

# Using Big Data to co-design a sustainable tourist experience. Some highlights by means of a practical example

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**Objectives.** *Smartness and sustainability represent nowadays the more update features in the tourism sector. From one hand a hyper-connected and hyper-informed tourist, shifting among virtual and real environments, represents him/herself as an experiencing actor seeking and negotiating new and stimulating meanings in the tourism experience, contextually participating - voluntarily or not - in the data production (Tribe and Mkono, 2017). From the other hand, the Information and Communication Technology (ICT) provides enterprises and tourism operators an update knowledge and advanced tools to improve processes and better respond to visitors' needs, focusing on tourism requirements (Shafiee and Ghatari, 2016) and enhancing innovation level in the management of the territories. Geo-referenced data, Big Data, the Internet of Things (IoT), end-user services and cloud computing, combined with mobile technology and artificial intelligence, represent fundamental elements for deliver more personalized tourist experiences and accomplish the transition towards more intelligent, sustainable and competitive tourist destinations (Femenia-Serra, 2018). Among these elements, Big Data - deriving from a variety of sources as smartphones, satellites' imagery, online social media platforms, public monitoring devices, and so on - clearly brought benefits for tourism research, closely related to emerging technologies, new abilities in data processing and new applications (Zhang, 2018).*

*Big Data constitute the main driver for value creation in the smart tourism experience, pending among innovative technology, strengthened tourists and stakeholders' involvement, increased personalization of the offering. In this light, a component of Big Data is that of Big Social Data, deriving from user-generated content through popular social online services, such as Facebook, Twitter, YouTube, Instagram or forums and blogs. The voluntary character of these data represents their main characteristic, which is the core of their value, as tourists want pictures and comments to be accessible to others and yearn for sharing them with closed/open communities (Brandt et al., 2017). Indeed, these unstructured/semi-structured data are semantically richer than other Big Data and so, in conjunction with these one, they represent a well-stocked source for suggesting the key elements to co-create personalized products/services with tourists, thus providing them a better value even in real time (Olshannikova et al., 2017). Hence, they can support decision driven approaches addressed the managing of complex relationships in the smart tourist destinations arena. By applying such decision making approach to the tourism market, the paper highlights how Big Data and Big Social Data can be transformed into value propositions in order to co-design precious tourist experiences (Wang and Alasutari, 2017; Moscardo, 2017), both for visitors and governance institutions, site managers, enterprises (He et al., 2017; Del Vecchio et al., 2017).*

*From the tourists' point of view, active participation through online reviews and interactions activate a process of tourism experience co-design. Even though not always (or not completely) aware, this involvement increases the value for the consumers, encouraging more respectful behaviors, due to an increased personal exposure (self surveillance) and social pressing (social surveillance), but also thanks to more customized situations and so with potentially higher satisfaction - sustainable tourism behavior.*

*In the industry viewpoint, instead, smart destinations use advanced ICT to optimize tourism and urban resource production and consumption, enhancing sustainability in the sector. Firstly, a wise management of natural resources can be arranged, investments in human and social capital can be improved, infrastructures can be better used, economic growth of the tourist stakeholders can be sustained in the respect of traditional and historical values of the place, inhabitants quality of life can be heightened (Romao and Neuts, 2017). This approach is in accordance with the*

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*theory of sustainable tourism integrating the concepts of preservation of resources - sustainable use - and growth and benefits for the host communities - sustainable development (Ritchie and Crouch, 2003; Baum, 2018). In addition, smart tourism technologies (as informativeness, accessibility, interactivity) have a direct impact on tourist' value-seeking processes regarding the experience they live in the area (Lee et al., 2018).*

*In this sense, if a virtuous circle of shared value based on digital technologies can be supposed - sustainable use of resources → sustainable development → sustainable behaviors - it is also necessary to maintain an advanced level of observation against possible vicious behaviors, strongly negative for the destinations' reputation.*

**Methodology.** *By applying the concepts of sustainability and smartness to a valuable co-creation approach of the experience, the support of Big Data is underlined to contribute to the theory on sustainable co-design in the tourism market. Despite tourism in Italy represents a booming sector, directly contributing in 2017 to GDP with EUR 94.1 billion (USD 106.8 billion), 5.5% of total GDP and a forecast of rising by 1.9% p.a. from 2018-2028, reaching EUR 116.2 billion (USD 131.9 billion), 6.2% of total GDP in 2028 (WTTC, 2018), this profitable influx takes a considerable influence on livability for local communities. Many of Italy's most established tourist destinations suffer the phenomenon of overtourism (Seraphin et al., 2018) and need a planning to efficaciously regulate and better distribute the tourist fluxes along the whole year, sustain Italy's high profile as a travel destination, do not use in a marauding manner tourism resources, realize a suitable tourist experience and improve the quality of life for local residents. In this sense smart tourism management, by means of intensive information sharing, can contribute to sustainable tourism, helping to develop the virtuous circle described above.*

*Hence, in order to take into consideration the impact of Big and Social Data in co-designing the tourist experience, an exploratory study has been arranged. This qualitative approach was preferred to better understand the problem, without providing conclusive or objective results, in the attempt to earn some reflections for further investigations (Corbetta, 2003). Thus, the main steps conducted were:*

- a. identification of the problem: how the great amount of data provided by advanced tools and shared information on social media can be used to co-design sustainable tourist experiences for both tourists and public/private tourism actors;*
- b. creation of the hypothesis, based on the questions obtained while identifying the problem. By this, the intent of the analysis consist in improving the following research question: Do Big Data and Big Social data affect the tourist experience co-design fostering the growth of sustainable destinations?*
- c. further research, completing the data obtained through descriptive investigation, which will be realized in a next study, if the research question has been positively tested (explored).*

*In sum, the aim of the present study was to clarify and gain a greater understanding of the situation, providing indications for future investigations (Malhotra et al., 2006).*

*According to this, the field analysis concentrated specifically on the information provided by a City Forecast Platform, based on Big Data, applied to the "Mille Miglia 2018" event analysis. Knowledge was extracted by means of artificial intelligence and machine learning (Claveria et al., 2016). It is useful to underline that data gathered have not a statistic intent, but furnish an exemplification to reflect on how these information can be used to co-design a tourist experience, able to provide value for tourists, tourism actors and local communities in a sustainable sight. The "Mille Miglia 2018" event consists in an Italian open-road endurance race of international relevance, with a high value of remembrance that promotes the growth of a culture respectful of the environment, paying attention to communities, territories and mobility. The authors focused the field analysis on this event by virtue of its sustainable values towards smart communities.*

*Therefore, by analyzing density, people presence and their movements, especially during the starting of the race and the award ceremony, a profiling of the audience and tourists taking part to event was defined. In addition, an analysis of the web participation was conducted, based on Big Social Data (Cambria et al., 2013; Kim et al., 2019), taking into consideration people reactions to the event, with a wide range of intensity (Bravo-Marquez et al., 2014). The analysis of the web participation, instead, referred to a netnographic analysis (Kozinets, 2015; Whalen, 2018; Molz, 2018; Tavakoli & Wijesinghe, 2019), that represents an empathic approach to qualitatively analyzing publicly accessible data from user conversations on the event on the social media, following the keywords "Mille Miglia" and "Thousand Miles Race" (and the variations on the writing). By means of a qualitative content analysis (Hsieh & Shannon, 2005; Mayring, 2000), the narratives on the part of the internet users on Twitter relative to the car race were reconstructed, devising them into emotional comments and practical comments (providing or receiving information). Sentiment was divided into positive, negative, and neutral comments.*

*The content analysis returns the general appeal of the event on the web, focusing on the information exchanged by the digital participants, in order to evaluate how people conceive a fascinating historical race that is a testimonial of the Italian culture and lifestyle.*

**Findings.** *Mille Miglia is, without shred of doubt, the most prestigious car rally in the world. It takes place in Italy every year in May. The first rally took place in 1927 as an alternative to Formula One and it attracts about five million spectators each year ever since. The open-road race always starts and ends in Brescia in the north of Italy, traversing the Country up to Rome with a different route every year, covering the distance of 1000 miles. Hence the name Mille Miglia (thousand miles). Nowadays the name "Mille Miglia" represents a global brand, combining the heritage of the Italian style with a fun and sophisticated, inclusive and contemporary way of life. Its emotional and cultural*

characteristics, together with the identification of Brescia as smart city, meaning the creation of new relations between technology and society (Söderström et al., 2014), makes the event noticeably useful for the present analysis.

The area under observation concerned the center of Brescia involved in the Mille Miglia event, divided into three portions (namely area 1, area 2 and area 3), with a focus on the occasion of the evening arrival and prize-giving (May 19, 2018). At the starting of the race (May 16, 2018), the peak of participants was on about the three p.m. in area 2, with 14846 people, while at the arrival assisted 18035 subjects in area 1 and 59856 people in area 3 (data collected at eleven p.m.). Between nine p.m. and three a.m. 53186 people assisted to the arrival (presence on average), + 96% with reference to the turn-out of the evening before. The data also indicated the residence of the participants, deriving in the 76% of the cases from Lombardy and distributed as follows: Province of Brescia 94%; Province of Milan 3%; Province of Bergamo 1%; Province of Cremona 1%; Province of Mantova 1%. The remaining 24% was out of office.

Artificial intelligence and machine learning, that constitute the functioning architecture of the Forecast Platform, are able to extract added value by data, providing an in-depth knowledge of the consumers, shifting from analyses focused on the mere tourist attendance - release of presence data - to evaluations on the socio-demographic characteristics of the participants and their movements in the area - release of mobility data. By applying this information, it was possible to cluster the participants based on their behaviors. Hence, according to the release of mobility data, the climax of the event was reached in May 19 at eleven p.m, with 59856 participants in area 3, 95% Italian and 5% international tourists. The distribution by gender, type of consumer and origin (for all the areas observed) is summed up in table 1.

Tab. 1: Characters of the participants

	GENDER		ORIGIN		TYPE	
	FEMALE	MALE	ITALIAN	FOREIGN	CONSUMER	BUSINESS
AREA 1	53%	47%	96%	4%	88%	12%
AREA 2	54%	46%	92%	<b>8%</b>	81%	19%
AREA 3	53%	47%	95%	5%	87%	12%

Source: our elaboration

While the distribution in the areas was quite homogeneous per gender and stable in terms of type of participants (consumer/business), the start of the race constituted the greatest attraction for international tourists, as testified by a higher rate of foreign presences than in the other areas/moments (8%).

In any case, shifting from a generic crowd’s approach to a people profiles’ overture, the findings allow profiling the audience of the event into four categories according to their provenience and their movements in the area, that are:

- tourists - 2659 subjects travelling for pleasure and on purpose attending the Mille Miglia 2018 event;
- daily visitors (distinguished in extra-regional and intra-regional visitors not spending the night in the city) - 35653 subjects specifically coming to attend the starting/prize-giving ceremony of the rally
- workers - 2659 subjects passing through the area for business purposes
- inhabitants - 12233 subjects living in the city of Brescia.

In detail, the event attracted for the most part local visitors, coming from the province of Brescia (63%), while came out of the region only 4% of the people. The international tourists were about 5%, as the workers were too, people having their job interests in Brescia, without living there. The international tourists, instead, came from Germany for the most part (21%), the Netherlands (16%) France and Switzerland (respectively 8%). In the minority, international tourists came from USA (5%), Belgium (5%) and Spain (45%). The Italian tourists, instead, were about 6% of the participants, inhabitants of the Lombardy, for the most part (30.7%).

This information, which can reach a very detailed description, is very useful in order to facilitate the planning, the management and the marketing of the city of Brescia as tourist entity and to better arrange the tourist experience. For instance, starting from the knowledge on the tourists and on the visitors, the destination can disseminate comprehensive information about resource and services, and so on, making people able to take advantage of a “customized” hospitality.

In conjunction with the data described above, that takes into consideration participants behaviors, the user-generated content on the web associated to the Mille Miglia event was explored too, in order to outline the digital participants and their sentiment about it.

As expected, people commenting the race on the web was 69.8% male and 30.2% female. For the most, they were aged between 25 and 34 years (52%). Hence, thanks to the cultural outline of the event, linked to the Italian style, it goes across a transversal audience. Actually, only 18.6% of the digital users worked or was linked to the transport business, while most of them were car lovers, or were interested in sports and in travelling. In any case, the Mille Miglia event has no geographic boundaries: it moves a global participation on the web; in fact, 48.6% of the online users were Italian, while 42.2% were English. Germans and Americans gave good attention to the race too.

The main findings of the netnographic research were classified into the heuristic categories (tags) of topic and sentiment. According to topic “Mille Miglia”, most of the comments were emotional ones while a few were comments on exchanging information. According to the sentiment dimension, almost were positive comments, while a very few were neutral comments and negative ones. The results show that users’ interactions were mainly based on emotional

comments testifying affect and passion toward the Italian style and the beauties of the Country.

On the bases of the findings, it is possible to define the key elements to co-design a more valuable tourist experience. The “Mille Miglia” award ceremony retrieved a higher percentage of people (+96%) compared to the previous day, attracting travelers from all over the Country (63% were intra-regional daily visitors and 37% came from other regions to spend some days in the city) and international tourists too (5%). Sure enough, the event is known all around the world. Although Italian, the rally attracted international comments, as testified by the amount of sentences in English (42%). Hence, the “Mille Miglia” event really demonstrates a transversal character. Moreover, the most relevant trait of the brand “Mille Miglia” consists in the “affect” dimension, as the comments and the tone of voice applied to the user-generated contents on the web testified.

The field analysis, in sum, can provide useful indications in terms of: arrangement of area before, during and after the event, in order to better manage the flux of the crowd, without interfering with the daily life of the residents and optimizing the tourism resources too. Thanks to the profiling of the participants, it can be better arranged the planning of the pre-visit assistance, reception, services (as parking, accommodation, signage, etc.) and assistance during the event (i.e. during the award ceremony), improving the overall assessment of the tourist experience.

In sum up, the contribution of the research can be defined from a theoretical and practical point of view. The definition of the tourists profiling on the basis of the mobility data can be applied to the management of the customer-driven service design and of the service delivery, while the individuation of the social sentiment toward the event/area by means of the user-generated content can be used for a planning built on the tourist insights and for building the reputation of the area.

In this sense Big Data (mobility data) and Big Social Data (user-generated content on social networks) can be used to co-design a sustainable tourism experience, combining technological innovation - smart city - and sustainable tourism - smart communities.

**Research limits.** Despite the explosive growth of Big and Social Data, as well as that of various Big Data analytics technologies, as key sources in planning and strategic governance of smart destinations, the research has a limit, linked to the bias of online data that disregards the narrations and perceptions of people (tourists and community) non-users of the web. In this viewpoint, the integration/correlation between Big Data and Small Data may represent the overcoming of the conceived limit, contemporary suggesting new perspectives of research.

A high quality small sample can produce valuable inferences, useful to better understand research on Big Data too, especially when Small Data are detected among key nodes of the smart networks (Wu et al., 2018). Hence, to get over the limit a second step of research was planned through in depth interviews to a panel of city managers. In this light, it would be interesting to investigate relationship and intersections between Big Data and Small Data, opening not well-explored field of research in the tourism sector.

At the same time it would be interesting strengthen the observations conducted by means of a describe research (as indicated in the step c. - see methodology), gathering data by means of survey tools, to concern with what happens when Big Data and Social Data are used to co-design a sustainable tourism experience, using statistical analyses to determine relationships.

**Practical implications.** With the advent of the digital devices, the tourist experience has completely changed and nowadays it is increasingly “on the move”. The interactive tourist rely on mobile devices, social media and networking technologies to stay in touch with friends and family members while he is on the road. In addition, he stopped to be a meager consumer of tourist services and acquired an increasing role of co-creator of the travelling experience. The development of Web 2.0 gave a great contribution to the co-design of the tourism experience, by means of user-generated content, effectively involving consumers to work on behalf of business (Oriade & Robinson, 2019). The co-design, instead, is pointed out not only with reference to the exchange of information, both practical and emotional, but also in actively taking part to the travel arrangement (making online reservations, buying tickets, planning the route, and so on) thanks to a wide range of online resources. In other words, the web evolves from a technology platform to a social milieu.

In this direction, the analysis of the tourists’ experience, starting from their behavior in the place, in conjunction with the spontaneous perception of any event or a destination on the web, can represent a valuable info-structure to co-design a sustainable tourism experience in the light of preserving cultural resources of the destinations and promoting the wellbeing of the local communities. In this perspective, the findings, matching both physical and digital indications, may have in general terms a consistent consequence in contributing to orientate the decision making approach to the tourism market. This useful information for the public actor and the tourism enterprises help the decision makers by gaining richer and deeper insights and getting an advantage over the competition among territories and offering systems. Therefore, by this way the support of forecast applications or machine learning, which use Big Data technology, applied to data coming from mobile devices of participants and from public sources (i.e. data collection on the points of access or exit arranged to pass through the area dedicated to the award ceremony), really represent an evolution in approaching the tourists and in managing the destinations too. The evident advantage of the profiling results, enriched by both historical and forecast analyses, allows the optimization of territorial, urban, commercial and transport planning in order to make the managers of the destination able to better organize the touristic offering, even though without forgetting needs and expectations of the residents in terms of daily quality of life. In addition, the online participation gives back the “quota” of the event, clarifying what attracted more the participants, what they judged

relevant or emotional, how they felt about the whole event, providing the city managers a deep knowledge of the tourist experience, as basis for future planning directly built on the tourist insights. Such *modus operandi* puts into effect the smart city mandate, really applicable when the social actors use in a “smart”, namely clever, manner the opportunities offered by advanced technology to resolve urban difficulties or to arrange efficaciously the strengths.

**Originality of the study.** The practical example underlines how the interrelation of data coming from heterogeneous sources (Fan et al., 2014) offers valuable information on collective behaviors, choices and sentiments of the tourists, but also on the relation among: (a) destinations, (b) destination offering and (c) the people, in terms of balance between the expectations of the inhabitants and the tourists.

Subsequently, smart destinations can improve the tourist satisfaction by means of a valuable, more respectful and effective Destination Management System, based on knowledge, balance and trust with networks, tourists and local communities (Della Corte et al., 2018). These are the key elements to generate a virtuous circle. In sum up, smart destinations, based on technological and social innovation, represent a “step” towards the comprehensive transformation of touristic territories, while always balancing the arrangement of attractive systems of offering, local quality of living and sustainable development of the area, in terms of favorable repercussions for all the actors involved (smart community). Therefore, the strategic governance of such smart tourism destinations must pinpoint to the management of the tourism in all its complexity, instead of only focusing on the promotion of the attractiveness of the area. In this light, Big Data and Big Social Data are able to support a more intelligent, meaningful and sustainable connections between tourists and the destinations they choose, allowing a both more respectful and effective Destination Management System. By this way, tourism can be considered as a form of deep civic engagement - more than a simple consumption - favoring the development of a new ethos of sustainable smart tourism.

Obviously, the emphasis on the technological innovations has not to distract scholars and city/destination managers from the consideration that the technological features intersect the social data, granted by the people living in the area and by who visit it. Therefore, the involvement of the smart communities activates the social innovation, as new ideas that work to meet pressing unmet needs and improve peoples’ lives. Recognizing the smart communities as agents of social change, social innovation can play a key role in enhancing sustainable human-environment interactions. By the way the deriving smart destinations or territories are economically more competitive in the new global economy, and attract and promote a more respectful and sustainable tourism because of advanced technological infrastructures in combination with social innovation.

**Key words:** smart tourism; sustainable tourism; interactive travel; tourism forecast; regional development; big social data; destination management system

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# Tourism and disability: an interpretative framework

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**Objectives.** *The purpose of the paper is to offer an interpretative framework on tourism linked to disability, by examining the existing literature on this specific subject.*

*Disability has historically been defined as the loss of bodily function (WHO, 2007). The World Health Organization defines disability as any restriction or lack of ability to perform an activity within the range considered normal for a human being (Yim King Penny Wan, 2013). The ecological perspective is also in line with the ideology of the World Health Organization, which considers disability as “a complex phenomenon reflects an interaction between the characteristics of a person’s body and the characteristics of the society in which he or she lives” (WHO, 2007). Similarly, disability is defined by the American Disability Act (ADA) (US Department of Justice, 1990) as a physical and mental incapacity that substantially limits one of the main activities of life.*

*Research on tourists with ‘special needs’ emerged around 1970, then more in-depth studies were undertaken between 1980 and 1990 (McKercher et al., 2003). Today there is a growing number of studies focusing on the tourist experience of people with disabilities (PwDs). Careful examination of the research indicates that the tourism and hospitality literature focuses on two main issues. Firstly, the birth of the Study Centers on the characteristics of people with disabilities, who participate in the tourist experience, as well as on the economic potential of people with disabilities. Secondly, the research has focused its attention on the provision of services for people with disabilities (e.g. Disability Discrimination Act and Americans with Disabilities Act).*

*Despite the growth of scientific contributions dealing with the tourism phenomenon of people with disabilities (Buhalis and Darcy, 2011; Darcy, 2010; Grady and Ohlin, 2009; Kim and Lehto, 2012; McKercher et al., 2003; Ozturk et al., 2008; Poria et al., 2010, 2011; Smith, 1987; Tantawy et al., 2004), the tourism industry has paid little attention to the distinctive needs and preferences of these tourists for accessible travel products.*

*Defining disabled tourists as a segment is, in effect, a simplification because the term “disability” is a generic term that covers a wide variety of deficits, activity limits and participative restrictions. Although the demands of PwDs are more exigent, “people with disabilities have the same needs and desires for tourism as others” (Yau, McKercher and Packer, 2004, 946).*

*Since in recent years the provision of holidays for PwD and their families has been integrated into social care policies, this has not been the subject of extensive discussions in the tourism context, because it is thought that the reference segment does not can lead to high profits, due to the limited number of consumers with special needs. On the contrary, many studies have shown how this market segment can be a springboard for tourist destinations, which will be seen from the outside as a showpiece on the treatment of “special needs”. This vision leads to a more accessible conception of tourism and therefore allows every individual of the globe to access the tourism sector very easily without restrictions, prejudices and obstacles. All this turns into giving a fair opportunity to the PwDs to access and participate in tourism and leisure activities, helping to cultivate a more positive feeling among the PwDs and all those close to the development of tourism. The underlying principle is captured in the notion of human rights (Buhalis, 2011), as established by the United Nations Convention on the Rights of Persons with Disabilities (United Nations, 2006). The convention is inspired by the following principles: dignity, independence, full and effective participation, respect and acceptance of disability as part of human diversity, equality of opportunity, gender equity and rights of children. Similarly, the European Disability Strategy 2010-2020 intends to empower PwDs so that they can enjoy their full rights, and benefit fully from participating in society (European Commission, 2010).*

*It is hoped that, through the recognition and awareness of equal travel opportunities, the dissemination of a new concept of tourism (as a universal phenomenon and not just a niche one), the PwD and its families will be encouraged to undertake more tourist activities: under this point of view, in an academic context, it is developed the concept of Tourism for All (Elske de Vries, 2014), understood as a powerful and well-organized machine that makes services, products and tourist destinations in particular, travel and tourism more generally, accessible to travelers around the world, regardless of their physical limitations, disabilities or age. The synthesis is that everyone has the right to benefit from an accessible environment.*

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**Methodology.** *To address the objective of this paper, the study examines the literature on the tourism linked to disabilities in order to develop an interpretative framework and suggest some research propositions. It studies articles of business and management, published between 2010 and 2018 and dedicated to tourism related to the disability. In detail, the review process has been divided into three main phases: i) the collection of articles; ii) the selection of those most relevant to the topic; and iii) in-depth analysis of selected articles. Starting from the identification of appropriate keywords that represents a necessary activity for a systematic review process (Tranfield et al., 2003), in the first phase of the work we developed a search string “disab\*” and “tourism”. In this way, we include in the research all the declinations of the word disability. The study utilized Web of Science database that permitted to consider different and useful filters, such research area, the type of document, the time interval of publication. .*

*In this context, it was possible to collect 76 papers that contained the key word in their titles, keywords or abstracts. After reading the respective abstracts, all those who did not specifically dedicate themselves to the topic in question were discarded. At the end of this systematic process, the study focused on a more in-depth reading of 11 full papers considered most relevant to the topic.*

**Findings.** *It has been seen that among scholars the concept has spread (Darcy, 2010; Darcy, Cameron and Pegg, 2010; Gröschl, 2007) that disability should not focus only on functional limitations related to medical conditions of a person, but should also include an ecological perspective concerning disability as “resulting from the interaction between a physical impairment, activity limitations and restrictions on participation in a specific social context or physical environment such as work, home or school “(Human Resources Development Canada, 2003, P. 6).*

*Additionally, at the end of the literature review we developed an interpretative framework and advanced the following research proposals.*

*Currently, the European population is aging continuously. There are three main factors driving the aging of the population. The first is linked to the aging of the baby boom generation of 1945 - 1965, reaching 65+ in 2010. Second, fertility rates have fallen since 1965, the elderly population is growing at a faster rate than generation younger. The third characterizing factor is that life expectancy in old age is increasing (OECD - Organization for Development and Cooperation 2002 Economic). Despite the fundamental need to address different market segments, the accessibility market is currently not sufficient. Making accessible tourism for disabled people is considered by many tourist destinations and suppliers as an additional and even unnecessary burden (Shaw and Coles, 2004; Shaw, Veitch, and Coles, 2005). This attitude exists mainly due to the misunderstanding of the needs of this market, as well as the perception that significant costly changes in infrastructure and the surrounding environment are necessary in order to remove barriers. The accessibility market is not homogeneous, but involves different sub-segments with distinct needs and needs (Woodside & Lyonski, 1989). Ultimately, every person is unique in his or her abilities and preferences, and this is most evident in this market. In particular, the segment here examined is rapidly growing and includes people who suffer from some form of disability, as well as the population, which often develops diseases that lead to disability (Kitchin, 2000). Global competition, legislation and the growing aging of the population show that competitive tourist destinations and organizations must take steps to improve their accessibility and provide appropriate information on the services they offer (Crompton, 1979).*

*From the analysis of the literature, the study advances the following research proposition.*

*RP1: the accessibility is a necessary condition in the development of tourism proposals for PwDs.*

*To address the disability market and benefit from the multiplier effects generated by friends and relatives traveling with them (Gerlin, 2005; Puhretmair, 2004), destinations should not only have “barrier-free” structures, but also develop mechanisms to widely disseminate information accessibility. Therefore, Destination Management Organizations (DMOs) need to collect, manage and disseminate reliable and accurate information on accessibility. Information communication technologies (ICT) and destination management systems (DMS) provide effective tools to perform this task and support destinations and suppliers to offer adequate services for this market segment that has particular characteristics (Buhalis & Michopoulou, 2010).*

*For this reason, technology is indispensable because it starts dialogue, allows participation and allows people with disabilities to declare their needs with more freedom, leaving aside the fear of expressing themselves and the prejudices they can be subjected to when communicating their preferences (Buhalis & Michopoulou, 2010).*

*Furthermore, an integrated and articulated Customer Relationship Management (CRM) can guarantee personalized treatment for current customers, as well as providing an overview of the users' future behavior. This can be the basis for customer segmentation and each destination, by doing so, will be able to identify the necessary resources and with which category of customers it will have to face (Gretzel et al., 2004).*

*According to another strand of literature, accessible tourism implies the paradigm of universal design, which allows people with or without disabilities to easily use various products and environments (The Center for Universal Design, 2016). The central element of this design concept is the ability to improve usability with little or no effort (Darcy et al., 2011). The universal design center has adopted seven, simple and intuitive use, perceptible information, tolerance by mistake, little commitment to use SECTOR. These design requirements are an effective guide to better integrating user needs (Story, 1998). In many countries, the notion of universal design serves largely as an accessibility standard for tourism and the hospitality industry (Preiser & Smith, 2011).*

*With reference to the literature examined, the table 1 highlights the attributes that a tourist destination have to possess and/or develop in order to best meet the needs of disabled tourists.*

Tab. 1: Characteristics of a tourist destination

<b>Accessibility</b>	<b>Physical Mobility</b>	<b>Public Transport</b>	Connection between airports, ports, train stations and buses with the city center Good connection to nearby tourist destinations		
		<b>Disabled and elderly tourists</b>	Physical support for public transport Assistance through technological devices		
		<b>Traffic Management</b>	Real-time traffic management system with special apps Traffic management with visual and sound indicators Parking area management for PwD Video monitoring with sound and visual indicators of tunnels, subways and areas at high risk of accidents		
			<b>Internet Access</b>	Free access to WI-FI throughout the city	
			<b>Digital Mobility</b>	<b>Website</b>	Provide information on tourism and events in the city on the official website
				<b>Mobile applications</b>	Crossing assistance with sound and visual indicators
	<b>Social Media</b>	Set up an official city page on social media for instant suggestions			
	<b>Special smart tourist card</b>	For much easier access to all the services offered by the city (public transport, attractions, parks, leisure activities)			
	<b>Mobility Management</b>	Create assessment standards to develop accessibility as effectively and efficiently as possible			
	<b>Attractions</b>	<b>Artificial Attractions</b>	<b>Center for Tourists</b>	Set up an info point with the geolocation of the main tourist attractions in the city with the help of interactive audio and video guides	
<b>Parks</b>			Theme parks with personalized routes Sports complexes accessible to people with any degree of disability Botanical gardens, with the possibility of making experiences from a practical point of view		
			<b>Entertainment</b>	Casino, cinema, theater and live music, all provided in such a way that each person has the same opportunity to enjoy this service	
			<b>Natural Attractions</b>	<b>Mobile applications</b>	Interactive touch devices to virtually visit or geolocate the main historical attractions of the city
<b>Special Events</b>		Use of visual and auditory sensors for crowd control			
<b>Attractions Management</b>		Involve in the management public and private organizations with the collaboration of citizens and tourists			
<b>Public Transport</b>		Good connections between the sites of the various historical attractions			
<b>Receptive Services</b>	<b>Hotels and Restaurant</b>	<b>Staff training</b>	Train staff for a better approach to the disabled Destroy every architectural barrier		
		<b>Accessibility in the premises</b>	Increase the number of rooms for PwD In restaurants introduce interactive menus with visual and auditory descriptions		
			<b>Hospitality network</b>	Define an ict innovation-based entrepreneurial hospitality network	
			<b>Website</b>	Provide very detailed information in the PwD channel	
		<b>Banks</b>	<b>Smart banking</b>	Provide mobile and intelligent banking services both inside and outside the hotels	
<b>Additional Services</b>	<b>Postal Service</b>	Provide postal services for disabled tourists through websites or specific electronic devices previously provided			
	<b>Medical Service</b>	<b>Pharmacies</b>	Provide advanced guidance on the location of pharmacies in the city		
		<b>Hospitals</b>	Geolocation of the various hospitals and possible medical specialization		
	<b>E - Culture</b>	Creation of a strategy to integrate tourists and citizens			
	<b>Leisure</b>	Define a complete map of outdoor activities or facilities equipped to better assist PwDs			

Source: Tran et al., 2017.

With this in mind, the study suggest the following research proposition.

RP: In tourism destinations, both services and facilities strictly related to touristic offering and those complementary to it have to meet the distinctive needs of customers with disabilities.

The literature underlines the relevance of market segmentation referred to the process of classifying customers into groups based on different needs, characteristics or behaviors (Sarigollu and Huang, 2005) and is necessary to identify and select specific groups of customers (Dolnicar, 2004). Some segmentation studies focus on motivations (Bieger and Laesser, 2002; McKercher, 2002), environmental attitudes (Hong, Kim and Kim, 2003; Weaver and Lawton, 2002), information-seeking behavior (Fodness and Murray, 1997), seasonality (Dolnicar and Leisch, 2003), use of transport (Hsu and Lee, 2002; MacKay, Andereck, and Vogt). Traditional segmentation operates under the assumption that companies should group cluster users to better address these segments. In terms of disability,

traditional segmentation means that companies should identify people into different groups based on their disability. This conveys a model with medical features of understanding the disability that the individual sees in clinical terms, rather than focusing on the range of abilities. It is a short-sighted perspective because, for example, not all users with physical disabilities have the same requirements, and their abilities vary significantly, also based on the way they face life, so an action can be well seen and stimulated by of some disabled, as can be a taboo for others.

In general, two approaches to the segmentation of tourism are mainly used: a priori (Dolnicar, 2004) and a posteriori (Mazanec, 2000). In the a priori study, the variables for segmentation are chosen in advance to identify and isolate market clusters. Additional psychographic or behavioral variables can be added in a process such as the type of travel (McKercher, 2001). A posteriori study is often used when there is no previous knowledge of the groups. They focus on behavioral and psychographic variables to identify and classify segments - for example, football fans or gay couples. Other variables (e.g. socio-economic and demographic) can later be used to further describe the segments (Hsu and Lee, 2002; Lee et al., 2004). In recent years, the a posteriori approach has been used more extensively (Woodside & Martin, 2007).

Criticisms have been voiced for both approaches. With regards to a posteriori approach, the identified segments can vary substantially depending on the methodological parameters used by the researchers (Wedel and Kamakura, 1998). Johns and Gyimo thy (2002) assert that traditional demographic and socio-economic characteristics such as age, gender and wealth are poor indicators of buying behaviour as they vary by occasion. Psychographic and behavioural variables in themselves are also poor indicators and hence tourism segmentation needs to deploy multiple criteria.

Therefore, the study advance the following research proposition

RP: Traditional segmentation criteria have to be defined in order to favor the growth of tourism related to PwD.

**Research limits.** The limits of the research are to be still theoretical and based on the existing literature, by suggesting research propositions for addressing future theoretical studies and empirical analyses related to tourism linked to people with disabilities

**Practical implications.** The study aims to provide a framework in the field of tourism related to PwD, by examining the existing literature. As for managers and policy makers, the research intends to underline the relevance of having a clear picture of the many problems and difficulties faced the people with disabilities that continue to have a lower probability of participation in tourism activities than non-disabled ones. This is necessary by considering that PwD represents a very significant segment of tourism, with a constantly growing potential demand, and a great opportunity for private and public tourism actors involved in the tourism activities that have to develop an efficient provision of different services and facilities depending on the type of disabilities. Additionally, the benefits linked to tourism experience of PwD are different: the low-season supply of some tourist destinations; the possibility of diversifying the value propositions and the improvement of their quality; the creation of jobs; and the possibility of getting higher income.

**Originality of the study.** The present study, that is included in a broader research project, aims to highlight the relevant concepts examined in the literature focused on the tourism linked to disability and to provide some research propositions. Although tourism linked to disabilities has been the subject of various studies, there is currently no complete and exhaustive exploration of the entire phenomenon. Additionally, many jobs focus only on certain categories of disabilities, so academic studies have not yet established macro-areas in which to place the various PwDs with the respective degree of disability, because, in a global view, disability is not seen by the single individual in the same way as others, each has a different perception.

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**Key words:** disability; accessible tourism; people with disabilities; research propositions.

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# Gli hotel e la gestione del passaparola online: un'analisi empirica

LINDA GABBIANELLI\* TONINO PENCARELLI\*

**Obiettivi e framework della ricerca.** *Oggi più che mai, l'attrattività e la competitività delle strutture ricettive dipendono dalla loro presenza e visibilità in rete, così come la comunicazione e la gestione delle prenotazioni dipendono dall'utilizzo di strumenti sempre aggiornati.*

*I viaggiatori digitali utilizzano la rete principalmente per cercare informazioni perché la maggior parte di loro ritiene di trovare prezzi migliori (Law et al., 2014). Gli utenti trovano recensioni e opinioni pubblicate da altri, nonché contenuti particolarmente utili generati su piattaforme di social media. I viaggiatori considerano queste informazioni affidabili e utili nel processo di scelta di un prodotto, nonché per evitare di prendere una decisione sbagliata.*

*Il passaparola elettronico (EWOM) ha attirato un'attenzione significativa in quanto influenza in modo rilevante il comportamento dei consumatori ed è definito come qualsiasi affermazione positiva o negativa fatta da potenziali, effettivi o ex clienti su un prodotto o un'azienda che è messa a disposizione di una moltitudine di persone e istituzioni via Internet (Henning et al., 2004). L'industria del turismo è fortemente influenzata dal passaparola online e, nel settore del turismo, gli hotel sono probabilmente i più colpiti.*

*In letteratura vi sono alcuni studi che hanno provato a fare una review dei lavori realizzati per quanto riguarda l'EWOM nel settore del turismo (Cantallops e Salvi, 2014; Bore et al., 2017; Hlee e Koo, 2018).*

*Cantallops e Salvi (2014) individuano due linee principali di studio, vale a dire i fattori che generano le recensioni e l'impatto dell'EWOM dalla prospettiva dei consumatori e delle imprese. Bore et al. (2017) indicano 8 temi di ricerca: 1) motivazioni contribuire al passaparola online, 2) motivazioni per leggere le recensioni online, 3) piattaforme utilizzate per facilitare l'EWOM, 4) analisi dei "Big data", 5) impatto dell'EWOM sul comportamento dei consumatori, 6) impatto sulle performance dell'hotel, 7) risposte degli hotel alle recensioni online, 8) differenze culturali dei consumatori.*

*Liang et al. (2013) affermano che le recensioni online possono essere considerate un segnale che determina il successo o il fallimento di un servizio, a seconda che le recensioni siano positive o negative. Si è anche riscontrato che le recensioni online hanno generalmente un effetto positivo. Tuttavia, le decisioni di acquisto sono influenzate dalla piattaforma di EWOM utilizzata (Xie et al., 2014) e il modo in cui gli albergatori gestiscono e rispondono alle recensioni online (Liu et al., 2013).*

*Nieto et al. (2014) e Kim et al. (2015) sostengono che sull'impatto delle recensioni online sulla performance aziendale nel settore alberghiero sia un ambito di ricerca poco sviluppata.*

*Per quanto riguarda le risposte dell'hotel alle recensioni online, Xie et al. (2014) e Mauri e Minazzi (2013) trovano che le risposte degli hotel ai commenti negativi hanno un impatto negativo sull'intenzione di acquisto dei consumatori e sulle aspettative dei consumatori. Di opinione sono Ye et al. (2009), Kim et al. (2015) e Nieto et al. (2014) che suggeriscono che le risposte degli hotel ai commenti negativi online hanno un effetto positivo sull'intenzione di acquisto.*

*Wei et al. (2013) suggeriscono che le risposte alle recensioni negative che affrontano direttamente la questione specifica dell'utente sono percepite in modo più favorevole dai potenziali clienti rispetto alle risposte generiche e possono infondere un senso di fiducia nel consumatore. Wei et al. (2013) sottolineano l'importanza di sviluppare una cultura di coinvolgimento "interattivo" dei clienti e raccomandano che i manager seguano e rispondano frequentemente ai commenti online affrontando direttamente questioni specifiche sollevate nelle recensioni dei clienti.*

*Dall'analisi della letteratura emergono alcuni gap (Cantallops e Salvi, 2014; Schuckert et al., 2015; Bore et al., 2017):*

- *come stimolare la generazione di nuovi commenti e recensioni?*
- *quali sono le motivazioni per contribuire allo sviluppo del passaparola online e le differenze dei consumatori?*
- *in che modo è possibile identificare la veridicità e la credibilità delle recensioni pubblicate?*
- *quale potrebbe essere il modo migliore per gestire l'impatto delle recensioni e misurarne i risultati?*
- *in che modo le aziende valutano le loro azioni e misurano le loro performance?*

*Le risposte alle recensioni online sono state in gran parte limitate al trattamento dei commenti negativi (Levy et al., 2013; Lee e Cranage, 2012).*

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La maggior parte delle ricerche è stata condotta sull'influenza delle recensioni online sulle decisioni di acquisto dei consumatori e sul loro processo decisionale. Meno attenzione è stata data alla capacità di sfruttare i vantaggi di un passaparola positivo e di attenuare il passaparola negativo da parte delle imprese.

Inoltre, esistono approcci di ricerca che sono ancora stati poco utilizzati in relazione all' EWOM e hotel come l'uso di interviste, osservazioni e questionari agli albergatori che potrebbero migliorare le conoscenze su come gli albergatori gestiscono le risposte online.

Questi studi potrebbero essere utili non solo per una maggiore comprensione del comportamento dei consumatori, ma anche per le imprese ricettive per stabilire e sviluppare strategie di marketing appropriate.

Questo studio intende evidenziare alcuni degli aspetti dell'EWOM che non sono stati approfonditi in letteratura.

L'obiettivo è quello di approfondire il comportamento manageriale di un campione di imprese ricettive in Italia, in particolare nella provincia di Rimini, che si trova sul territorio italiano con un alto livello di ospitalità.

Sulla base di questo obiettivo, la domanda di ricerca è la seguente: in che modo gli hotel gestiscono le recensioni online?

**Metodologia.** Sulla base dell'analisi della letteratura, l'indagine empirica relativa al comportamento manageriale degli hotel ha indagato i seguenti aspetti:

- la frequenza di lettura delle recensioni online;
- le modalità di risposta alle recensioni in termini di tono utilizzato ed il comportamento con le recensioni negative;
- i metodi utilizzati dagli hotel per stimolare la generazione di nuovi commenti e recensioni;
- l'influenza delle recensioni on line sulle performance degli hotel in termini di qualità dei servizi e prezzi.

Per comprendere il comportamento manageriale è stato creato un questionario semi-strutturato e inviato via mail agli albergatori.

La scelta di utilizzare il questionario on line permette alle imprese ricettive di rispondere in modo anonimo, in un ambiente user-friendly e che non richiede molto tempo. (Molteni e Troilo, 2007).

Il campione è stato selezionato svolgendo una ricerca su Tripadvisor per ciascuna città della provincia di Rimini. Sono stati estratti 900 hotel.

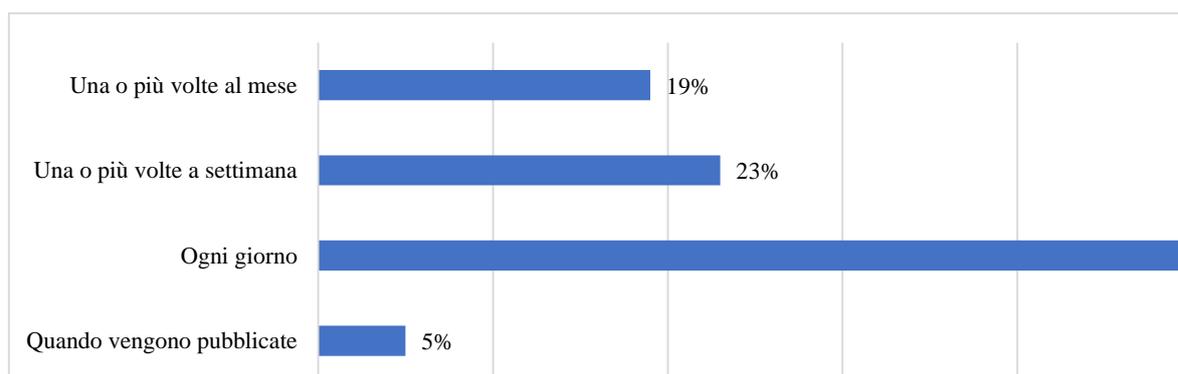
**Risultati.** Il questionario online lanciato nel periodo agosto-settembre 2018, indirizzato ad un campione di 900 hotel situati nella provincia di Rimini, ha raccolto un totale di 103 risposte (tasso di risposta del 11,4%). Gli alberghi che hanno contribuito allo studio appartengono principalmente alla categoria 3 stelle (48,5%).

Per quanto riguarda la presenza online, quasi tutti gli hotel hanno il sito Web, tranne uno, confermando che è considerato importante per la visibilità nel mercato di riferimento e che è considerato estremamente necessario differenziarsi dai concorrenti.

Per quanto riguarda i social network, il 94% ha una pagina Facebook, gestita principalmente internamente, mentre il 57% degli intervistati ha un canale Instagram, anch'esso principalmente gestito internamente.

Riguardo alla frequenza con cui vengono lette e considerate le recensioni on line, il 53% degli intervistati ha dichiarato di leggerle tutti i giorni, il 23% le esamina una o più volte alla settimana, mentre il 19% le controlla una o più volte al mese (grafico 1).

Graf. 1: Frequenza di lettura delle recensioni online



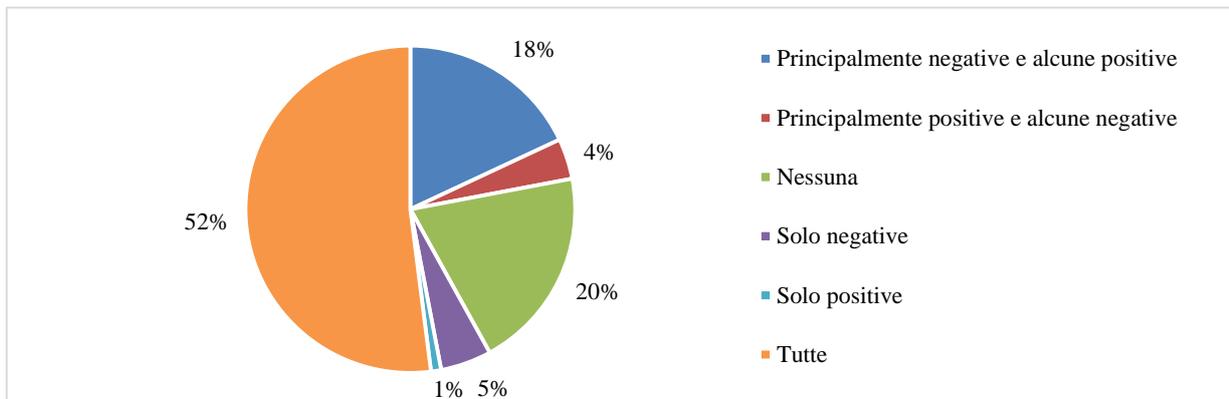
Fonte: ns. elaborazioni

È interessante comprendere il comportamento adottato nel rispondere alle recensioni online, cioè a quale tipo di recensione gli hotel della provincia di Rimini preferiscono rispondere (grafico 2).

Il 52% degli albergatori ha rivelato di rispondere a tutte le recensioni, si tratta di un atteggiamento che richiede molto tempo e dedizione, soprattutto se l'hotel è registrato su vari portali nei quali è possibile lasciare una recensione. Tuttavia, il 20%, non è particolarmente interessato a rispondere alle recensioni. Una piccola parte, l'1%, risponde solo a recensioni positive, mentre il 5% risponde solo alle negative, cercando di dare una risposta ai reclami e agli aspetti critici rilevati dagli ospiti.

Il 18% degli albergatori si concentra maggiormente sui commenti negativi, ma senza trascurare quelli positivi, a cui generalmente si risponde ringraziando l'utente per aver espresso un'opinione positiva. Infine, il 4% ritiene più importante mostrare la propria gratitudine a coloro che hanno apprezzato il servizio ed è meno attivo nel gestire il feedback negativo.

Graf. 2: Comportamento adottato nel rispondere alle recensioni online

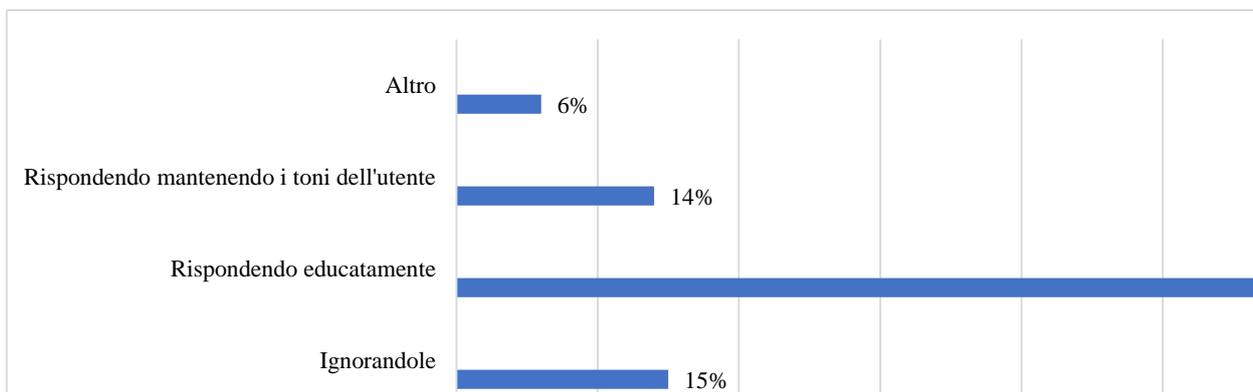


Fonte: ns. elaborazioni

Rispondere ad entrambi i tipi di recensioni online è essenziale per dimostrare l'impegno totale dell'hotel. Tuttavia, va notato che a volte recensioni negative richiedono una maggiore considerazione e attenzione.

In questo caso, l'atteggiamento e il tono nei confronti delle recensioni negative sono molto importanti e cruciali (grafico 3).

Graf. 3: Come rispondere alle recensioni negative secondo gli albergatori



Fonte: ns. elaborazioni

Il 63% degli albergatori afferma di rispondere in modo educato, indipendentemente dal comportamento dell'utente e dai toni utilizzati nel testo della recensione, cercando di evitare di essere troppo affrettato e maleducato. Inoltre, alcuni albergatori sostengono che a volte la migliore risposta a certe recensioni è quella di pubblicare una foto piuttosto che una spiegazione, per rimuovere qualsiasi dubbio ai futuri utenti interessati all'hotel.

Il 14% degli intervistati, tuttavia, è pienamente convinto che il modo giusto per rispondere a una recensione online negativa sia mantenere il tono dell'utente o rispondere in maniera accesa, ironica, irritata, o distante. Sebbene i commenti negativi influenzino la reputazione, il 15% decide di ignorarli completamente.

Infine, il 2% degli intervistati ha spiegato che la risposta alle recensioni negative varia a seconda della veridicità della recensione, ad esempio rispondendo a coloro che forniscono informazioni false o rispondendo in modo costruttivo.

Nel contesto della recensione online, potrebbe accadere il curioso fenomeno della scomparsa di recensioni negative: spesso, sfogliando i vari siti di hotel, si imbattono in strutture con pochissime recensioni negative, se non quasi assenti, e qualche volta c'è il dubbio che l'hotel abbia provveduto a eliminarli.

Va notato che cercare di mettere a tacere un cliente nell'era della digitalizzazione non sempre funziona. Cioè, l'atto di cancellare un commento negativo su una piattaforma non può in alcun caso impedire all'utente di esprimere il suo dissenso su altri siti e in altri modi.

Questo concetto sembra essere chiaro agli albergatori di Rimini, dato che il 62% non ha mai rimosso commenti negativi. Il 34%, d'altro canto, ha rivelato che a volte sono attivamente impegnati a far scomparire una recensione

scomoda, mentre il 4% ha dichiarato di voler nascondere tutte le recensioni negative che provengono dai commenti relativi al proprio hotel.

Sebbene in letteratura sia stato sottolineato più volte che, man mano che il numero di recensioni presenti online aumenta, il rischio percepito dal cliente diminuisce, il 40% degli albergatori non è interessato ad aumentare il numero delle recensioni. Il restante 60% degli albergatori invita gli ospiti a lasciare recensioni e commenti adottando modalità differenti:

- il 17% degli intervistati ha lasciato un questionario di soddisfazione nella stanza degli ospiti. In questo caso, i commenti aiuteranno sicuramente i gestori a realizzare la qualità dei loro servizi, ma non aumenteranno il numero di feedback sul web.
- il 27% dei casi invia una e-mail con un questionario alla fine del soggiorno. In tal modo, gli albergatori sfruttano la possibilità di inviare il link al questionario che può essere collegato sia al proprio sito web ufficiale sia alla piattaforma in cui è stata effettuata la prenotazione. In alternativa, alcuni albergatori preferiscono fornire il link diretto a Tripadvisor via e-mail;
- il 9% degli albergatori mette a disposizione dei clienti un dispositivo mobile al momento del check out, invitandoli a dedicare alcuni minuti per rispondere alle domande chiuse nel questionario;
- il restante 7% preferisce parlare direttamente con il cliente durante il check out.

Gli albergatori della provincia di Rimini hanno ben compreso che le recensioni non sono solo adeguate a soddisfare le esigenze di informazione del consumatore finale, ma sono anche utili per le performance dell'hotel, ovvero per il monitoraggio della percezione della qualità del servizio. Infatti, il 77% degli intervistati riconosce il valore aggiunto delle recensioni e cerca di cogliere i suggerimenti e, quando possibile, migliorare la propria offerta.

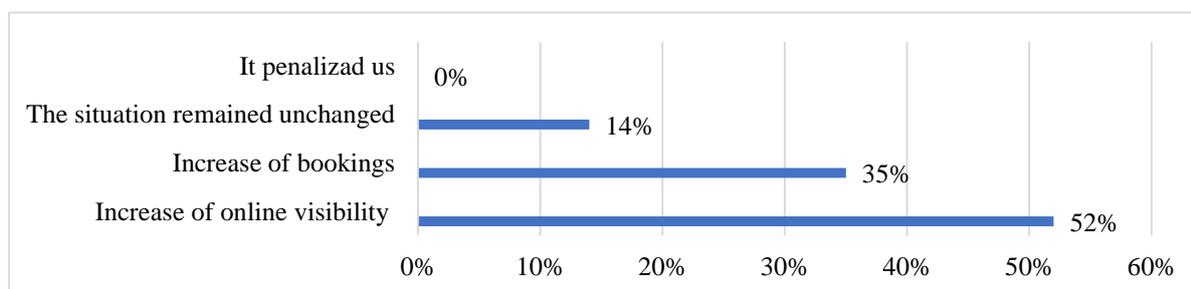
Non è sempre possibile ottenere un aumento della qualità del servizio; infatti, il 18% degli albergatori ne è consapevole e ritiene molto difficile intervenire per apportare modifiche soprattutto perché spesso richiede elevati investimenti. Solo il 6% dichiara di non essere interessato a migliorare il servizio.

Come è emerso anche in letteratura, una buona posizione in classifica può giustificare un cambiamento dei prezzi praticati.

Per quanto riguarda gli albergatori della provincia di Rimini, il 54% ritiene legittimo aumentare i prezzi in base all'aumento del rating. Una buona parte di essi, il 27%, lo ha già testato, mentre l'altro 27% ha affermato che questo aumento è giustificabile, ma evidentemente non ha ancora raggiunto un punteggio che può permettergli di farlo.

Per quanto riguarda la riduzione dei prezzi, invece, l'8% degli albergatori ha deciso di abbassare i prezzi a causa della perdita di posizione su siti di prenotazione on line, mentre il 92% non ha cambiato i prezzi.

Graf. 4: L'effetto della presenza nei siti web di recensione secondo gli albergatori



Fonte: ns. elaborazioni

La presenza degli hotel nei siti di prenotazione e di recensione ha indubbiamente apportato vantaggi e benefici (grafico 4) in quanto nessun hotel ha selezionato l'opzione "ci ha penalizzati", affermando che non vi erano implicazioni che influissero negativamente sulle performance degli hotel.

Per il 14% la situazione è rimasta invariata, mentre per il 52% degli hotel è stato fatto un passo in avanti, come l'aumento della visibilità online. D'altra parte, il 35% aumenta il numero delle prenotazioni ed i ricavi grazie alla presenza sulle piattaforme di recensione.

Per quanto riguarda gli strumenti utilizzati per gestire le recensioni online, l'87% degli albergatori non possiede un software dedicato e se ne occupa personalmente. Solo il 12% è supportato da software che acquisisce le recensioni e le identifica come positive, negative o neutre.

**Limiti della ricerca e sviluppi futuri.** Come tutte le ricerche, lo studio presenta alcuni limiti come ad esempio il campione è focalizzato solamente su un'area turistica italiana. Trattandosi di un lavoro in fase di sviluppo, i risultati necessitano di ulteriori analisi statistiche.

Ulteriori ricerche potrebbero riguardare espandere il campione in altre aree turistiche e fare delle comparazioni, quale potrebbe essere il miglior modo per misurare le performance dell'hotel, le piattaforme di passaparola on line utilizzate, nonché data analysis.

*Ulteriori suggerimenti potrebbero riguardare il confronto interculturale tra hotel di paesi diversi o capire come integrare la comunicazione organica con quella di terzi.*

**Implicazioni pratiche e teoriche.** *Sulla base di quanto emerso dall'analisi quantitativa, lo studio fornisce alcune implicazioni pratiche che potrebbero essere utili per la gestione degli hotel.*

*La gestione della reputazione online è una serie di azioni volte a salvaguardare l'immagine dell'hotel a partire dal monitoraggio dei siti di prenotazione.*

*Il monitoraggio è fondamentale per tenere sotto osservazione i commenti, specialmente se si basano su esperienze insoddisfacenti. Kim et al. (2015) indicano che la gestione delle risposte ai commenti negativi è uno dei predittori più salienti delle performance alberghiere, ecco perché tutti i feedback negativi richiedono una giustificazione o una spiegazione ed è assolutamente necessario mantenere un certo livello di professionalità nel fornire la risposta. Gli hotel che vorrebbero crescere, non solo sopravvivere, nel mondo dei social media dovrebbero rispondere in modo proattivo alle recensioni degli utenti nel tentativo di stimolare e gestire l'attività del passaparola online (Xie et al., 2016). Poiché l'EWOM è generato spontaneamente sulle piattaforme di social media e il suo impatto è di vasta portata, gli albergatori dovrebbero gestire attivamente le risposte per intervenire nelle conversazioni online con i consumatori in modo tempestivo.*

*Tuttavia, per un albergatore il cui hotel è registrato in numerosi portali sarebbe molto costoso controllare manualmente tutte le recensioni, in quanto richiederebbe molto tempo e attenzione. Oltre a questo, sarebbe bene rispondere in tempo reale non solo per riparare ai reclami, ma anche per anticiparli. Per questo motivo, gli albergatori potrebbero utilizzare software specifici e dedicati per la gestione della reputazione online e delle recensioni online: si tratta di strumenti di monitoraggio "intelligenti" che catturano commenti e menzioni sull'albergo e consentono una risposta immediata (ReviewPRO) o strumenti per gestire e monitorare le recensioni sui profili social come Hootsuite. L'utente che desidera prenotare deve sentirsi rassicurato, ridurre l'incertezza relativa alla decisione finale e infine sentirsi soddisfatto della sua prenotazione.*

*Un'ulteriore implicazione manageriale è che gli albergatori dovrebbero sviluppare una gestione sistematica del passaparola online e delle recensioni; dovrebbero superare l'approccio spontaneo e poco sistematico che a volte si traduce in comportamenti reattivi che non sono in grado di cogliere appieno le opportunità che i social media e l'economia di condivisione mettono a disposizione delle imprese. Le imprese di servizi dovrebbero comprendere l'importanza strategica della gestione delle recensioni online. Precedenti ricerche hanno raccomandato che i gestori degli alberghi monitorassero regolarmente le recensioni online dei consumatori e risolvessero tutti i problemi rilevanti (Lee & Hu, 2004).*

*Al di là della semplice lettura dei messaggi dei consumatori, Xie et al. (2016) suggeriscono di rispondere attivamente alle recensioni dei consumatori e coinvolgerli costantemente sui social media. In questo modo si apre una nuova linea di comunicazione con i potenziali clienti e si dimostra che l'albergatore è attento a soddisfarli. Inoltre, come affermato da Leong et al. (2019), i siti web degli alberghi potrebbero essere migliorati, offrendo ai viaggiatori un angolo per condividere le loro esperienze e pubblicare le loro foto in modo che possano raggiungere un contatto personale attraverso il sito web. I viaggiatori potrebbero anche essere coinvolti nella partecipazione a attività online come giochi e concorsi. Inoltre, gli albergatori possono anche offrire alcuni pacchetti speciali che sono più adeguati ai bisogni e ai desideri dei viaggiatori. Questo può essere fatto conducendo sondaggi online, caselle di posta di opinione o moduli di feedback.*

*Nella scelta del metodo per aumentare le recensioni, ci sono alcuni aspetti etici da considerare. Stanton et al. (2019) hanno rilevato che i diversi metodi per incentivare il passaparola online hanno ricevuto giudizi morali significativamente diversi, che hanno poi influenzato l'atteggiamento dei consumatori nei confronti dell'hotel e dell'immagine dell'hotel.*

*Dallo studio emergono anche alcune implicazioni teoriche. In primo luogo, il passaparola aumenta la consapevolezza del marchio e la reputazione online (Cioppi et al., 2016). Nel settore alberghiero, vari autori hanno analizzato i vantaggi del web 2.0 e delle ICT. Tra questi, Lim et al. (2011) sottolineano come il web 2.0 consenta di aumentare notorietà e reputazione, facilitare i processi rendendoli più snelli e veloci, ottenere feedback in tempo reale sui prodotti esistenti, costruire comunità tra i consumatori.*

*Inoltre, il passaparola online è un investimento importante per aumentare il coinvolgimento del cliente e migliorare l'analisi del profilo del cliente al fine di proporre offerte di valore innovative e personalizzate. In questo modo gli albergatori possono aumentare la fiducia e la soddisfazione dei clienti, ampliare il portafoglio clienti.*

**Originalità del lavoro.** *Lo studio condotto fornisce spunti di originalità poiché, a differenza dei precedenti studi empirici sul tema delle recensioni on line nel comparto alberghiero, questo lavoro ha colmato alcune lacune presenti nella letteratura per quanto riguarda la gestione delle risposte alle recensioni online, lo stimolo a generare nuovi commenti e l'impatto delle recensioni online sulle performance dell'hotel in termini di qualità del servizio e di prezzo.*

**Parole chiave:** *passaparola online; turismo; hotel; recensioni online; servizi.*

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# Business Models for Sustainability (BMfs) in the sharing economy. Emerging platforms in accommodation service

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**Objectives.** *Contributing to the debate on share value generation in the digital era by evaluating the nature of the business model and the nature of the value generated by sharing economy both on-line and off-line. In particular, investigating how sustainable are sharing economy digital platforms in the tourism accommodation service.*

**Methodology.** *Through a review of the most recent literature on business models (BM), business model for sustainability (BMfs), business models in the sharing economy, were identified a comprehensive sharing economy business model framework and tools to evaluate the nature of the value they generate. By collecting qualitative secondary data, these tools were used to investigate two illustrative cases of sharing digital platforms in accommodation services whose mission include issues connected to sustainability - Ecobnb.it and Fairbnb.coop.*

**Findings.** *Fairbnb.coop is a singular transaction model (dyadic) while Ecobnb.it is a commission-based platform (triadic model). Both platforms adopt a BM for sustainability and generate a sustainable shared value. Due to its dyadic structure and the cooperative form, Fairbnb is more inclined to distribute the value generated among the platform users and the society.*

**Research limits.** *Exploratory study building on new streams of managerial literature. More case studies should be analysed and compared by using mixed tools of analysis and primary and secondary data.*

**Practical implications.** *Preliminary insights suggest that BM for sustainability seems to be more effective to share the value generated with the society when BM structure is dyadic.*

**Originality of the study.** *Investigating an n. which is still in its infancy - the sustainability of sharing digital platform - through cross-disciplinary managerial literature.*

**Key words:** *business model; business model for sustainability; sharing economy; digital platforms; accommodation service*

## 1. Introduction

*Sustainability (Turner, 1993; Herman and Kenneth, 1993, Goodland, 1995) is among the main challenges that business models (BM) are pursued to face as the classical economic dogma of unlimited growth today clashes with the awareness of limited physical resources (Herman and Kenneth, 1993), the impact of global warming and climate change (UNCED, 1992) and the urgency of social inclusion and participation (Warschauer, 2004).*

*The failure of traditional BM (Osterwalder, 2004; Osterwalder et al., 2005) to overcome the problems of the economic growth's limit (Porter and Kramer, 2011), asks for the transition towards business models for sustainability - BMfs - (Lüdeke-Freund, 2010; Boons and Lüdeke-Freund, 2013; Rauter et al., 2015). This transition questions the nature (economic, social and environmental) and sources of value generation (value proposition, creation, delivery and capture) which incorporate, but do not remain entangled to, the traditional economic drivers such as profit, income, costs and benefits (Porter and Kramer, 2011, 2012).*

*In the digital era, this transition is challenged by technological advancement and IT development which transformed the actors involved in the interactions - traditional and new ones - and the ways and the places worldwide - real and virtual - in which actors interact (Armstrong, 2006; Evans, 2008). The value created and distributed online and off-line is questioned by the reshaping of an ancient phenomenon, the sharing economy, which has attracted the attention of scholars and organizations because its BM may suit with the need for sustainability, based on the exchange of underused resources at fair prices through social interactions (Belk, 1988, Belk, 2013). On the other hand, the technological advancement of digital platforms in the sharing economy market that have given more and more power to intermediaries, establishing new and distinctive strategies positioning (Porter, 2001). The investigation of the business models and new management practices in the sharing economy are still in their infancy (Magretta, 2002; Osterwalder, 2004; Sigala, 2018).*

*This contribution is positioned at the intersection of the most recent literature on business models (BM), business model for sustainability (BMfs) and business models in the sharing economy. Through a review of this cross-disciplinary managerial literature, it aims at evaluating the nature of the business model and the nature of the value*

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generated by sharing economy both on-line, through digital platforms, and off-line. In particular, it aims to investigate how sustainable is sharing economy in the tourism accommodation service through the analysis of two illustrative digital platforms - *Ecobnb.it* and *Fairbnb.coop* (Yin, 2014) - which include issues connected to sustainability in their mission. Following the contributions of Ludeke-Freund (2010) and Boons and Ludeke-Freund (2013), BM digital platforms' theory is linked to sustainability concept and tools used to analyse and evaluate the value generated - Business Model Canvas (Osterwalder, 2004) and Sustainable Business Model Canvas (Upward, 2013). Finally, the BM theory is linked with the sharing economy and digital platform through the comprehensive business model category of Ritter and Schanz (2019) that combines the BM elements with those of the digital platforms. The study provides preliminary insight about the nature of the value that is created by the sharing economy digital platforms and the BM structure more likely to generate and distribute sustainable value.

## 2. Theoretical background

### 2.1 Business Model and Shared Value

The notion of Business Model (BM) has been introduced and used in economic and managerial fields around the 20<sup>th</sup> century (Osterwalder, 2004; Osterwalder et al., 2005; Zott et al., 2011), frequently in relation to Internet, Information Technologies (IT) and e-business (Amit and Zott, 2001; Afuah and Tucci, 2001; 2003; Osterwalder et al., 2005; Zott et al., 2011). BM has been conceived both as a concept - a representation, a description or a statement, a framework (Stewart and Zhao, 2000; Weill and Vitale, 2001; Morris et al., 2005; Shafer et al., 2005) - and/or as a tool - a model, a structural template, an architecture (Osterwalder, 2004; Osterwalder and Pigneur, 2005; Timmers, 1998; Amit and Zott, 2001; Afuah, 2004). Irrespective of the different conceiving of this notion, scholars agree that BM is an emerging unit of analysis of organizations (Zott et al., 2011) and, as a result of the ever-changing market, it is always under innovation pressure.

According to some of the most influential scholars (Lüdeke-Freund, 2010; Boons and Lüdeke-Freund, 2013; Osterwalder, 2004), BM combines four pillars expressed in term of values - proposition, creation, delivery and capture - whose system interactions results in (share) value (proposition, creation, delivery and capture). Value proposition is the value that organizations embeds in the product or service. Value creation and delivery result respectively from - the existing upstream relationships within the supply chain (key activities, key partnerships, key resources and channels); and the down-stream relationships with customers, the distribution and sale channels. The value capture is the financial model: the costs and benefits of the previous elements and their distribution across the BM stakeholders; for the organization it represents its revenues. The organization's BM configuration may have two structures: the traditional dyadic BM structure based on the producer-consumer relation; instead, the triadic -and even polyadic- BM relation based on the producer-intermediary-consumer relation. The intermediary has shifted mainly on-line.

Porter and Kramer' (2011) critical analysis of BMs allows to overcome the narrow conception of capitalism focusing on the firm - and value (proposition, creation, delivery and capture) - as a close system and shift towards a broader concept focusing on exploiting the full potential of organizations through the engagement of stakeholders and the society in the organization value chain. Shared Value captures both the value nature - economic - and value sources - the variety of stakeholders participating in complex network interactions - involved in an organization BM. It bridges economic progress to the needs of society through policies and practices that improve the performances of a company while strengthening the economic and social conditions of its community (Porter and Kramer, 2011). SV is a long-term corporate strategy allowing to integrate business success (value creation for companies) with societal progress (value creation for society) (Lüdeke-Freund et al., 2016). The Business Model Canvas (Osterwalder, 2004), a strategic planning tool, which help to illustrate, develop and monitor BMs structure and activities acting as an executive summary for the business plans aimed at evaluating how SV is created.

### 2.2 Business Model for Sustainability and Sustainable Shared Value

Nowadays, traditional BM clashes with a range of issues related to the economic growth's limit (Porter and Kramer, 2011): the awareness of limited physical resources (Herman and Kenneth, 1993), the impact of global warming and climate change (UNCED, 1992) and the urgency of social inclusion and participation (Warschauer, 2004). The digital era serves as a multiplier as the shifting of humans' horizons and interactions from local to global, and from real to virtual spaces, have grown the issues related to sustainability in size and depth. Actors, resources/input and tangible and intangible outputs involved in production, exchange and consumption processes, both off-line and online, have expanded the nature, level and scale of their impact growing exponentially worldwide.

These challenges question the broader negative impact that the system, generating a short-term SV, has on society and environment in the long-term (Porter, Kramer, 2011). And they ask for an innovation of BMs vision by including sustainability (Lüdeke-Freund, 2010) and the development of integrative and competitive solutions that both reduce negative externalities of shared value generation and increase its positive effects. In BM for sustainability (BMfs) (Boons and Lüdeke-Freund, 2013) the value of an organization combines the company's self-interests and social progress in term of sustainability - the balance between economic, social and environmental costs and benefits (Lüdeke-Freund, 2010; Porter and Kramer, 2011; Schaltegger et al., 2016).

*The incorporation of sustainability challenges in BM theory affects necessarily the enunciation of the four pillar values (Ludeke-Freund, 2010) and the result of their interaction which is sustainable shared value. The value proposition incorporates (or not destroy) sustainable - economic, social and environmental - values into the product or service; this means to integrate private benefits (for the company) with public benefits (for society) increasing general well-being. The value creation integrates the partnerships, governance, activities and resources up-stream the value chain that enhance the sustainability of an organizations looking at biophysical stocks and ecosystem service. The value delivery integrates the relationships, stakeholders and channels down-stream the value chain looking at ecosystem actors and needs and addressing the principles of eco, social or sustainability marketing through market segmentation and distribution. The financial model at the base of the value capture is complemented with accounting measures evaluating both economic (costs/revenues), social and environmental (impacts/benefits) values and tools to distribute the costs and benefits across the company value chain. The Value generated by BMfs is a Sustainable Shared Value (SSV) which captures both the multidimensional value nature - economic, social and environmental - and multiple value sources taking part in the creation of value and carrying out costs and benefiting of the positive effects of value generation. In particular, the private benefits of businesses and consumers can increase the well-being of society (public benefits) in which production and consumption choices are reversed, with the achievement of widespread well-being. The Sustainable Business Model Canvas (Upward, 2013) is the tool used to evaluate this value and it is developed by integrating the Business Model Canvas with the organization's contexts (natural environment, society and financial economy) and its stakeholders and their needs.*

### 2.3 Business Model and Sharing Economy

*Both BM and BMfs face the opportunity and challenge that an ancient phenomenon of sharing economy (Belk, 1988) has assumed in the digital era. Originally it has been defined as a socio-economic ecosystem where people share and exchange underutilized tangible or intangible assets - such as goods, skills, spaces, time and services - for monetary or non-monetary benefits (Botsman and Rogers, 2010; Belk, 2013; Breibach and Brodie, 2017; Muñoz and Choen, 2017; Frenken and Schor, 2017). The underused assets are shared in the form of renting, lending, bartering, swapping instead of the traditional exchange of ownership. Both the underused resources and the sharing instead of the owning mechanism, has been interpreted by some scholars as a potential sustainable behavior (Frenken, 2017; Frederik and Guenther, 2018).*

*Currently the sharing economy undergone profound changes and it has expanded its size exponentially becoming one of the main exchange mechanisms. Sharing economy BMs have assumed mainly a triadic structure giving new power to virtual intermediaries. Digital platforms have allowed many people to get in contact, quickly and simply, encouraging the exchange at lower price and becoming the guarantors over the transactions, which usually take place between strangers. Due to these benefits, a growing number of private actors entered the market by establishing and creating new businesses. However, this phenomenon has led an over-use of the resources and the creation of new assets instead of using underutilized. The over-exploitation of these sharing mechanisms may generate also negative economic, social and environmental externalities on the society. Exemplary is Airbnb, a digital platform in the accommodation service, which has exacerbated the real estate market, the gentrification and forced locals to move to the suburbs (Zarvas et al., 2016).*

*Ritter and Schanz (2019) link the BM theory with the sharing economy by developing a comprehensive business model matrix that applies BM elements to sharing digital platforms. Four ideal-type market segments of the sharing economy - singular transaction model, commission-based platforms, unlimited platforms and subscription-based platforms - are identified by combining two dimensions. Value creation and delivery dimension analyses the relationship between the platform and its users defined as enable if the relationship is triadic or polyadic and employ if the relationship is dyadic. Value capture dimension identifies the revenue streams nature which is utility-bound when the compensations is linked to the fruition of the tangible or intangible assets and utility un-bound when there is a fee or for free. Moreover, the value proposition of the BMs in sharing economy allows to categorize the digital platforms on the basis of their assets exchanged nature in product-oriented, use-oriented and result-oriented.*

### 3. Case study and research design

*Tourism, one industry strongly influencing both global economy and local systems, faces the entry of sharing digital platforms in different sectors, hospitality in particular (Zarvas et al., 2016). These platforms (Booking, Couchsurfing, Airbnb, etc.) fostered important changes on both the demand and supply side. On the supply side (value creation), they allow private actors to enter the market selling their assets on-line as occasional landlord and competing with industry professionals. On the demand side (value delivery), they allow consumers to access a lower priced housing, speeding up transactions and promoting personal interaction with locals (Zarvas et al., 2016).*

*The evaluation of the nature of BM and the related value generated by sharing economy in the tourism accommodation service is investigated in Ecobnb.it and Fairbnb.coop, two illustrative cases (Yin, 2014) of digital platforms which include in their mission environmental and social issues (Porter, 2011).*

*Ecobnb was born in Trento (Italy) from ViaggiVerdi.it blog with the aim of telling travel stories respectful of the environment, places and communities, where green travellers and environmentally friendly accommodations meet*

(value proposition). *Ecobnb* allows individuals to rent their accommodations (or part of them) using sustainable indicators as prerequisites for access to the platform itself (organic or local food, bio-architecture; 100% renewable energy, low-consumption lights; hot-water solar panels; eco-friendly cleaning products; >80% of sorted waste collection; access without car; water flow and rainwater recovery and reuse) and collaborating with green organizations (value creation). Moreover, the platform provides green accommodations that could be self-certified or certified by national and international certification bodies which guarantee for the consumer downstream of the value chain (value delivery). Finally, the revenue is mediated by the platform that, on the one hand, holds a fee for itself and, on the other, give back the payment to the service providers (value capture).

*Fairbnb* is a cooperative born in Bologna (Italy) as response to the limits that digital short-term accommodation platforms have shown in touristic cities. Is cooperative platform builds on dyadic relationship (the owners are also the providers) aims at building a dialogue with citizens and institutions by applying the “I host - Ihome” policy (value proposition). The platform redistributes its revenue not only within the platform system (i.e. the owner/s) but in the community in which the platform operates (50% of the revenues) through social and environmental projects and (value delivery). The partners up-stream the value chain (hosts) make their own resources (accommodations) available (value creation) to consumers (guests) that want to stay in homes that respect the social problems arising in the local context.

The research design adopted to analyse these illustrative cases builds on a cross-disciplinary perspective at the intersection between BM and shared value (Osterwalder, 2004; Porter and Kramer, 2011), Business models for sustainability (Lüdeke-Freund, 2010; Lüdeke-Freund et al. 2016) and BM in the sharing economy (Ritter and Schanz, 2018). The nature of the BM and the value generated (economic, social and environmental) by these platforms, for whom is generated (supply side and demand side) and where this value falls (on-line/off-line) are evaluated by applying respectively the comprehensive business model category framework (Ritter and Schanz, 2019) and the (Sustainable) Business Model Canvas (Osterwalder, 2004; Upward, 2013). These tools were used to analyse the BM and represent/identify the activities/inputs/outputs implemented by these platforms in different phases of the value chain. The value creation is divided in key partners, key activities and key resources; the value delivery in customer relationships, customer segments and channels; the value capture consists in the cost structure and revenue streams. Data were collected through web-sites, articles and interviews (qualitative and secondary data).

### 3.1 The Ecobnb.it

*Ecobnb*'s BM presents the following features whose:

- Value proposition: the value embedded in the *Ecobnb* service takes into account both economic, social and environmental issues in a virtuous and sustainable used-oriented perspective. It considers the environmental impacts trying to reduce them thanks to the use of environmentally sustainable indicators as prerequisites to access the platform and the collaboration with green organizations and national and international certification bodies. The value proposition is declared by platform at on-line level.
- Value creation: The platform takes care of the upstream segment of the supply chain. On the supply side, the accommodations are self-certified by the owners and/or have also national or international environmental certifications, built on a participatory network (governance). The in-house capabilities, activities and resources are based on environmental indicators. The value created is double: lower costs for renting the accommodations (economic value) and the generation of green impacts for the environment (environmental). Moreover, at least in the platform system the social value is not destroyed. The economic value is created on-line by the providers, while the environmental one occurs on the territory.
- Value delivery: The target customers are green travellers, careful to social and environmental issues (environmentally friendly market segment). They can review the accommodations so that, if there is any non-compliance, the platform can intervene (participatory system). The demand meets the offer at on-line level, where the economic value is delivered, while it enjoys the sustainable environmental value at territorial level.
- Value capture: the economic revenue is spread among the users through the platform system (on-line) which acts as an intermediary. The environmental value (expressed in term of benefits) are shared among users (providers and consumers) at territorial level.

In conclusion *Ecobnb.it* is a commission-based platform (triadic model) which is use-oriented, enabling and bounding (Ritter and Schanz, 2018) adopting a BM for sustainability. It creates economic and environmental value without destroying social one. The value embedded in the service is sustainable and shared among the platform users and the society can enjoy the benefits deriving from a lower environmental impact.

### 3.2 The Fairbnb.coop

*Fairbnb*'s BM shows the following features whose:

- Value proposition: the value embedded in the platform takes into account the issues that generally affect the accommodation service segment. It proposes a service, which respects the local system in which the assets are located thanks to the creation of social and environmental projects chosen by users in dialogue with citizens and local administrations. Moreover, the platform applies the “I host - Ihome” policy, limiting the effects of short-

term rentals on the real estate market and the over-exploitation of resources. The value proposition is declared by platform at on-line level.

- Value creation: The type of structure chosen by the platform (cooperative) ensuring sustainability upstream the value chain. The service providers (which are also the owner) adhering to the platform, spontaneously decide to remove a percentage of their revenues from reinvesting in social projects. The value created is double: owners/providers on the one hand create economic value by making their assets available at fair prices; on the other they create (or not destroy) social and /or environmental value thanks to their active involvement in projects that reduce impacts on the territory. The cooperative system is built on a participatory system that on the on-line level creates economic value, on the territory create social and environmental value.
- Value delivery: The market niche to which the platform is addressed, is composed by those travellers who decide to use this type of platform (cooperative) because they are aware of the problems caused by digital platforms in the accommodation. The economic value is distributed on-line through the platform; the social (and environmental) value is delivered through the off-line projects.
- Value capture: It shows an equitable on-line distribution of revenue among the actors thanks to the cooperative structure: the platform acts as an intermediary giving to the providers their profits and retaining part of the profits to pay the management of the service and to finance social or environmental projects. The social and environmental benefits fall on the territory through the creation of projects.

In conclusion, also Fairbnb.coop is a singular transaction model platform (dyadic) adopting a BM for sustainability: it is a use-oriented, employing and bounding platform (Ritter and Schanz, 2018). The value embedded in the service is sustainable and distributed among the platform users and the society. In particular, the platform acts as part of the society itself reinvesting its gains and bringing its objectives closer to those of the communities. The sustainability is guaranteed by the way economic profits and social and/or environmental benefits are distributed and shared. The SSV strategy revolves around the distribution of the value and the awareness that a healthy and sustainable market leads to greater profits also in terms of profitability.

#### 4. Discussion and conclusions

This exploratory contribution aimed at evaluating the nature of the business model and the nature of the value generated by sharing economy both on/through digital platforms and off-line. In particular it aims to investigate how sustainable is sharing economy in the tourism accommodation service. These research questions were addressed through a review of most recent literature on business models (BM), business model for sustainability (BMfs), business models in the sharing economy. Selected tools of analysis at the intersection of these research fields were used to investigate two illustrative cases of sharing digital platforms in accommodation services whose mission include issues connected to sustainability.

Results show that Fairbnb.coop is a singular transaction model (dyadic) while Ecobnb.it is a commission-based platform (triadic model). Both platforms adopt a BM for sustainability and generate a sustainable shared value. They announce their value proposition on the platform (on-line) and their providers (value creation) and their consumers (value delivery) meet on the platform (on-line), generating for each other economic value. The economic value is captured by the platform and redistributed between users through the platform (on-line). Instead, the environmental and social benefits do not remain entangled in the platform system, but they flow on the local system (off-line level). The virtuous value sharing mechanism promoted by Ecobnb.it and Fairbnb.coop considers the negative externalities they generate on local system driven by the search for economic profit and introduce distribution mechanisms to avoid or compensate these externalities.

These preliminary insights have managerial and theoretical implications. Dyadic relationships/platforms seem to be more inclined to favour sustainable sharing behaviours but, as Fairbnb demonstrates, this depend on the form of organization and its mission - this assumption should be tested on other dyadic platforms. The building of a conceptual framework defining the sustainability of sharing economy should analyse the BM features in each of the four ideal-type market segments of the sharing economy - singular transaction model, commission-based platforms, unlimited platforms and subscription-based platforms - and to evaluate the nature of the value generated, from and for who and where. These considerations open the way to other questions: how does the form of an organization impact on the sustainability sharing digital platforms? Where do the benefits of environmental and social sustainability fall? While the economic benefits are created and delivered on-line, may the environmental and social value only occur in local system at off-line level? Further research should be conducted for both a better theoretical understating of the phenomenon and the elaboration of practical tools which allow to investigate and analyse the structure and behavior of the digital platforms in the tourism accommodation service in the sharing economy.

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### **Websites**

[www.ecobnb.it](http://www.ecobnb.it)  
[www.fairbnb.coop](http://www.fairbnb.coop)



# Technology role in innovation ecosystem

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**Purpose:** Innovation is stated to take place in wider interconnected contexts more than in single firms, and scholars focusing on the understanding of innovation as multi-actors and collaborative-based phenomenon are increasingly growing in number as time goes by (Adamides and Karacapilidis, 2006; Genus and Coles, 2008; Russo Spena et al., 2017). These contexts of innovation are referred to as innovation system or innovation ecosystem and the purpose of this study is to clarify the role of technology in the innovation ecosystem literature.

**Key Literature Reviews:** Large firms or institutions are unable to afford the innovation alone because of rapid changes spurred on by the greater challenges society has to face, and the opportunities that innovation produces are more useful than before to spread into more changes when innovation is open and its results are shared (Chesbrough, 2013).

An important feature of this new complexity is that innovation is usually seen strategically developed around a specific technology increasingly involving a great variety of actors and networks (Adner 2006; West and Borges, 2014). Technology is one of the main drivers of innovations (Brown and Mason, 2014) that is considered a necessary ingredient for introducing transformational changes influencing business and economic growth, as highlighted by the diffusion of concepts like Internet of Things (IoT), Industry 4.0, artificial intelligence (AI) and digital transformation.

The most known context in which relationships between innovation and technology have been investigated in a wider and networked perspective is the literature field of innovation system, in which the research is ongoing (Jenson et al., 2016) to define advancements about technology, its role and its features in the shaping of the systems of innovation.

Moreover, scholars within different disciplines, such as regional studies (Zabala-Iturriagoitia et al., 2007), strategy and marketing (Adner, 2006; Gawer and Cusumano, 2014), entrepreneurship (Carayannis et al., 2018), and social and sustainable development studies (Carayannis and Campbell, 2009) move towards the idea of system into innovation ecosystem (de Vasconcelos Gomes et al., 2018). An innovation ecosystem stresses the focus on how different actors interplay through complex and dynamic interactions to achieve innovation-driven goals (Valkokari et al., 2016; Dedehayir et al., 2018), with technology playing a central role in favouring knowledge flows and integrations (Gawer and Cusumano, 2014).

There has been a significant overlap and even an interchange between scholars studying technological advances through both the innovation system and innovation ecosystem approaches (Russo Spena et al., 2017). Yet both fields of study are concerned with technology development and innovation, the former more at the macro level of institutional structures needed to take advantage of innovations for economic growth and the latter at the level of industry or technological innovation of the sort to sustain business growth. Recent developments in social studies (Carayannis and Campbell, 2009) and service science (Vargo et al., 2015) have made greater contact possible between the two fields.

**Methodology:** The methodological choice is a systematic review that allows a focus on the theoretical proposals by scholars and the identification of the pivotal role of technology and the description of innovation-based mechanisms in innovation ecosystem literature. The systematic review we perform is based on the methodological suggestion proposed by Gough et al. (2012) because the authors shaped the research process starting with the definition of the review question, then going through the data collection with a specific search strategy and finally moving towards the assessment of contribution and the interpretation of the content by the researchers.

The research process starts with the collection of data, so we have performed queries on Web of Knowledge - Web of Science to acquire most of the contributions on innovation ecosystem using the descriptors 'innovation ecosystem\*' to consider both singular and plural versions (Pittaway et al., 2004).

**First results:** The first results show that the key elements are the overall idea of technology as pivotal in driving innovation, the actors affecting technology and contributing to reach the innovation-based goals, and the decisional process emerging because of technology. Furthermore, the emerging features on evolution through time and

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knowledge-transforming mechanisms favoured by technology in innovation ecosystem show the opportunity to learn in-depth from specific insights generated in both literatures and to delineate a more comprehensive approach to the technology related to innovation in wider interconnected contexts.

The technology issues in innovation ecosystem direct attention to an ecosystem's evolution over time as well as in relation to other ecosystems and paid most attention to knowledge-transforming mechanisms and the generative force of technologies.

Innovation ecosystem literature is quite recent and starts to be affirmed through the rise of a technology era in which the key element is considered open access to technology (van der Borgh et al., 2012; Selander et al., 2013). Technology is considered a critical resource at the basis of the growth of firms and businesses in different industries (Adner, 2006). The integration of technologies in innovation ecosystem is delineated as an element that influences the emergence of relationships among the different actors, both upstream and downstream, and the development of innovation in the whole ecosystem (Adner and Kapoor, 2010). Moreover, the impact of the new technologies on the old ones has been intertwined into two different strategies of 'racing' or 'retreat' (Adner and Snow, 2010), as introduction of disruptive technologies has been related to the strategic consequences of continually adjusting for navigate coopetitive tensions (Ansari et al., 2016).

Generally, when framing technology in innovation ecosystem there are the pillars of a pattern towards the achievement of innovation-based goals, namely the actors and their relationships. One of the ways in which an innovation-driven goal is presented is growth, and industries are under focus when dealing with an innovation ecosystem. Additionally, the aim of technology is mainly thought of as disrupting previously available technologies.

A multitude of actors is considered as positively affecting the development of technology with reference to different businesses, diverse solutions to be achieved and several sources of knowledge to be taken into account. The dynamic relationships among the multiple technologies in innovation ecosystem have led to the identification of the roles of actors, products and applications, and support and infrastructure (Adomavicius et al., 2007; Adner and Snow, 2010), which together influence technology evolution. Moreover, the analysis of technology development and the roles of technology in different innovation contexts (Adomavicius et al., 2007), such as mobile technology ecosystems (Hedman and Henningson, 2015) and financial ecosystems, has given a growing importance to the integration of demand-side forces, namely stakeholders' actions (Kauffman et al., 2015).

Innovation ecosystem scholars have even paid attention to platforms as the main instrument enabling actors' cooperation in achieving technology-based goals through the great influence played by platform leaders. One actor among the others is particularly under focus, namely university, because it represents a technology transfer agent and a competence carrier.

Innovation ecosystem studies provide a clear and unequivocal relation between the context(s) hosting the innovation process and the technology, even if the contexts taken into account are different. The contexts are seen as an enabler because they represent the physical or virtual place where actors cooperate in the achievement of innovation-driven goals.

When dealing with framing and describing innovation-based mechanisms through technology, innovation ecosystem studies paid most attention to the generative force of technology and its complexity, which is manifested both in the artifacts (new propositions, new tools, platform, and so on) and in the interactions between actors with different rules and perspectives.

Technology acts as a connector and collector of actors holding knowledge and leading towards knowledge combination through technologies (like platforms) in an ecosystem-based perspective. In this sense, the role of technology has been valued for its interoperability within platform ecosystems in which different firms, behind the platform leader, must identify the better collaboration strategy (Ceccagnoli et al., 2012; Hung et al., 2013).

The importance of the contexts in which technology can be used has sometimes been related to national or regional contexts in which high-technology SMEs create the conditions for the enactment of innovation in the form of emerging, co-adapting, and growing (Best, 2015; Frenkel et al., 2015); however, the interoperability of technologies has been raised as a topical issue in research that relates the Internet of Things and Open Innovation model within smart cities considered innovation ecosystem joining institutions, knowledge activities and web-based applications (Carvalho, 2016; Scuotto et al., 2016) in a sustainable well-being view (Hämäläinen, 2015).

The role of technology as a tool to improve existing value propositions creating a new offering or reconfiguring ecosystem partners (Maglio and Spohrer, 2013) has also been related to the distinction between operand resources (i.e., people and businesses) and operant resources (i.e., technology and information) (Akaka and Vargo, 2014). Otherwise, the increasing importance of technology has led to its delineation as an operant resource, one capable of acting on other resources to create value within the so-called service (eco)system (Lusch and Nambisan, 2015). Technology emerges to be both an operant and operand resource, "an outcome and a medium of value co-creation and innovation" (Lusch and Nambisan, 2015; Vargo et al., 2015). The scope of technology is broadened beyond a material artifact by considering the multiple roles of technology in service ecosystems and how it influences and is influenced by human actions (i.e., practices) and institutions (i.e., rules, norms, and practices) (Vargo et al., 2015).

Connective institutions, either formal or informal, are necessary to bridge individual components in an ecosystem and allow free-flowing exchange and collaboration between various actors (Vargo et al., 2015).

In many cases, research universities are the critical lynchpin tying together the necessary components of a dynamic and collaborative innovation ecosystem (Clarysse et al., 2014; McAdam et al., 2016; Carayannis et al., 2018). While it is necessary for university to play this role, many ecosystems have different convening institutions bringing

together top human capital, research and development funding and leading private-sector actors; in addition, these ecosystems are drawn on venture capitalist and incubators playing a critical role in fuelling innovation-led growth (Fernández Fernández et al., 2015; Haines, 2016).

Finally, innovation-governance mechanisms such as policy are another element taken into account as policies are considered to be a way to favour the flourishing of innovation-based activities. The focus on technology as an enabler of innovation within ecosystems has also been analysed in terms of its link with policy where the use of a top-down approach to create a fair business environment emerges. This top-down approach is typical in developing countries where national programmes aim to develop flourishing ecosystems based on a technology and business incubator (Khorshed et al., 2014; Li and Reimers, 2015). Instead, in an ecosystem where innovation is typically driven by grassroots entrepreneurship (Krishna and Sha, 2015), technology plays a critical role as a tool allowing the enhancement of actors and different urban stakeholders' involvement in bottom-up initiatives for a better quality of life (Gretzel et al., 2015; Veeckman and van der Graaf, 2015).

However, in innovation ecosystem studies, the focus placed on incubators, entrepreneurship and stakeholders' involvement made policy less relevant because central institutions seem to play a less relevant role.

**Future steps:** As the first results show, the technology issues in innovation ecosystem not only direct attention to the structures and operation of the system, but also consider its evolution through time, as well as in relation to other ecosystems. Technology's role is not only seen as a question of the possibility of more knowledge resources being at the disposal of innovation, but mainly involves knowledge-transforming mechanisms; technology became critical for its ability to cross knowledge domains and innovation contexts and to produce unintended consequences through the learning processes it generates. Thus, the complexity and nonlinearity typical of interactions in the ecosystem perspective provides opportunities to further investigate technology's role in the formation of shared infrastructures to influence ecosystem stability and development.

The importance of knowledge sharing thanks to technology and the role of a variety of actors in innovation ecosystem are interesting topics to be further analysed; so, further steps of the research will look at one of the most important actor identified in literature - i.e., universities - in order to analyse the mechanisms of knowledge creation, sharing, and transfer facilitated by these actors, and their role in the governance and innovation process.

**Keywords:** technology; innovation ecosystem; knowledge; university

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# Near or far? How geographic distance affects the inter-organizational relationships in local innovation systems

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*The study aims to explore the impact of geographic proximity on patterns of inter-organizational cooperation, within a Local Innovation System (LIS). We take empirical evidence from the Biopharma Local Innovation System in Greater Boston Area by analysing the impact of geographical distance on three types of inter-organizational links, i.e. Venture Deals, Joint R&D partnerships and Intellectual Property (IP) transfer agreements. Our findings show that the importance of geographic distance varies across different types of cooperation practices and, more specifically, that it has a negative effect on the formation and the strength of venture deals and IP transfer types of relationships. Conversely, no significant effect has been recorded for the establishment and intensity of R&D alliances. This work allows for a more comprehensive analysis of the impact of geographic proximity by taking in due account the network composition in terms of both actors' heterogeneity and relationships' variety whereas extant literature privileges the focus on inter-firm or university-industry relationships. Also, from an empirical standpoint, by adding measures of geographical distance, this study contributes to reduce the ambiguity of the notion of spatial proximity.*

**Objectives.** *Since the 1980s, literature on innovation systems (Freeman 1987, De la Mothe and Paquet 1998; Cooke 2001, 2004; Asheim and Coenen, 2005) has introduced the territorial variable to the study of innovation processes at different geographical scales, i.e. national, regional and local, assuming that geographic proximity stimulates processes of collective learning (Lundvall, Johnson, 1994; Lawson, Lorenz, 1999; Lundvall, 2010), facilitates the transfer of tacit knowledge (Bathelt et al., 2004) enhances trust mechanisms (Moulaert and Sekia, 2003) and increases the competitive advantage of networks at the local level (Tallman et al., 2004). The idea that geographical proximity is at the heart of the network formation (Morgan, 2004) has been questioned by a strand of literature arguing that excessive proximity among firms and organizations may lead to an environment of excessive closeness and knowledge overload which, in turn, can reduce the scope for novelty and learning and lead to lock-in phenomena (Geldes et al., 2015), i.e. the "proximity paradox" (Broekel and Boschma, 2011; Cassi and Plunket, 2014). Consequently, a recent body of literature has been concerned with determining which is the proper level of distance (Rodriguez-Pose 2010; Fitjar et al. 2016) and introduce alternative measures of proximities to the purely geographical one that include cognitive, organizational, social and institutional dimensions (Boschma 2005; Crescenzi, et al. 2016; Lagendijk and Lorentzen 2007; Lagendijk and Oinas 2005; Torre and Rallet 2005). From a local innovation system perspective, the issue of whether geographic proximity positively affect the emergence of inter-organizational relationships it is complicated by the fact that, due to their complexities, innovation-driven activities require a broader spectrum of cooperation practices ranging from contract research, patenting and licensing, venture deals, spin-off formation to the provision of industry training courses, consulting and creation of technology parks, with differences in terms of the characteristics of the exchanged knowledge (tacit-explicit) and the nature of ties (formal or informal). While the issue of whether spatial proximity increases inter-organizational tie formation has been widely debated (D'Este et al., 2010; Broström, 2010; Biggiero and Sammarra, 2010; Crescenzi et al. 2016; Cassi and Plunket, 2015; Steinmo and Erasmussen, 2016), its differential impact across diverse types of relationships has been less explored. Only a few scholars (Huggins et al. 2012; Grillitsch et al. 2015; Quatraro and Usai, 2017; Lazzaretti and Capone, 2016; Balland et al. 2016) have analyzed the effect of locational factors on the nature of cooperation mechanisms, suggesting that the impact of geographical proximity varies significantly across diverse kinds of knowledge flows and that, in some cases, it is mediated by other forms of proximities and the phase of technology life cycles. However, apart from a few exceptions (Balland et al. 2016; Quatraro and Usai, 2017), empirical studies on the geography of networks of innovation tend to consider spatial proximity as the general co-localization of partners within the same institutional*

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borders (at the national or regional level) and overlook the implications deriving from its operationalization in terms of geographical distance at smaller scales. Also, extant literature privileges the focus on inter-firm or university-industry relationships at the network structural level, thus failing to capture the diversity of innovation networks' demography (including government and capital providers) and their variety of forms of cooperation. Hence, the objective of this work is to fill the above literature gap and explore how the impact of geographic proximity varies across different types of inter-organizational relationships within an innovation system from a micro-geographical perspective, that is typical of Local Innovation System. In particular, the study aims to answer to the following research questions: RQ1. Does geographic distance affect the emergence of inter-organizational relationships within an innovation system? RQ2. Does the impact of geographic distance vary across different types of inter-organizational relationships within an innovation system?

**Methodology.** In order to test our hypotheses, we take empirical evidence from the Biopharma Local Innovation System in Greater Boston Area by analysing the impact of geographical distance on three types of inter-organizational links, i.e. Venture Deals, Joint R&D partnerships and Intellectual Property (IP) transfer agreements. This work analyses the case of the Biopharma LIS in Greater Boston Area (MA, USA) for the period 2012-2017. Due to its high-ranking position among U.S. Biotech Clusters rankings (JLL U.S. Life Science, 2016), it is considered as a benchmark case for LIS successful performance. We combined several data sources. First, we used MassBio, the freely available membership directory of the Massachusetts Biotechnology Council. MassBio counts more than 975 members dedicated to advancing cutting-edge research in life science industry in Massachusetts and provides information on their location, typology and area of specialization, ranging from academic hospitals and non-profit organizations to pharmaceutical biotech companies and capital providers. We selected those organizations with headquarters or branch offices having mailing addresses in the metropolitan areas of Greater Boston. According to the criteria defined above, we were able to identify an initial sample of 450 organizations belonging to the Biopharma LIS in the Greater Boston Area, namely 65 Corporate (including firms > 250 employees); 269 SME (including firms < 250 employees); 58 Research and no-profit organizations: (including Universities, Research Institutes, Hospitals, Incubators); 51 Capital Risk Providers: (including VC, CVC, Hedge Funds, PE Firms, Investment Banks); 7 Government (including Government Institutions and Public Agencies). Second, to obtain information on venture capital deals, R&D alliances and IP transfer agreements, we relied on two sources of relational data. More precisely, to collect data on venture deals, we used Preqin Dataset (Preqin Ltd. 2017), which is a comprehensive and historical database on the private equity industry offering detailed information and analytics on firms, funds, deals and portfolio companies dating back to 1999 on over 5,000 funds and 11,000 hedge funds. We selected venture deals (i.e. Series A-E/Round 1-5; Grant; Seed; PIPE; Add-on; Venture Debt) between portfolio companies and investors located in Massachusetts (U.S.) completed within the last five years (2012-2017) in Biotechnology and Pharmaceutical Industries and matched with our initial sample. To gather information on R&D alliances and IP transfer agreements we collected data from the Strategic Transactions Database (Pharma & MedTech Business Intelligence) that summarizes deals by type, industry and sector from 1995 to date. We collected this information within 2012 - 2017-time frame. After adding relational data to the initial sample of organizations, our final sample counts 289 ties (180 venture deals, 60 R&D alliances and 49 IP transfer agreements) that involved 164 organizations. We rely on the dyad as the unit of analysis to estimate the likelihood of inter-organizational tie formation (Dieste and Rajagopalan, 2012). More specifically, we built three separate samples for each deal type, namely venture capital deals, R&D alliances and IP transfer agreements. As to venture deals, we started from the 180 ties that involved 61 firms that received venture capital and 67 investors in the reference period. We then considered all the possible combinations between each of the 61 firms that received venture capital and the 67 investors with which the focal firms could potentially have established a venture capital tie, resulting in 4,087 potential venture capital ties. As to R&D alliances, we started from 60 R&D alliances that involved 51 organizations in the reference period. We then considered, all the possible combinations between each of these 51 organizations and the remaining 50 organizations with which the focal organizations could potentially have established a R&D alliance ( $51 \times 50 = 2,550$ ). After the elimination of duplicated ties, we came up with 1,275 (i.e.,  $51 \times 50 / 2$ ) potential R&D alliance ties. As to IP transfer agreements, we used a similar approach. Starting from the 46 organizations involved in one of the 49 IP transfer agreements in the reference period, we considered all the  $46 \times 45 / 2 = 1,035$  potential ties.

For each of the three samples of potential ties, we then run a probit model where the dependent variable is a dummy that equals 1 if the two organizations had established a tie. Alternatively, we used an OLS regression with the strength of the collaboration (i.e. the number of repeated ties occurred during the reference period) between the two organizations as dependent variable. To assess the association between geographical proximity and tie formation, we used as main independent variables two alternative inverse measures for geographical proximity, namely the distance in kilometers between each pair of organizations and the logarithm of this distance. As to controls, we included dummy variables that consider the type of organizations (Capital Risk Provider, Corporate, Research / non-profit organization and SME), whether organizations are located in Boston and whether the two organizations are of the same type.

**Findings.** Table 1, Table 2 and Table 3 show the results for venture capital deals, R&D alliances and IP transfer agreements, respectively. Each table shows the coefficients from probit (dependent variable: probability of tie formation) and OLS (dependent variable: strength) regressions, using distance or its logarithm as main independent variables. Results from Table 1 are in line with H1. We find that, when considering venture capital deals, geographical distance is negatively associated to the likelihood of tie formation. The coefficients of the distance variables are indeed

negative and statistically significant at the 10% in both column I and column II. More specifically, according to the coefficient of the distance variable in column I, the likelihood of tie formation is 0.05 when the distance between the investor and the target firm is 1km. When distance is 50km, the probability of tie formation is 0.02. Results are robust when using the strength of the tie as alternative dependent variable (column II and column IV).

Tab. 1: Venture capital deals

	I Probit Tie formation	II OLS Strenght	III Probit Tie formation	IV OLS Strenght
Same type	-0.084 (0.091)	0.005 (0.010)	-0.083 (0.092)	0.005 (0.010)
Distance	-0.007* (0.004)	-0.001*** (0.000)		
Distance (log)			-0.047* (0.028)	-0.008* (0.004)
Type dummies	YES	YES	YES	YES
Boston dummies	YES	YES	YES	YES
Constant	-1.649*** (0.110)	0.029* (0.017)	-1.650*** (0.110)	0.034* (0.019)
N	4087	4087	4087	4087
Log-likelihood	-733.2	-1395.5	-732.9	-1395.5
Pseudo R <sup>2</sup>	0.007		0.007	
R <sup>2</sup>		0.004		0.004

\*\*\*, \*\*, and \* indicate significance at 1%, 5% and 10%, respectively. Robust standard errors in round brackets.

Source: our elaboration

Conversely, we do not detect any significant association between distance and tie formation when considering R&D alliances (Table 2). Hence, our results do not support either H2a or H2b. This result might be driven by a combination of the positive and negative effects associated to geographical proximity in R&D alliances.

Tab. 2: R&amp;D alliances

	I Probit Tie formation	II OLS Strenght	III Probit Tie formation	IV OLS Strenght
Same type	-0.189 (0.151)	0.000 (0.022)	-0.187 (0.149)	0.001 (0.022)
Distance	0.006 (0.006)	0.000 (0.001)		
Distance (log)			-0.007 (0.049)	-0.004 (0.008)
Type dummies	YES	YES	YES	YES
Boston dummies	YES	YES	YES	YES
Constant	-2.174*** (0.148)	0.077 (0.084)	-2.136*** (0.148)	0.111 (0.074)
N	1275	1275	1275	1275
Log-likelihood	-224.4	-291.9	-224.8	-291.7
Pseudo R <sup>2</sup>	0.073		0.071	
R <sup>2</sup>		0.027		0.027

\*\*\*, \*\*, and \* indicate significance at 1%, 5% and 10%, respectively. Robust standard errors in round brackets.

Source: our elaboration

Finally, evidence shown in Table 3 is consistent with H3. All the coefficients of distance variables are indeed negative and statistically significant at least at the 5%. Distance appears to be even more detrimental in the case of IP transfer agreements than in the case of venture capital deals. According to the coefficient of the distance variable in column I of Table 3, the likelihood of tie formation is 0.07 when the distance between the investor and the target firm is 1km. When distance is 50km, the probability of tie formation becomes less than 0.01 (and not statistically significant).

Tab. 3. IP transfer agreements

	I Probit Tie formation	II OLS Strength	III Probit Tie formation	IV OLS Strength
Same type	0.000 (0.170)	0.037 (0.028)	-0.018 (0.168)	0.036 (0.028)
Distance	-0.028*** (0.010)	-0.002*** (0.001)		
Distance (log)			-0.092** (0.041)	-0.014** (0.006)
Type dummies	YES	YES	YES	YES
Boston dummies	YES	YES	YES	YES
Constant	-1.996*** (0.166)	0.238*** (0.086)	-2.058*** (0.163)	0.164** (0.082)
N	1035	1035	1035	1035
Log-likelihood	-184.9	-515.2	-188.1	-516.6
Pseudo R <sup>2</sup>	0.062		0.047	
R <sup>2</sup>		0.018		0.015

\*\*\*, \*\*, and \* indicate significance at 1%, 5% and 10%, respectively. Robust standard errors in round brackets.

Source: our elaboration

Our results suggest that there is an impact of geographic proximity on two types of relationships (Lazzeretti and Capone 2016), namely venture deals and IP transfer, while no significant effect has been observed with regard to R&D alliances. This general result overall supports the argument that the impact of geographic proximity varies across different types of inter-organizational relationships (Huggins et al. 2012; Grillitsch et al. 2015; Balland et al. 2016; Quatraro and Usai 2017). More specifically, consistent with the broader finding on the importance of physical proximity between the venture capitalist and his investee (De Clercq and Sapienza 2001; Nahapiet and Goshal 2000; Shane and Cable 2002; Lutz et al. 2013; Chemmanur et al. 2016) our results suggest that, when considering venture deals, geographic distance is negatively associated to tie formation and, in particular, tie strength. This negative association is probably due to the fact that spatial proximity, apart from increasing the likelihood of first-encounter, it reduces information asymmetry, monitoring efforts as a result of the emergence of social relationships, trust as well as public policies to stimulate the localization of capital risk providers in the territory and reinforce the personal bonds between the partners. This research further shows that distance has an even more detrimental effect in the case of IP transfer agreements compared to venture capital deals, with regards to both tie strength and tie formation likelihood. This result is in line with that stream of studies supporting the importance of geographic proximity for channels of knowledge trade (Agrawal 2001; Audretsch and Stephan 1996; Zucker et al. 1998; Belenzon and Schankerman 2013) as in the case of licensing agreements, for which physical distance between the licensor and the inventor becomes critical when the inventor’s engagement is required, especially whereas the technology is not readily marketable and the knowledge required to use it, is hard to be codified and demands an higher frequency of interactions. Finally, geographic distance appears not to exert any specific effect on the formation and the strength of R&D alliances and thus we could do not provide any support to the ongoing debate whether geographic distance is harmful rather than beneficial for the formation of this sort of partnerships. We could only suggest that this null effect may be due to a “compensation effect” of the risks of too much proximity, as lock-in phenomena and lack of novelty information (Broekel and Boshma 2012; Weiss and Minshall 2014) versus the agglomeration advantages as the establishment of collaboration routines, discouragement of misappropriation hazards, development of idiosyncratic language for the exchange of fine-grained information (Galunic and Rodan 1998; Reuer and Lahiri 2013; Singh et al. 2016; Ponds et al. 2009).

**Research limits.** First, the sample could be expanded to include a greater number of inter-organizational practices (including informal ties) within the LIS in order to gain a deeper exploration of the distance effect on patterns of cooperation.

Second, a greater number of control variables could be included to improve the explanatory power of our model.

**Practical implications.** We believe that the results of this study may orient managers by providing a framework that can guide their R&D operations’ delocalization decisions and their tie selection processes. Policy implications may also be derived regarding the selection of incentives for specific types of partnerships within the framework of regional innovation strategies.

**Originality of the study.** We believe that this work contributes to the studies on innovation systems as it allows for a more comprehensive analysis of the impact of geographic proximity by taking in due account the network composition in terms of both actors’ heterogeneity and relationships’ variety whereas extant literature privileges the focus on inter-firm or university-industry relationships at the network structural level. Also, from an empirical standpoint, by adding measures of geographical distance, this study contributes to reduce the ambiguity of the notion of

*spatial proximity whether the majority of empirical studies on the geography of networks of innovation tend to consider it as the general co-localization of partners within the same institutional borders (at the national or regional level) and overlook the implications deriving from its operationalization at smaller scales from a micro-geographical perspective*

**Keywords:** *inter-organizational relationships; innovation networks; knowledge transfer; venture deals; local innovation systems; geographic distance; geographic proximity*

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# Il valore dei Big Data per la performance aziendale

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**Obiettivi.** *Oggigiorno i clienti forniscono alle aziende sempre maggiori quantità di dati, in maniera gratuita, tramite le interazioni con i dispositivi mobili, e questo trend è destinato a crescere nei prossimi anni. Il possesso e l'analisi di tali dati consentono alle organizzazioni di poter collezionare "Big Data" ed estrarre valore da questi. In particolare, con il termine Big Data vengono identificati dati caratterizzati da elevato Volume, raccolti con molta Velocità, ad elevata Varietà, che contengano informazioni di Valore e che siano anche Veraci cioè veritiere (Jin et al., 2015).*

*Di conseguenza, l'interesse accademico in questo campo è in continua crescita (Chen et al., 2012), e una ricerca su Google Scholar, nell'ottobre 2015, per "big data" ha restituito quasi 55.000 risultati negli ultimi 5 anni (Singh et al., 2015). L'attenzione verso i Big Data sta crescendo anche tra i policymaker in quanto sono in grado di beneficiare anche le organizzazioni pubbliche e di contribuire a risolvere problemi sociali e ambientali (Lavalle et al., 2011; Einav e Levin, 2014; Jin et al., 2015). Infatti, recentemente in USA ed in Cina sono state lanciate sovvenzioni per incentivare l'uso dei Big Data per aziende pubbliche e private (Weiss, 2012; Wu et al., 2014). È quindi chiaro che i Big Data possono rappresentare una nuova risorsa per le organizzazioni per fornire prodotti, servizi e soluzioni migliori. Infatti, grazie a Big Data, le aziende possono avere migliori informazioni sulle loro attività e migliorare le loro prestazioni (McAfee e Brynjolfsson, 2012). Più in dettaglio, le aziende possono trarre vantaggio dall'ottimizzazione del portafoglio prodotti, rispondere meglio alle esigenze dei clienti, aumentare il tasso di ritenzione, diminuire i costi e facilitare l'innovazione (Davenport e Patil, 2012; Wamba et al., 2015) e più in generale prendere decisioni aziendali migliori (Garg et al., 2018). D'altro canto, i big data implicano anche costi per aziende come la creazione e la gestione di database, l'utilizzo di strumenti di analisi, l'impiego di risorse umane e l'impegno verso la sicurezza dei dati raccolti. Questi costi non dovrebbero essere trascurati dalle imprese, poiché, ad esempio, la ditta olandese Diginotar è fallita perché i suoi dati non erano protetti in modo adeguato (Arthur, 2011). Quindi, i Big Data sono in grado di apportare sia numerosi vantaggi che diversi costi per le aziende. Inoltre, come recentemente evidenziato da McAfee e Brynjolfsson (2012), non ci sono ancora prove empiriche che i Big Data possano migliorare le prestazioni aziendali. Pertanto, in questa ricerca abbiamo esplorato la seguente domanda di ricerca: qual è l'impatto dei Big Data sulle prestazioni aziendali?*

*A tal fine, in questo studio, abbiamo stimato la quantità di Big Data raccolta e il loro impatto sulle prestazioni aziendali. In particolare, oggi la principale fonte di Big Data per le aziende sono i dispositivi mobili. Considerando che nel 2011 più di 4 miliardi di utenti di dispositivi mobili sono stati identificati in tutto il mondo e che questo numero ha continuato ad aumentare drasticamente negli anni successivi (Wamba et al., 2015), la quantità di dati che le aziende possono raccogliere tramite la loro applicazioni proprietarie rappresenta la risorsa principale di Big Data. Difatti, i dati raccolti in questo modo possono migliorare diverse dimensioni dei Big Data, cioè il Volume, la Velocità e la Varietà dei dati. Quindi la prima ipotesi che abbiamo indagato in questa ricerca è:*

*Ipotesi 1: la quantità di dati raccolti dalle applicazioni per dispositivi mobili avvantaggia le prestazioni aziendali.*

*Oltre alla raccolta di numerosi Big Data, per estrarre informazioni di Valore e Veritiere, cioè le ultime due V dei big data, le aziende devono impegnarsi anche nell'analisi dei dati tramite personale specializzato (Erevelles et al., 2016). Ciò è particolarmente vero considerando che solo una piccola parte delle aziende risulta essere brava nella analisi dei dati (Wegener e Sinha, 2013), mentre le organizzazioni con le migliori prestazioni utilizzano i Big Data cinque volte più delle altre società (Lavalle et al., 2011). Pertanto, maggiore è il focus dell'azienda sull'analisi dei Big Data, più le decisioni saranno basate su analisi rigorose che guidano le strategie future. Pertanto la seconda ipotesi testata in questo studio è:*

*Ipotesi 2: la percentuale di dipendenti dedicati all'analisi dei big data avvantaggia le prestazioni aziendali.*

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I risultati di questa ricerca contribuiscono alla valutazione dei benefici portati dai Big Data e forniscono alle aziende una prima evidenza empirica riguardante l'impatto sulla performance dei Big Data provenienti dalle applicazioni per dispositivi mobili.

**Metodologia.** La fonte principale per la raccolta dei dati per le aziende è attraverso le applicazioni (“apps”) dei dispositivi mobili, e in particolare da quelli basati sul sistema operativo Android che copre quasi il 90% del mercato mondiale. Il campione della nostra ricerca è composto da società tra le prime 100 società quotate negli Stati Uniti per capitalizzazione di mercato dell'indice S&P 500, al fine di avere valori comparabili in termini di visibilità per i clienti, valore del marchio e dimensioni. La nostra analisi è limitata ai valori del 2017 dei Big Data e alle prestazioni aziendali. Il campione usato per il presente studio è costituito da 15 osservazioni tra le prime 100 società quotate negli USA distribuite in 5 diversi settori. Per misurare la performance aziendale abbiamo misurato il Return on Equity (ROE) (Wan e Yiu, 2009). Le statistiche descrittive sono riportate nella Tabella 1.

Tab. 1: Statistiche descrittive delle variabili

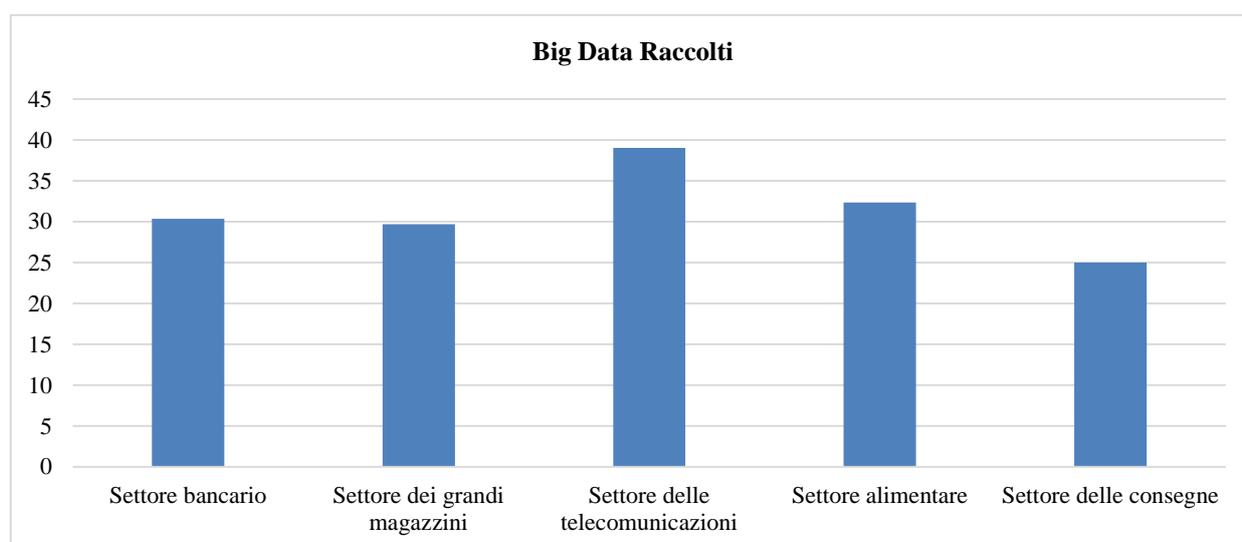
Variabile	Media	Dev. Std.	Min	Max
ROE	44.306	51.985	-9.774	160.300
Big Data Raccolti	31.267	9.968	13.000	62.000
Percentuale di Dipendenti per Analizzare i Big Data	0.042	0.043	0.003	0.128
Ricavi	6.56E+10	4.61E+10	8.29E+08	1.64E+11
Settore bancario				
Settore dei grandi magazzini				
Settore delle telecomunicazioni				
Settore alimentare				
Settore delle consegne				

Fonte: Database nostra elaborazione, 2019.

Abbiamo misurato la quantità di “Big Data Raccolti”, cioè il numero di autorizzazioni dei dati raccolti dalle applicazioni nei dispositivi mobili. Tali informazioni sono state prese direttamente dal Google Play Store, cioè il maggior mercato di applicazioni per dispositivi mobili. Inoltre, gli sforzi nell'analisi dei Big Data sono misurati attraverso la “Percentuale di Dipendenti per Analizzare i Big Data” come percentuale di dipendenti dedicati all'analisi di Big Data (informazione ricavata dagli annunci di lavoro e posizioni su LinkedIn) rispetto al numero totale di dipendenti. Per misurare l'impatto di queste due dimensioni dei Big Data abbiamo considerato il loro impatto sul ROE, una proxy di performance aziendale affidabile e molto usato (Abor, 2005; El-Sayed Ebaid, 2009; Marchini e D’Este, 2015).

Abbiamo evidenziato che in media la quantità di Big Data raccolti attraverso le applicazioni è coerente tra i settori, tra i quali quello delle telecomunicazioni ne raccoglie di più mentre quello delle consegne ne raccoglie di meno (Figura 1).

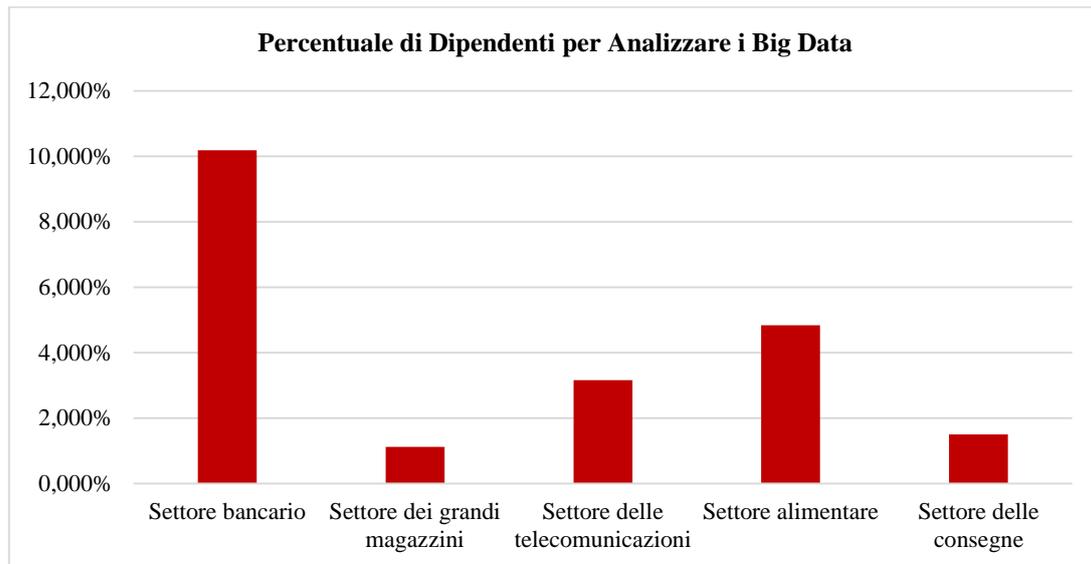
Fig. 1: “Big Data Raccolti” per settore



Fonte: Database nostra elaborazione, 2019.

Per quanto riguarda la percentuale di dipendenti dedicati alle analisi dei Big Data, invece, vi è una grande variabilità, e il settore bancario possiede più del doppio di tale percentuale rispetto agli altri settori (Figura 2).

Fig. 2: “Percentuale di Dipendenti per Analizzare i Big Data” per settore



Fonte: Database nostra elaborazione, 2019.

Oltre alle informazioni descrittive sopra menzionate, abbiamo condotto t-test tra i valori bassi, medio e alto di queste variabili per ogni settore. In questo modo possiamo vedere come il passaggio da basso (Gruppo 1) a medio (Gruppo 2) o alto livello (Gruppo 3) di “Big Data raccolti” e della “Percentuale di Dipendenti per Analizzare i Big Data” possano avere un impatto positivo sulle prestazioni aziendali. La power analysis condotta ha confermato che la dimensione del campione è adeguata per condurre queste analisi esplorative.

**Risultati.** I risultati dei t-test condotti tra i livelli basso, medio e alto di “Big Data raccolti” e della “Percentuale di Dipendenti per Analizzare i Big Data” sono riportati nella Tabella 2

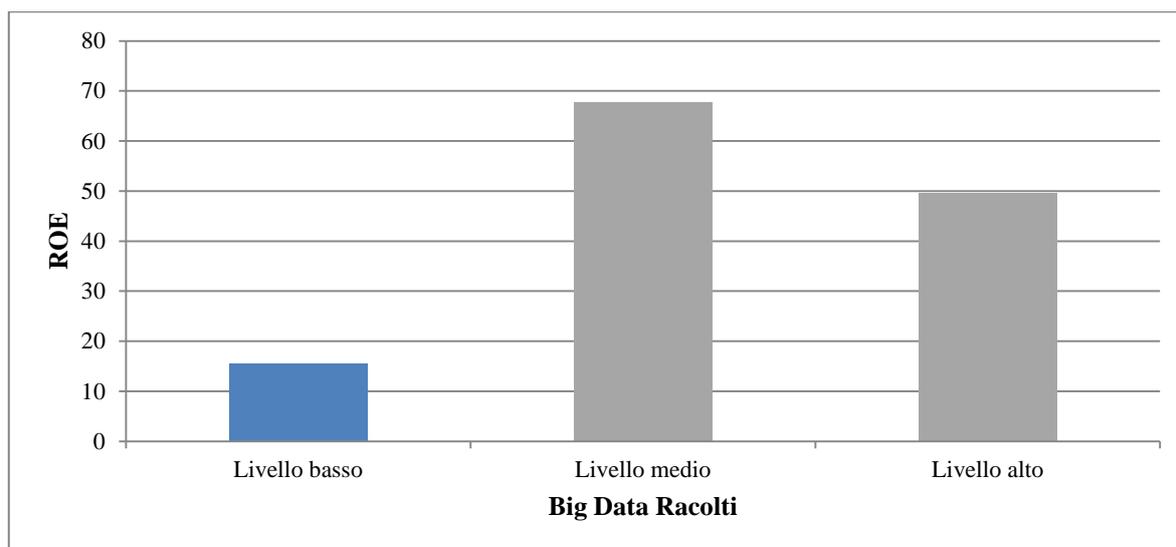
Tab. 2: T-test sui “Big Data Raccolti” e sulla “Percentuale di Dipendenti per Analizzare i Big Data” tra i vari gruppi

Big Data Raccolti			Percentuale di Dipendenti per Analizzare i Big Data		
Gruppo	<b>Media</b>	<b>Err. Std.</b>	Gruppo	<b>Media</b>	<b>Err. Std.</b>
1	15.52058	8.041725	1	21.37901	5.995882
2	67.72098	33.07749	2	68.80563	30.0668
	<b>p-value</b>			<b>p-value</b>	
t-test della differenza	0.0819		t-test della differenza	0.0802	
Gruppo	<b>Media</b>	<b>Err. Std.</b>	Gruppo	<b>Media</b>	<b>Err. Std.</b>
1	15.52058	8.041725	1	21.37901	5.995882
3	49.67533	19.53281	3	42.73226	25.8784
	<b>p-value</b>			<b>p-value</b>	
t-test della differenza	0.0723		t-test della differenza	0.2224	

Fonte: Database nostra elaborazione, 2019.

Più dettagliatamente, man mano che ci spostiamo da basso a medio o alto livello di quantità di “Big Data raccolti” attraverso dispositivi mobili, il ROE aumenta (Figura 3). Questo risultato supporta l'ipotesi 1. Tuttavia non si evidenzia alcun aumento statistico per il passaggio dal livello medio ad alto.

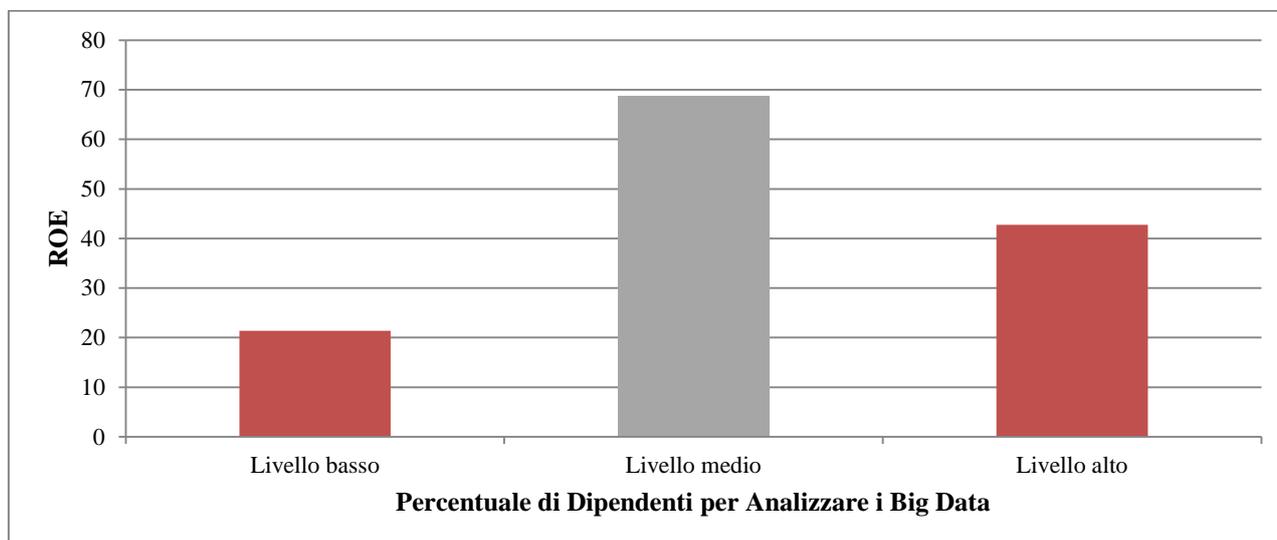
Fig. 3: T-test sull'impatto dei "Big Data Raccolti" sul ROE per gruppo (Livelli bassi, medi e alti). Colori differenti implicano una differenza significativa



Fonte: Database nostra elaborazione, 2019.

Allo stesso modo, quando la percentuale di dipendenti che si occupa di analizzare i Big Data aumenta dal livello basso a quello medio, il ROE aumenta (Figura 4). Tale risultato supporta la nostra ipotesi 2. Tuttavia, in questo caso se andiamo verso l'alto livello di questo indice, non c'è un aumento statisticamente significativo del ROE. Tale relazione dovrebbe essere ulteriormente studiata in studi futuri.

Fig. 4: T-test sull'impatto della "Percentuale di Dipendenti per Analizzare i Big Data" sul ROE per gruppo (Livelli bassi, medi e alti). Colori differenti implicano una differenza significativa



Fonte: Database nostra elaborazione, 2019.

Inoltre, abbiamo anche condotto controlli di robustezza con la Tobin's Q come alternativa del ROE per misurare le prestazioni aziendali (Lloyd e Jahera, 1994). I risultati del t-test sono confermati anche con questo secondo indice di prestazioni.

**Limiti della ricerca.** La limitazione principale è dovuta alla dimensione del campione, che è abbastanza numerosa per condurre queste analisi esplorative, ma sarebbe vantaggiosa per la validità dei nostri risultati se venisse aumentata in studi futuri.

**Implicazioni pratiche.** Con questo studio, rispondiamo al crescente interesse verso i Big Data iniziando a evidenziare le condizioni in base alle quali i Big Data possono beneficiare le prestazioni delle aziende. Più dettagliatamente, abbiamo chiarito in che modo il numero di informazioni raccolte dalle applicazioni mobili e la

percentuale di dipendenti dedicati all'analisi dei Big Data possono avvantaggiare le prestazioni aziendali. Così facendo, contribuiamo a comprendere meglio l'intero fenomeno dei Big Data e diamo delle iniziali indicazioni ai manager su come sfruttarli al meglio per avvantaggiare le prestazioni aziendali.

**Originalità del lavoro.** Una delle recenti sfide per le aziende è quella riguardante la raccolta e l'uso dei Big Data per estrarre informazioni preziose e per prendere decisioni migliori (Wu et al., 2014). Tuttavia, anche se studi precedenti hanno evidenziato teoricamente i vantaggi dei Big Data, o esplorato la relazione tra il suo utilizzo e le prestazioni aziendali mediante sondaggi, non è stato ancora chiarito il loro impatto sulla performance aziendale (McAfee e Brynjolfsson, 2012). Con questa ricerca, cerchiamo di contribuire a questo scopo evidenziando empiricamente l'impatto dei Big Data raccolti e dell'impegno profuso in termini di risorse umane per la loro analisi sulla performance aziendale.

Abbiamo evidenziato che una maggiore quantità di Big Data raccolti tramite dispositivi mobili consente alle aziende di ottenere maggiori prestazioni, grazie a una migliore comprensione dei clienti, delle tendenze emergenti e più in generale del business. Inoltre, i nostri risultati evidenziano che le aziende avendo una maggiore percentuale di personale impegnata nell'analisi dei Big Data, cioè ponendo grande attenzione all'analisi dei Big Data, sono maggiormente in grado di estrarre informazioni di valore dai Big Data (Erevelles et al., 2016). Questo risultato è in linea un recente studio condotto mediante sondaggi che evidenzia la mancanza di capacità analitiche dei Big Data come una sfida chiave per le aziende (Ransbotham et al., 2015), evidenziando i benefici in termini di prestazioni di quelle aziende che esercitano maggiori sforzi sulle posizioni degli analisti di dati.

**Parole chiave:** big data; performance; dispositivi mobili; creazione di valore; applicazioni; aziende

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# L'innovazione digitale nell'editoria: un modello di analisi del processo di adozione dell'e-book reader da parte del consumatore

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**Obiettivi.** La digitalizzazione è una delle trasformazioni più importanti della società attuale. Si tratta di un fenomeno che sta modificando drasticamente i modelli di business, i processi di acquisto dei consumatori e le forme di commercio. La diffusione delle tecnologie digitali in particolare influenza sia il modo in cui le imprese forniscono ai consumatori nuovi prodotti e servizi, sia le forme di uso e consumo degli stessi. Una più attenta analisi dei modelli comportamentali dei consumatori può fornire utili indicazioni alla ricerca e agli operatori economici nel definire le proprie strategie di mercato. Il contesto di analisi del nostro lavoro è quello dell'editoria digitale con riferimento al processo di adozione dell'ebook reader del consumatore nel mercato italiano. Dai risultati della ricerca si possono derivare utili indicazioni per capire i motivi del ritardo della sua adozione nel mercato italiano rispetto a quello degli altri paesi da una parte e, fornire valide indicazioni per migliorarne la diffusione e preparare gli operatori ad affrontare la sfida del nuovo ed emergente prodotto dell'editoria digitale, l'audiolibro dall'altra.

L'innovazione tecnologica è stata ampiamente analizzata in letteratura già dagli anni Sessanta, in cui si sviluppa l'Innovation Diffusion Theory (IDT) di Rogers (1962). La teoria sottolinea come, perché e a quale ritmo le innovazioni vengono adottate, ed è stata spesso utilizzata per indagare l'adozione iniziale (diffusione) di una certa innovazione (Hong et al., 2017). La diffusione è un processo attraverso il quale una nuova tecnologia/innovazione viene promossa nel tempo tra gli utenti di un sistema sociale (Rogers, 2017). Diffusione e innovazione sono due concetti diversi, perché il primo è un processo adattativo in cui le scelte individuali cambiano nel tempo a seconda del progresso, mentre il secondo è un'idea o qualcosa che viene percepito come nuovo (Consoli, 2005; Rogers, 2017). Così, l'Innovation Diffusion Theory fornisce un insieme di fattori (vantaggio relativo, compatibilità, complessità, prova e osservabilità) che sintetizzano il processo di adozione (Agag e El-Masry, 2016). Secondo questa teoria (Rogers, 2017), gli innovatori possono essere classificati in (i) innovators, appassionati di tecnologia che credono ai benefici che ne possono derivare; (ii) early adopters, che tendono ad acquistare il nuovo prodotto molto presto, ritenendo che essere i primi ad adottare la nuova tecnologia massimizzerà i loro benefici; (iii) early majority, adottano la tecnologia perché già ampiamente diffusa, ritenendola uno standard di riferimento; (iv) late majority, la parte più conservatrice del mercato che mostra un atteggiamento avverso al rischio ovvero adotta perché influenzata dalle norme sociali e dai gruppi di riferimento; e (v) laggards, consumatori che mostrano un atteggiamento negativo nei confronti delle nuove tecnologie in generale, essendo molto scettici nei confronti dei benefici che ne possono derivare.

Il comportamento di acquisto del consumatore viene anche studiato in letteratura attraverso la TPB (Theory of Planned Behaviour). La TPB nasce con Ajzen nel 1991 e cerca di spiegare il processo d'acquisto del consumatore attraverso l'intenzione dell'individuo ad adottare un certo comportamento. Le intenzioni comprendono i fattori motivazionali che influenzano il soggetto nella scelta per cui più forte è l'intenzione di impegnarsi in un comportamento, maggiore risulterà la probabilità di adozione di quel determinato prodotto. La teoria si compone di tre costrutti ovvero: il 1) "perceived behavioural control" che può influenzare l'intenzione, l'attitudine e le regole soggettive ma anche il comportamento in modo diretto soprattutto in quelle situazioni in cui il soggetto non ne ha il pieno controllo. In sostanza, questo riflette convinzioni personali su quanto sia facile o difficile attuare un dato comportamento e può riguardare fattori esterni quali disponibilità di tempo e denaro, il sostegno sociale ma anche interni quali capacità, abilità e informazioni. 2) L'"attitude toward the behavior" (AATB), che esprime un dato modo di agire e le 3) "subjective norm", che riflettono la percezione delle aspettative.

Thatcher et al. (2007) hanno poi ripreso tale teoria introducendo un'ulteriore variabile la self-efficacy, connessa alla perceived behavioral control, che viene definita come la fiducia delle persone nelle loro capacità di raggiungere diversi livelli di performance e risultati e che può essere espressa in due modi: individual self-efficacy e human assisted self-efficacy. La prima è data dalla capacità del singolo individuo di riuscire a svolgere un'unica mansione autonomamente mentre la seconda, è data dalla capacità del singolo di riuscire a svolgere una data mansione solo con l'aiuto di altri soggetti come colleghi o amici che facciano provare il prodotto oppure mostrino le caratteristiche.

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Dall'integrazione delle due teorie abbiamo costruito un modello di analisi con il quale si intende comprendere meglio come l'e-book è percepito dai consumatori italiani e quali sono le variabili psico-attitudinali che ne influenzano l'attitudine e l'intenzione ad acquistare.

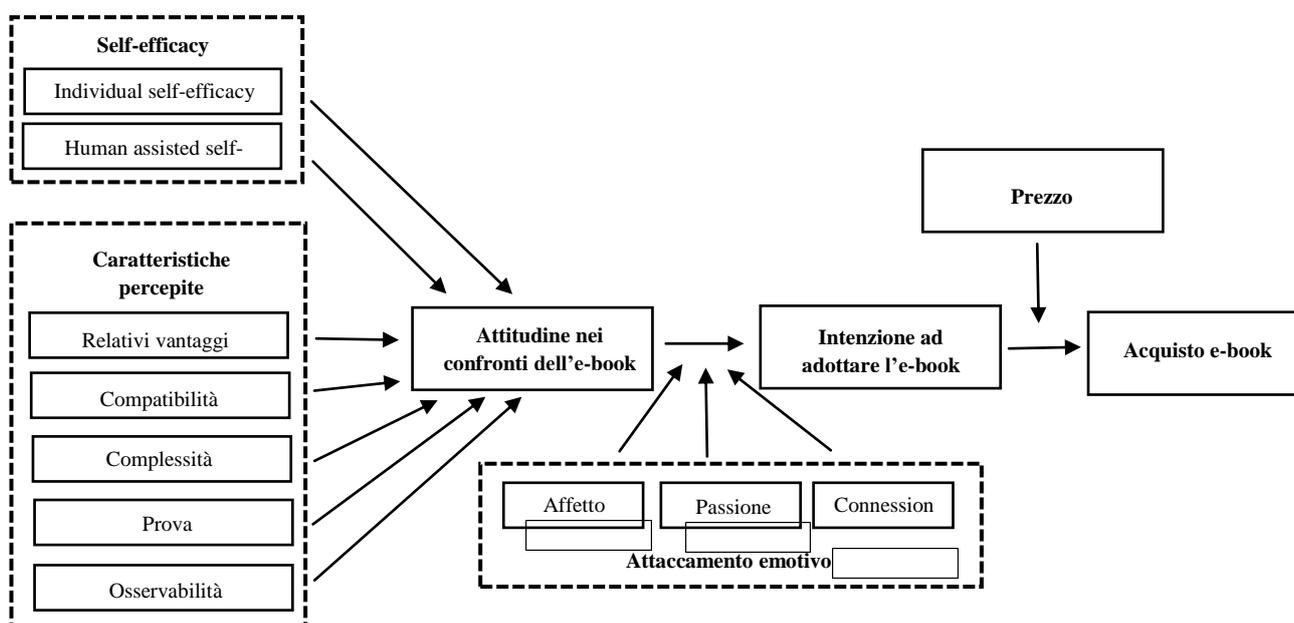
Per lo sviluppo del modello sono state analizzate alcune ipotesi come evidenziato nella figura 1 ed elaborato uno schema concettuale di riferimento (figura 2)

Fig. 1: Le ipotesi di ricerca

Variabili	Ipotesi	Teorie di riferimento
Self efficacy	<b>H1:</b> L'individual self-efficacy dell'ebook reader influenza l'attitudine dei soggetti nei confronti degli ebook reader. <b>H2:</b> La human assisted self-efficacy influenza l'attitudine dei soggetti nei confronti degli ebook reader.	Thatcher J. B., Gundlach M. J., McKnight D. H. Srite M., (2007) Mehwish W., Kiran K., NoorUl A., Shamsudeen A., (2015)
Relativi vantaggi	<b>H3:</b> I vantaggi relativi di un ebook reader influenzano l'attitudine dei soggetti nei confronti degli ebook reader.	Mehwish W., Kiran K., NoorUl A., Shamsudeen A. (2015) Tahir A., Syed W., (2015)
Compatibilità	<b>H4:</b> La compatibilità tra l'ebook reader ed i valori dell'utente, esperienze e bisogni influenza l'attitudine dei soggetti nei confronti dell'ebook reader.	Tahir A., Syed W. (2015) Mehwish W., Kiran K., NoorUl A., Shamsudeen A. (2015)
Complessità	<b>H5:</b> La complessità di un ebook reader influenza l'attitudine dei soggetti nei confronti dell'ebook reader	Tahir A., Syed W., (2015) Mehwish W., Kiran K., NoorUl A., Shamsudeen A. (2015)
Prova	<b>H6:</b> La prova di un ebook reader influenza l'attitudine dei soggetti nei confronti dell'ebook reader.	Mehwish W., Kiran K., NoorUl A., Shamsudeen A. (2015)
Osservabilità	<b>H7:</b> L'osservabilità di un ebook reader influenza l'attitudine dei soggetti nei confronti dell'ebook reader.	Moore e Benbasat (1991)
Attitudine	<b>H8:</b> L'attitudine è positivamente correlata all'intenzione di adottare un ebook reader da parte dei lettori	Read W., Robertson N., McQuilken L., (2011)
Attaccamento emotivo	<b>H9:</b> L'affetto nei confronti dei libri cartacei ha un effetto moderatore sul rapporto tra attitudine e adozione dell'ebook reader. <b>H10:</b> La passione per i libri cartacei ha un effetto moderatore sul rapporto tra attitudine e adozione dell'ebook reader. <b>H11:</b> La connessione con i libri cartacei ha un effetto moderatore sul rapporto tra attitudine e adozione dell'ebook reader.	Read W., Robertson N., McQuilken L., (2011) Mehwish W., Kiran K., NoorUl A., Shamsudeen A., (2015)
Intenzione di adottare	<b>H12:</b> L'intenzione d'acquisto è positivamente correlata all'acquisto di un ebook reader da parte dei lettori.	Ajzen I., (2006) Prendergast G., Ko D. (2010)
Il prezzo	<b>H13:</b> La consapevolezza dei prezzi dei libri digitali modera il rapporto tra l'intenzione e l'acquisto di un ebook reader	Chen C. (2015)

Fonte: ns. elaborazioni

Fig. 2: Modello concettuale ipotizzato



Fonte: ns. elaborazioni

## Metodologia

### Campionamento

Al fine di testare empiricamente il modello concettuale ipotizzato e rispondere alla nostra domanda di ricerca - come l'e-book è percepito dai consumatori italiani e quali sono le variabili psico-attitudinali che ne influenzano l'acquisto e la fedeltà - è stata utilizzata la tecnica del survey (Moser e Kalton, 2017), ossia la creazione, somministrazione, e raccolta dati attraverso un questionario. Ogni variabile latente concettualizzata nel modello è stata misurata grazie a "scale" (strumenti di misurazione) convalidati in letteratura, per un totale di 50 item (variabili osservate) e 10 variabili di controllo demografiche (Zollo, 2018). Dato che le scale originali erano in inglese, è stata utilizzata la procedura back-translation (Brislin, 1970) al fine di tradurre efficacemente e rendere comprensibili le domande del questionario ai consumatori italiani. Ogni domanda è stata analizzata attraverso scale Likert con range 1-7 (pienamente in disaccordo - pienamente d'accordo).

Per alleviare il rischio di non-response bias (Rogelberg e Stanton, 2007) e pre-testare il questionario, abbiamo inviato nel mese di novembre 2018 il link del survey a 10 studenti iscritti alla Laurea Magistrale di Marketing dell'Università di Firenze, verificando che non ci fossero termini vaghi, poco chiari o ambigui nelle domande, oltre a controllare la chiarezza della cover letter e l'appropriatezza in termini di tempi di riempimento del questionario. Il link è stato successivamente inviato anche a 3 Professori dell'Università di Firenze esperti di marketing e comportamento del consumatore, i quali hanno confermato l'adeguatezza e chiarezza del questionario. Per evitare il rischio di social desirability bias e la relativa common method variance (Spector, 1994), nella cover (lettera di presentazione) del questionario è stato sottolineato che (a) ogni risposta sarebbe pervenuta in forma anonima, (b) non ci sarebbe stata nessuna forma di compensazione, (c) non c'erano risposte giuste o sbagliate, (d) i dati sarebbero stati utilizzati col massimo della confidenzialità e indipendenza da parte dei ricercatori. Inoltre, sono state seguite le linee guida di Podsakoff et al. (2003) nel strutturare efficacemente il questionario in modo che le domande relative a variabili indipendenti (ad es. self-efficacy e innovazione percepita) fossero separate rispetto alle domande relative alle variabili dipendenti (ad es. intenzione ad adottare e acquisto dell'e-book).

La somministrazione del link è avvenuta a partire dal 1 dicembre 2018 fino al 31 marzo 2019, attraverso un metodo di campionamento non probabilistico e di convenienza (Etikan et al., 2016) che ha permesso di raccogliere 281 risposte valide. Per la distribuzione del questionario sono stati utilizzati canali multimediali grazie ai principali social media (Rialti et al., 2016; 2017). Al fine di controllare ulteriormente l'effetto di non-response bias (Rogelberg e Stanton, 2007) è stata condotta una wave analysis (Armstrong e Overton, 1977) per assicurarci che non ci fossero differenze significative tra gli early respondents (rispondenti iniziali dicembre-gennaio) e i late respondents (rispondenti finali febbraio-marzo). Dopo aver condotto il T-test sulle variabili di controllo - età, genere, educazione, ecc. - non sono risultate differenze significative tra i due gruppi di rispondenti, limitando così il rischio di non-response bias e potendo analizzare congiuntamente tutti i dati raccolti (Laudano et al., 2018).

Scale/misure utilizzate: medie e deviazioni standard

La prima variabile antecedente del nostro modello è Self-efficacy, analizzata grazie alla scala di Thatcher et al. (2007) che comprende due sotto-dimensioni di tale costrutto: individual self-efficacy (3 item) e human assisted self-efficacy (3 item).

**Statistiche degli item**

	Media	Deviazione standard	Variabile	N
Ind_Self-eff1	5,21		1,779	281
Ind_Self-eff2	5,13		1,766	281
Ind_Self-eff3	5,55		1,679	281

**Statistiche degli item**

	Media	Deviazione standard	Variabile	N
Hum_Self-eff1	4,86		1,949	281
Hum_Self-eff2	4,52		2,082	281
Hum_Self-eff3	4,23		2,220	281

Fonte: ns. elaborazioni

La seconda variabile antecedente del nostro modello è un costrutto muldi-dimensionale denominato Caratteristiche percepite dell'innovazione, analizzato grazie alle cinque dimensioni convalidate da Moore e Benbasat (1991): Relativi vantaggi (8 item), Compatibilità (3 item), Complessità (3 item), Prova (3 item), Osservabilità (3 item).

**Statistiche degli item**

	Media	Deviazione standard Variabile	N
Rel_Van1	2,75	1,693	281
Rel_Van2	5,69	1,464	281
Rel_Van3	3,85	1,857	281
Rel_Van4	3,46	1,938	281
Rel_Van5	6,20	1,181	281
Rel_Van6	5,15	1,692	281
Rel_Van7	6,33	1,111	281
Rel_Van8	4,51	1,856	281

**Statistiche degli item**

	Media	Deviazione standard Variabile	N
Compat1	4,62	1,913	281
Compat2	4,26	2,000	281
Compat3	3,33	2,117	281

**Statistiche degli item**

	Media	Deviazione standard Variabile	N
Comp11	6,01	1,213	281
Comp12	6,17	1,089	281
Comp13	5,98	1,236	281

**Statistiche degli item**

	Media	Deviazione standard Variabile	N
Prova1	6,14	1,540	281
Prova2	5,21	1,851	281
Prova3	4,90	2,098	281

**Statistiche degli item**

	Media	Deviazione standard Variabile	N
Osserv1	4,05	2,275	281
Osserv2	4,10	2,154	281
Osserv3	2,71	2,053	281

Fonte: ns. elaborazioni

La variabile intermedia *Attitudine* è stata osservata tramite la scala di Read et al. (2011) composta da 3 item.

**Statistiche degli item**

	Media	Deviazione standard Variabile	N
Attit1	5,02	1,828	281
Attit2	5,05	1,871	281
Attit3	4,57	1,981	281

Fonte: ns. elaborazioni

Il costrutto multi-dimensionale *Attaccamento emotivo* convalidato da McQuilken (2011) che consta di tre sotto-dimensioni: *Affetto* (3 item), *Passione* (3 item), *Connessione* (3 item).

**Statistiche degli item**

	Media	Deviazione standard Variabile	N
Aff1	5,76	1,671	281
Aff2	6,24	1,383	281
Aff3	5,66	1,770	281

**Statistiche degli item**

	Media	Deviazione standard Variabile	N
Pass1	6,08	1,452	281
Pass2	5,94	1,581	281
Pass3	5,96	1,523	281

**Statistiche degli item**

	Media	Deviazione standard Variabile	N
Conn1	5,47	1,852	281
Conn2	5,89	1,649	281
Conn3	5,73	1,734	281

Fonte: ns. elaborazioni

La variabile *Intenzione d'adozione* è stata analizzata con lo strumento di *Read et al. (2011)* e consta di 5 item.

Statistiche degli item				
	Media	Deviazione standard	Variabile	N
Int_Adoz1	5,00	1,954		281
Int_Adoz2	5,09	2,067		281
Int_Adoz3	5,02	2,013		281
Int_Adoz4	3,29	1,955		281
Int_Adoz5	4,54	2,174		281

Fonte: ns. elaborazioni

La variabile di moderazione *Prezzo* è relativa alla scala convalidata da *Choi e Kim (2007)* e consta di 3 item.

Statistiche degli item				
	Media	Deviazione standard	Variabile	N
Prezzo1	5,04	1,770		281
Prezzo2	4,49	2,082		281
Prezzo3	4,20	1,813		281

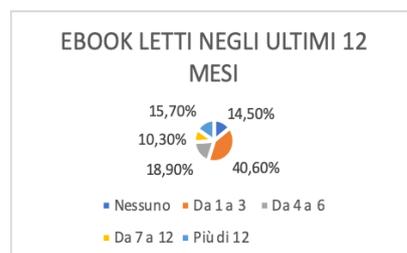
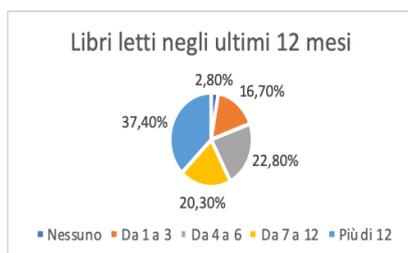
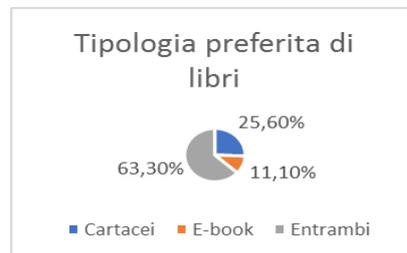
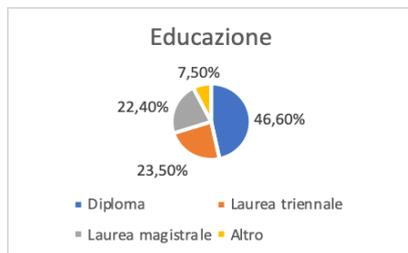
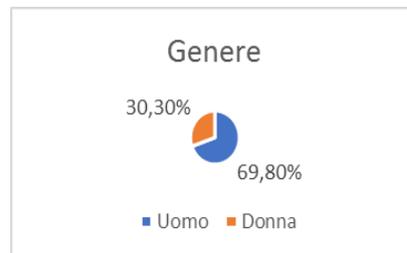
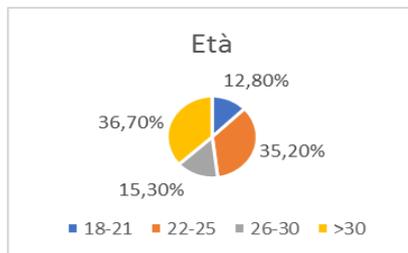
Fonte: ns. elaborazioni

La nostra ultima variabile endogena (*Zollo, 2018*) presa in considerazione è *Acquisto di un e-book reader* convalidata da *Coyle e Thorson (2001)* e composta da 4 item.

Statistiche degli item				
	Media	Deviazione standard	Variabile	N
Comp_Acq1	4,63	2,085		281
Comp_Acq2	4,73	1,990		281
Comp_Acq3	5,09	1,969		281
Comp_Acq4	5,31	1,826		281

Fonte: ns. elaborazioni

*Analisi preliminari: statistiche descrittive, analisi di affidabilità, correlazione tra le variabili*  
 Nei seguenti grafici sono illustrate le statistiche descrittive del campione oggetto di analisi:



Fonte: ns. elaborazioni

Nella Tabella 1 sono illustrate le Alfa di Cronbach di tutte le variabili latenti oggetto di analisi. Come è possibile osservare, la soglia richiesta dello 0.60 (Hair et al., 1998) è stata superata da tutte le variabili, indicando un buon livello di affidabilità. Dopo tali risultati, tutte le variabili sono state prese in considerazione per il prosieguo dell'analisi.

Tab. 1: Confronto Alfa di Cronbach modello e letteratura

Variabile	Alfa di Cronbach (modello di analisi)	Alpha di Cronbach (letteratura)
Individual Self-efficacy	0,91	0,78
Human assisted Self-efficacy	0,89	0,83
Relativi Vantaggi	0,79	0,79
Compatibilità	0,91	0,88
Complessità	0,88	0,70
Prova	0,67	0,90
Osservabilità	0,75	0,76
Attitudine	0,93	0,74
Affetto	0,90	0,71
Passione	0,95	0,81
Connessione	0,95	0,90
Intenzione	0,94	0,88
Prezzo	0,76	0,89
Comportamento d'acquisto	0,92	0,82

Fonte: ns. elaborazioni

Nella Tabella 2 vengono presentati i valori "r" di Pearson relativi al grado di correlazione bivariata esistente tra le variabili prese in considerazione.

Tab. 2: Matrice delle correlazioni.

	Affetto	Attitudine	Comportamento Acquisto	Compatibilità	Complessità	Connessione	Human assisted Self-efficacy	Individual Self-efficacy	Intenzione d'adozione	Osservabilità	Passione	Prezzo	Prova	Relativi Vantaggi
Affetto	1													
Attitudine	-0,200**	1												
Comportamento d'acquisto	-0,223**	0,836**	1											
Compatibilità	-0,271**	0,833**	0,744**	1										
Complessità	-0,061	0,471**	0,446**	0,457**	1									
Connessione	0,864**	-0,159**	-0,205**	-0,213**	-0,20	1								
Human assisted Self-efficacy	-0,030	0,237**	0,266**	0,195**	0,108	0,061	1							
Individual Self-efficacy	-0,108	0,396**	0,442**	0,359**	0,441**	-0,73	0,376**	1						
Intenzione d'adozione	-0,230**	0,921**	0,884**	0,844**	0,470**	-0,218**	0,212**	0,404**	1					
Osservabilità	0,055	0,068	0,092	0,065	0,076	0,102	0,147*	0,185**	0,069	1				
Passione	0,890**	-0,208**	-0,235**	-0,290**	-0,052	0,871**	0,048	-0,074	-0,276**	0,078	1			
Prezzo	-0,114	0,643**	0,689**	0,573**	0,347**	-0,174**	0,233**	0,307**	0,679**	0,071	-0,135*	1		
Prova	-0,038	0,265**	0,322**	0,260**	0,425**	-0,044	0,130*	0,415**	0,274**	0,491**	-0,027	0,223**	1	
Relativi vantaggi	-0,154**	0,699**	0,685**	0,731**	0,466**	-0,114	0,264**	0,344**	0,695**	0,109	-0,166**	0,611**	0,249**	1

Fonte: ns. elaborazioni

Focalizzando l'analisi di correlazione sulla variabile Comportamento d'acquisto, è possibile notare come sia significativamente e fortemente correlata con altre variabili quali Compatibilità ( $r=0.744$ ,  $p<0.01$ ), Intenzione all'adozione ( $r=0.884$ ,  $p<0.01$ ) e Prezzo ( $r=0.689$ ,  $p<0.01$ ). La variabile Connessione invece presenta valori di correlazione significativi ma negativi con le variabili Attitudine ( $r=-0.159$ ,  $p<0.01$ ), Comportamento d'acquisto ( $r=-0.205$ ,  $p<0.01$ ) e Compatibilità ( $r=-0.213$ ,  $p<0.01$ ). Infine, per quanto riguarda il costrutto Attaccamento emotivo, è possibile notare come la sotto-dimensione Affetto sia negativamente correlata sia con la variabile Intenzione d'adozione ( $r=-0.230$ ,  $p<0.01$ ) sia con la variabile Comportamento d'acquisto ( $r=-0.271$ ,  $p<0.01$ ). Da tali risultati iniziali emergono implicazioni teoriche e pratiche significative che saranno riprese dopo l'analisi SEM.

Analisi del modello ad equazioni strutturali: analisi fattoriale confermativa

Al fine di testare le ipotesi del modello concettuale ipotizzato (Figura 1), è stata condotta un'analisi SEM (modello ad equazioni strutturali). Tale metodologia è definita two-step in quanto consta di due analisi (Arbuckle, 2013): il primo step fa riferimento al measurement model ossia il modello di misurazione dove si conferma (trattandosi di una CFA ossia "analisi fattoriale confermativa") la validità e affidabilità del modello concettuale ipotizzato attraverso gli indici di fitting; il secondo step fa riferimento allo structural model ossia l'analisi delle influenze statistiche simultanee al fine di verificare le relazioni ipotizzate (Zollo, 2018).

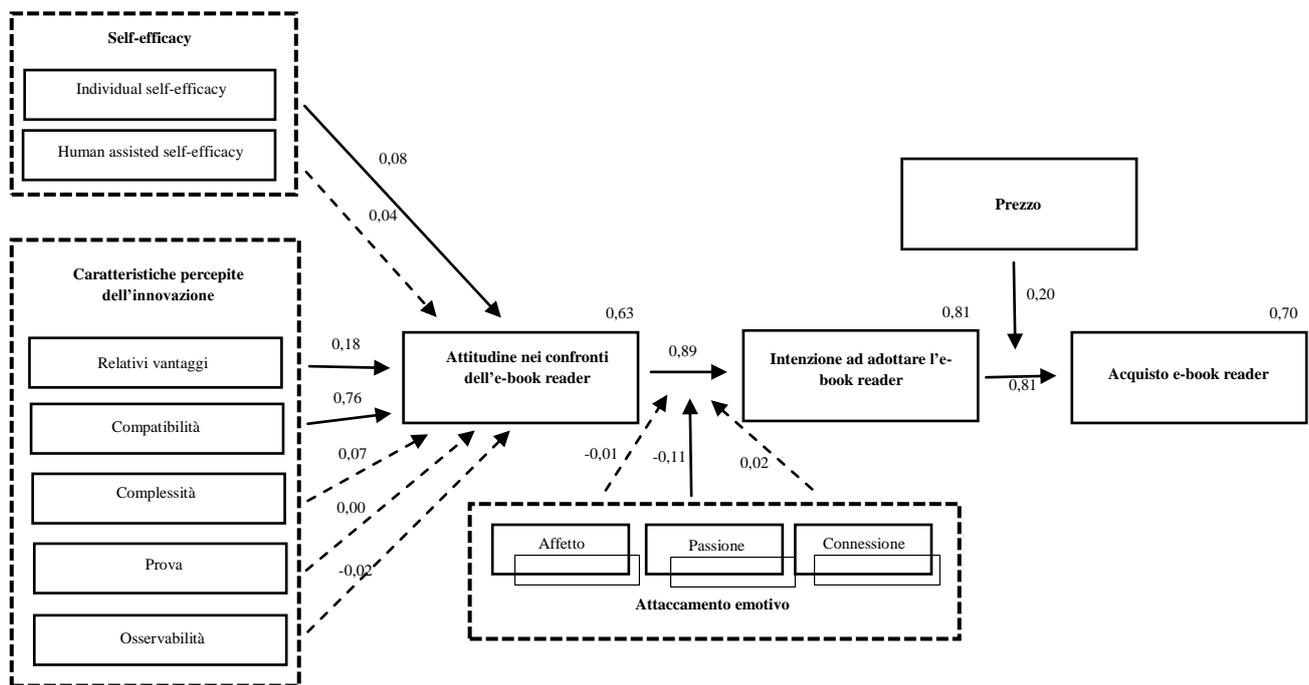
Il modello di misurazione è stato costruito prendendo in considerazione le 14 variabili latenti che compongono il modello concettuale oggetto di analisi. Scopo di tale analisi è verificare se gli item associati alle variabili latenti di riferimento mostrano factor loadings adeguati e, quindi, se possono essere considerati nel corso dell'analisi SEM.

Inoltre, attraverso l'analisi degli indici di fitting si procede a verificare se vi sono delle covarianze da "imporre" agli errori associati alle variabili latenti, come suggerito dal software utilizzato AMOS (v.21; Arbuckle, 2013). Gli indici di fitting si suddividono in due categorie: assoluti e relativi. Per quanto riguarda i primi, sono stati calcolati (a) il test Chi-quadrato relativo che ha mostrato un valore di 2.845 ritenuto accettabile dalla letteratura di riferimento (Bagozzi e Yi, 1988); (b) il GFI (global fitting index) con un valore di 0.910 maggiore della soglia richiesta di 0.900; (c) il RMSEA (root mean square error of approximation) che ha indicato un valore minore di 0.08 - nello specifico 0.0785 - quindi ritenuto accettabile (Hair et al., 1998). In secondo luogo, sono stati presi in considerazione il CFI (comparative fitting index; 0.922), il IFI (incremental fit index; 0.915) e il NFI (normed fit index; 0.918) i quali presentano valori maggiori della soglia richiesta di 0.900 (Bagozzi e Yi, 1988; Hair et al., 1998).

Pertanto, il nostro framework (modello concettuale) di riferimento è valido e accettabile dati i soddisfacenti indici di fitting.

**Risultati.** Il secondo step del metodo SEM è stato analizzato attraverso una path analysis al fine di verificare le influenze statistiche simultanee presenti tra variabili latenti (Arbuckle, 2013). La Figura 3 mostra le evidenze empiriche della nostra analisi.

Fig. 3: Risultati del modello strutturale con analisi SEM.



Fonte: ns. elaborazioni

Analizziamo innanzitutto la significatività dei regression weights (ossia dei beta standardizzati indicanti l'influenza statistica tra variabili) indicata nella colonna "P" della seguente tabella:

Tab. 3: Regression weights

		Estimate	S.E.	C.R.	P
Individual Self-efficacy	→ Attitudine	,073	,035	2,076	,038
Human-Assisted Self efficacy	→ Attitudine	,036	,030	1,211	,226
Complessità	→ Attitudine	,109	,053	2,061	,039
Prova	→ Attitudine	,004	,039	,114	,909
Osservabilità	→ Attitudine	-,017	,031	-,529	,597
Relativi vantaggi	→ Attitudine	,264	,054	4,889	***
Compatibilità	→ Attitudine	,632	,030	21,016	***
Attitudine	→ Intenzione d'adozione	,934	,027	34,400	***
Affetto	→ Intenzione d'adozione	-,009	,028	-,319	,750
Passione	→ Intenzione d'adozione	-,119	,029	-4,124	***
Connessione	→ Intenzione d'adozione	,015	,025	,581	,561
Intenzione d'adozione	→ Comportamento d'acquisto	,747	,030	24,982	***
Prezzo	→ Comportamento d'acquisto	,188	,031	6,082	***

Fonte: ns. elaborazioni

Come è possibile osservare, le relazioni con *p-value* (ossia valore di significatività) maggiore di 0.05 sono state scartate ed eliminate in quanto influenze non significative del nostro modello.

Nella seguente tabella vengono visualizzati i regression weights standardizzati, indicando anche le relazioni non significative coerentemente con la Figura 3:

Tab. 4: Regression weights standardizzati

		Estimate
Individual Self-efficacy	→ Attitudine	,076
Human assisted Self-efficacy	→ Attitudine	<del>,044</del>
Complessità	→ Attitudine	,075
Prova	→ Attitudine	<del>,004</del>
Osservabilità	→ Attitudine	<del>-,019</del>
Relativi Vantaggi	→ Attitudine	,178
Compatibilità	→ Attitudine	,764
Attitudine	→ Intenzione d'adozione	,894
Affetto	→ Intenzione d'adozione	<del>-,008</del>
Passione	→ Intenzione d'adozione	-,107
Connessione	→ Intenzione d'adozione	<del>,015</del>
Intenzione d'adozione	→ Comportamento d'acquisto	,814
Prezzo	→ Comportamento d'acquisto	,198

Fonte: ns. elaborazioni

Si procede ad esaminare, in particolare, ogni ipotesi nel modello in modo da capire se questa sia stata confermata o meno secondo i dati del campione italiano raccolti.

H1: L'individual self-efficacy dell'ebook reader influenza l'attitudine dei soggetti nei confronti degli ebook reader.

Questa ipotesi viene verificata dato il legame che si ha tra Individual Self-efficacy e Attitudine con un'influenza pari allo 0,08. I soggetti intervistati si sentono quindi, capaci di utilizzare un dispositivo dedicato senza l'aiuto di nessun altro.

H2: La human assisted self-efficacy influenza l'attitudine dei soggetti nei confronti degli ebook reader.

Non si può dire lo stesso per quanto attiene la Human assisted Self-efficacy poiché essa risulta non verificata avendo un legame con l'Attitudine pari a 0,04 ma un *p-value* non significativo (0,23). Per il campione quindi, non è importante essere aiutati ad utilizzare un dispositivo dedicato in quanto questi ritengono di poterlo fare da soli o al limite con un semplice manuale di istruzioni.

H3: I vantaggi relativi di un ebook reader influenzano l'attitudine dei soggetti nei confronti degli ebook reader.

L'ipotesi dei Relativi vantaggi viene verificata poiché si ha un legame con l'attitudine pari a 0,18. Il campione recepisce i vantaggi che ha un ebook reader e li ritiene molto importanti per l'adozione. Quelli che maggiormente vengono percepiti dal campione sono la portabilità, la possibilità di contenere migliaia di libri al suo interno e il risparmio del prezzo dei libri se paragonato con la carta.

H4: La compatibilità tra l'ebook reader ed i valori dell'utente, esperienze e bisogni influenza l'attitudine dei soggetti nei confronti dell'ebook reader. La Compatibilità influenza ampiamente l'attitudine con lo 0,76. È una variabile saliente poiché il campione ritiene il dispositivo compatibile con il proprio uso quotidiano ed esperienza di vita.

H5: La complessità di un ebook reader influenza l'attitudine dei soggetti nei confronti dell'ebook reader. La Complessità non viene verificata nel modello poiché il legame tra questa e l'Attitudine è 0,07. Questo implica che il campione non ritiene l'ebook reader complesso, ma anzi molto semplice dato che si tratta di un semplice dispositivo touch molto più semplice di uno smartphone o tablet utilizzati quotidianamente. Il campione ritiene l'utilizzo molto facile, così come leggere e scaricarvi libri al suo interno.

H6: La prova di un ebook reader influenza l'attitudine dei soggetti nei confronti dell'ebook reader. La variabile latente Prova non è assolutamente rilevante, infatti il legame che si ha tra questa e l'Attitudine è 0,00. Nonostante l'ebook reader sia un prodotto innovativo, il campione non ritiene importante provarlo per acquistarlo, le ragioni per cui lo fa sono altri quali ad esempio i vantaggi che abbiamo analizzato precedentemente.

H7: L'osservabilità di un ebook reader influenza l'attitudine dei soggetti nei confronti dell'ebook reader

L'Osservabilità è negativamente legata all'Attitudine con un valore pari a -0,02 quindi l'ipotesi non risulta verificata. Il campione non ha osservato l'utilizzo di un ebook reader o per mancanza di interesse o per altri motivi quali ad esempio la mancanza di dimostrazioni all'interno dei negozi.

H8: L'attitudine è positivamente correlata all'intenzione di adottare un ebook reader da parte dei lettori. Questa ipotesi risulta pienamente verificata con un legame forte dello 0,89. Ad un'attitudine elevata consegue l'intenzione di utilizzare il prodotto.

H9: L'affetto nei confronti dei libri cartacei ha un effetto moderatore sul rapporto tra attitudine e adozione

dell'ebook reader. L'Affetto è negativamente legato all'intenzione con un legame del -0,01. Il legame risulta essere troppo blando pertanto l'ipotesi non risulta verificata.

H10: La passione per i libri cartacei ha un effetto moderatore sul rapporto tra attitudine e adozione dell'ebook reader

La Passione si lega negativamente all'Intenzione con valore dello -0.11. Quest'ipotesi è verificata poiché il p-value assume un valore estremamente significativo ( $< 0,001$ ).

H11: La connessione con i libri cartacei ha un effetto moderatore sul rapporto tra attitudine e adozione dell'ebook reader. La Connessione invece, mostra un lieve legame positivo con l'Intenzione pari allo 0,02. Dato anche un p-value non significativo l'ipotesi non viene verificata.

H12: L'intenzione d'acquisto è positivamente correlata all'acquisto di un ebook reader da parte dei lettori.

Questa ipotesi viene confermata poiché il legame che si ha tra Intenzione e Comportamento d'acquisto è pari a 0,81 mostrando anche in tal caso un legame molto forte. Come affermato precedentemente l'attitudine positiva influenza l'intenzione e successivamente il comportamento.

H13: La consapevolezza dei prezzi dei libri digitali modera il rapporto tra l'intenzione e l'acquisto di un ebook reader.

Questa ipotesi è verificata poiché il Prezzo ha un effetto calmieratore sul Comportamento d'acquisto pari allo 0,20 con un p-value estremamente significativo.

**Implicazioni manageriali.** Dai risultati emersi dalla nostra ricerca è possibile derivare importanti implicazioni manageriali oltre che utili indicazioni per future ricerche. Il mercato dell'ebook reader in Italia presenta interessanti dati di crescita (Levi, 2017) soprattutto nella fascia di età tra i 15-24 anni ovvero quella parte di utenza prevalentemente orientata all'utilizzo della tecnologia digitale sebbene inferiori a quelli di molti altri paesi. Dai dati rilevati è evidente che si tratta di un'utenza consapevole della propria capacità "digitale" e per questo in grado di capire ed apprezzare gli innegabili vantaggi che l'ebook reader (portabilità, capacità di archiviazione, compatibilità) può offrire e pertanto non interessata ad occasioni di prova e osservabilità come spesso accade nei processi di diffusione delle innovazioni tecnologiche. E' possibile notare come, in questa categoria di utenti l'attaccamento emotivo al libro cartaceo, che è il vero ostacolo alla diffusione dell'ebook reader risulta essere attenuato rispetto a quanto emerso in altre ricerche e solo la componente della passione ha una valenza significativa a differenza delle altre due componenti analizzate ovvero l'affetto e la connessione. La passione per il libro cartaceo infatti riduce l'intenzione di acquisto ed è pertanto su questo elemento che gli operatori dovrebbero focalizzare eventuali interventi di marketing evidenziando come i vantaggi che l'ebook può fornire (utilizzo del dizionario incluso nel testo, traduzione del testo, compatibilità, portabilità ecc) e soprattutto la sua capacità di adeguamento al nuovo stile di vita dell'utenza siano di gran lunga superiori alla gratificazione che può derivare dal possesso fisico del bene. Infine, un ultimo elemento da sottolineare è quello legato all'effetto del prezzo. Anche in questo caso le strategie dovrebbero ridurre la percezione del prezzo che attualmente incide negativamente sull'intenzione di acquisto evidenziando come il primo investimento per l'acquisto del device è di gran lunga compensato dal costo medio degli e-book. Le imprese dell'editoria potrebbero anche focalizzare la propria strategia sulla definizione di applicazioni maggiormente responsive ad altri device come tablet o smartphone eliminando così la barriera legata all'acquisto di uno specifico device come l'ebook reader.

Il mercato italiano è comunque un mercato povero di lettori se confrontato con le realtà degli altri paesi sviluppati (Peresson G., 2018) per cui l'utilizzo e la promozione dell'ebook nei confronti dei giovani in età scolastica, magari arricchendo l'ebook reader di altre funzionalità utili alla lettura anche in giovane età potrebbe essere un percorso utile alla modifica delle abitudini e del comportamento della popolazione nei confronti della lettura in generale.

In termini di future ricerche sarebbe interessante osservare il comportamento delle fasce più anziane della popolazione, soprattutto degli over 65 categoria rappresentata da soggetti che hanno una maggiore disponibilità di tempo da dedicare alla lettura e che potrebbero essere attratti dai servizi che il reader può offrire come la modifica della grandezza del testo e/o il grado di illuminazione dello schermo che rende il device user-friendly soprattutto nei casi di problemi di vista. In questo caso l'ostacolo potrebbe essere rappresentato dal processo di diffusione dell'innovazione e dal basso livello di auto self-efficacy che tale categoria di utenza potrebbe avere per cui ne dovrebbero derivare strategie specifiche come interventi di social self efficacy. Un ulteriore proseguimento della ricerca potrebbe coinvolgere anche l'audiolibro di recente introduzione in Italia, laddove in altre realtà quale l'America mostra risultati molto positivi. In questo modo sarebbe possibile un'analisi più completa e approfondita del lettore digitale.

I limiti di questa ricerca sono dati in primo luogo dal campione che non è rappresentativo della realtà poiché ridotto nelle dimensioni e formato da fasce giovani e già utenti. Una sua estensione sia in numero, età e tipologia di utenza potrebbe arricchire le informazioni rilevate.

**Originalità del lavoro.** Da un punto di vista teorico il contributo di questa ricerca è volto ad arricchire i modelli di analisi dei processi di adozione delle innovazioni attraverso la loro integrazione con modelli di consumer behavior al fine di poter meglio spiegare la complessità del comportamento di acquisto dei consumatori di fronte alle innovazioni digitali di oggi.

Un secondo contributo è quello di aver indagato un settore su cui ci sono pochissimi contributi scientifici e che si

trova di fronte ad un grande cambiamento sia in termini di trasformazione del prodotto, che da fisico diventa digitale, che di radicale cambiamento dell'utenza (soprattutto quella compresa nelle fasce giovani di età) che da lettore tradizionale di libri cartacei diventa lettore di prodotti digitali.

**Parole chiave:** e-book reader, innovazione digitale; comportamento del consumatore, Innovation Diffusion Theory (IDT), Theory of Planned Behavior (TPB)

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# Human matters: una applicazione di machine learning alla fornitura di servizi

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**Obiettivi.** *Le innovazioni, siano esse di tipo strettamente tecnologico ma anche organizzativo o sociale, hanno sempre impensierito i contemporanei a motivo delle ricadute in termini, ad esempio, di mutamento della situazione occupazionale, di possibili esternalità negative legate all'ambiente, di variazioni nella composizione sociale o soltanto per i costi connessi al cambiamento necessario per non perdere posizioni acquisite. È stato così per la prima rivoluzione industriale quando l'impiego della macchina a vapore nelle grandi fabbriche forzava a spostarsi dalle campagne ai centri urbani, imponeva pesanti turni di lavoro anche per ragazzi molto giovani e inquinava l'aria delle grandi città industrializzate; ed è così ora per il rapido e pervasivo affermarsi di modelli di intelligenza cosiddetta artificiale, aumentata o sintetica che minaccia la sostituzione di molti posti di lavoro e sicuramente modificherà molte abitudini.*

*Probabilmente è prematuro stilare già un bilancio scientificamente fondato sotto il profilo occupazionale, della riorganizzazione dei processi aziendali o del rapporto tra costi e benefici per l'utilizzo di algoritmi e macchine che apprendono, decidono ed agiscono autonomamente, anche perché alcuni effetti si manifestano solo a distanza di tempo ed in ambiti confinanti con quelli in cui si introducono innovazioni di questo tipo.*

*In questo lavoro, più semplicemente, si presentano le prime evidenze e si cercherà di riflettere a margine di un esperimento in cui in cui l'applicazione di un modello di intelligenza artificiale in una determinata fase del processo di fornitura di un servizio fornisce all'impresa osservata un contributo molto rilevante in termini conoscitivi.*

*L'eventuale utilizzo dei risultati dell'esperimento per una ridefinizione del processo del servizio porterà in seguito a comprendere come può cambiare il processo stesso, la composizione del personale impiegato ed i miglioramenti sul valore del servizio offerto.*

*L'occasione tuttavia è significativa fin da subito per alcune considerazioni di fondo riguardo ai metodi utilizzati per analizzare grandi quantità di dati.*

**Metodologia.** *Come anticipato, la riflessione segue un esperimento in corso presso una grande impresa di servizi<sup>1</sup>. Oggetto dell'esperimento è il miglioramento dei processi relativi alla misura e quindi alla contabilizzazione del servizio erogato dall'impresa. In altre parole, si intende testare un modello di intelligenza artificiale in grado di prevedere in anticipo un eventuale malfunzionamento dello strumento di misura (il contatore) al fine di evitare perdite in termini di ricavi o disservizi nei confronti del cliente che potrebbe essere contattato inutilmente a distanza di tempo per una errata fatturazione.*

*Al momento l'impresa procede ad una ciclica sostituzione per lotti dei contatori in uso in base ad una programmazione definita ex ante ed interviene in maniera mirata quando il misuratore non segnala la fornitura del servizio per un determinato periodo. Ad evidenza il problema potrebbe non risiedere nello strumento di misura ma effettivamente potrebbe non esserci stato consumo da registrare, oppure potrebbero esserci anche altre cause dovute ad errori umani, ad esempio nella lettura dei consumi. In ogni caso l'intervento da parte dell'impresa fornitrice comporta dei costi sia sul versante del personale che deve essere impiegato per la verifica sia nella relazione con il cliente che viene disturbato, oltre ovviamente alla sostituzione del misuratore.*

*Dopo aver definito gli obiettivi e scelto la tecnica da utilizzare tra le metodologie attualmente disponibili è iniziato il lavoro sui dati. La base di partenza era composta da quasi 15 milioni di letture relative a circa 1 milione di clienti ed è stata sottoposta innanzitutto ad una fase di filtraggio da impurità, finalizzata a validare una semantica.*

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<sup>1</sup> Per il momento, in attesa di una verifica sia dei risultati che del metodo utilizzato, si ritiene opportuno non fornire ulteriori informazioni sull'impresa.

*L'addestramento della rete neurale richiede infatti che i dati vengano riconosciuti per un comune significato. Il numero delle misurazioni si è così ridotto a 2 milioni.*

*Le prestazioni dei modelli statistici di natura più tradizionale sono state comparate con le prestazioni ottenibili invece con un modello di Artificial Intelligence (AI) più sofisticato, e di recente ingegnerizzazione da parte del gruppo di lavoro, basato su una Recurrent Neural Network (RNN). Tale rete, costituita da 657 neuroni disposti su 10 diversi livelli in virtù delle sue aumentate capacità, è in grado di effettuare analisi su serie temporali più ampie e di lunghezza variabile. Specificatamente, in relazione al caso in esame, ciò ha richiesto dal punto di vista implementativo la ri-articolazione dei dati presenti nel dataset in un formato più strutturato, idoneo a presentare, in fase di training, le letture raggruppate per singolo misuratore. A tale modello, basato su RNN, sono state somministrate informazioni corrispondenti a circa 15.000 misuratori sostituiti (guasti) a cui, per motivi di bilanciamento inerenti alle tecniche di addestramento delle RNN, sono stati aggiunti altrettanti misuratori non sostituiti (50.000).*

**Risultati e discussione.** *Le prime evidenze mostrano che i risultati raggiunti da una macchina addestrata a prevedere dei malfunzionamenti nell'erogazione del servizio sono superiori a quelli basati su modelli statistici tradizionali ed alle attuali prestazioni dell'impresa; si potrebbe fin qui concludere che si tratta di una ottimizzazione del ciclo produttivo come tante vengono costantemente messe in campo dalle imprese man mano che aumenta la capacità di calcolo e la ricerca scientifica invece, dal punto di vista della comprensione dei possibili effetti dell'introduzione in azienda di modelli di intelligenza artificiale, l'analisi indica qualcosa di più interessante e cioè che i risultati sarebbero stati inferiori senza la collaborazione dell'intelligenza umana. In molti casi la macchina viene addestrata ad eseguire delle classificazioni (contatore funzionante/contatore non funzionante, e così via) quindi è essenziale la scelta e la qualità delle informazioni che vengono fornite alla macchina per imparare.*

*Dal caso in esame emerge inoltre la rilevanza della semantica dei dati perché è più importante andare a cercare i dati più utili piuttosto che una grande quantità di dati. La scelta dei dati da utilizzare operata dal ricercatore, infatti, ha condotto ad una capacità molto maggiore di prevedere i malfunzionamenti e le sostituzioni con una accuratezza che arriva anche all'86-89% ed ha evitato errori di apprendimento da parte della macchina (Casini et al, 2019, Rocchetti et al, 2019).*

*Da ultimo è necessario accordarsi su cosa si intende per ottimizzazione; la macchina addestrata ad individuare i contatori che più probabilmente presenteranno malfunzionamenti restituisce un risultato per certi versi ridondante rispetto a quanto l'azienda sa già. Molto più prezioso è concentrarsi su quella parte dei contatori su cui il comportamento è dubbio.*

*Le tecnologie che si stanno diffondendo in maniera pervasiva generano cambiamenti in ogni ambito sociale.*

*Già sul finire degli anni Settanta si registrano i primi segnali che indicano che il modello manageriale che aveva guidato il primo sviluppo dovuto all'introduzione della macchina a vapore era diventato insufficiente a reggere le sfide emergenti. Il fordismo, espressione sintetica con la quale si descrive l'applicazione dei principi organizzativi della direzione scientifica del lavoro messi a punto da Frederick Taylor, stava rallentando la sua spinta propulsiva a causa di una crescente complessità. La fabbrica di Henry Ford infatti era stata impostata in condizioni di maggiore stabilità dell'ambiente competitivo e quindi sulla possibilità di programmare in dettaglio ed in anticipo le attività in modo da ridurre gli imprevisti ed i costi.*

*In breve tempo il consumatore sempre più esigente e diversificato ha iniziato chiedere prodotti e servizi più personalizzati in alternativa alle soluzioni standard disponibili sul mercato<sup>2</sup>.*

*Come reazione le imprese hanno puntato sulla disponibilità di risorse distintive (Barney, 1991) e tra queste è via via emersa l'importanza della conoscenza. Si spiegano così anche gli ingenti investimenti volti all'attrazione dei talenti, quelli finalizzati all'aggiornamento delle attività formative e soprattutto alle attività di ricerca e sviluppo.*

*Poi sono arrivate le tecnologie digitali, sono state abbattute frontiere fisiche, amministrative ed ideologiche ed i mercati sono diventati globali.*

*Ora siamo di fronte ad un nuovo balzo in avanti.*

*L'innovazione tecnologica, la strategia delle imprese e la reazione dei vari livelli di governo hanno spinto a rivedere i modelli di business, le alleanze e attrezzarsi per acquisire sempre conoscenza nuova.*

*Probabilmente per la prima volta nella storia recente, il cambiamento non è stato progettato perché non è il frutto di una innovazione specifica (la macchina a vapore, l'elettricità, l'elettronica) ma è frutto della convergenza di tecnologie già in uso.*

*Sensori diffusi, grande capacità di calcolo, telecomunicazioni a banda larga, cloud computing sono traiettorie tecnologiche note ma i loro utilizzo contestuale ha portato alla "nuova rivoluzione delle macchine" (Brynjolfsson & McAfee 2015).*

*Sicuramente le dinamiche politiche hanno esercitato una influenza nel processo di globalizzazione ma questo non sarebbe stato possibile, almeno nelle forme in cui si è sviluppato, senza le innovazioni nell'ambito della comunicazione e dell'informazione.*

<sup>2</sup> È nota l'espressione di Henry Ford secondo cui i clienti potevano acquistare l'automobile che volevano purché fosse nera e modello T. In pratica le variazioni erano pressoché annullate ed il processo produttivo piuttosto rigido.

*Queste tecnologie (ICT) non sono recenti ed erano già disponibili da tempo ma hanno sprigionato tutto il loro potenziale quando le imprese hanno investito massicciamente per migliorarle e per utilizzarle in tutte le fasi del ciclo produttivo e della distribuzione al cliente.*

*Per certi aspetti la parola chiave di questa epoca è la parola interconnessione, collegamento tra luoghi, persone e persino oggetti lontani. Le ICT in questo senso si sono affermate come tecnologie abilitanti (KET– Key Enabling Technologies) cioè in grado rivitalizzare i tessuti produttivi e attivare processi innovativi a livello sistemico così come le biotecnologie, la fotonica, i materiali avanzati, la microelettronica, la nanoelettronica, e i sistemi di fabbricazione avanzati<sup>1</sup>.*

*Per questi motivi la “rivoluzione” che affiora ha almeno tre caratteristiche: è esponenziale, digitale e ricombinante (Brynjolfsson e McAfee, 2015).*

*Nel 1965 Gordon Moore, a quel tempo a capo della Ricerca e Sviluppo della Fairchild Semiconductors ed in seguito fondatore di Intel, prevede che negli anni successivi la quantità di componenti presente in un semiconduttore sarebbe raddoppiata ogni anno.  $x-2x-4x-8x-16x$  e così via con uno sviluppo esponenziale, appunto.*

*Non è il luogo per una descrizione sulle spiegazioni tecniche o su alcune eccezioni che si potrebbero opporre alla “Legge di Moore” ma le ripercussioni sullo sviluppo dei nuovi prodotti e sulla riduzione dei tempi di introduzione di soluzioni sempre più economiche sono sotto gli occhi di tutti.*

*Digitale: la codificazione delle informazioni non significa solamente ridurre i costi di produzione e soprattutto di riproduzione ma anche modificare il modello di business e l’assetto proprietario. Come noto, ad esempio, il costo maggiore di un prodotto editoriale (libro, audio, video) è la realizzazione della prima copia ed ogni riproduzione avviene a costo marginale vicina allo zero. Tuttavia questa non è la questione più ricca di conseguenze poiché il digitale consente l’interazione tra i vari utenti e la creazione da parte dell’utente di una parte del valore. Le mappe stradali digitali hanno archiviato quelle cartacee e facilitato il raggiungimento di una destinazione; le mappe digitali vengono utilizzate anche a livello industriale unitamente a sofisticati programmi che ottimizzano i percorsi ma il vero potenziale lo manifestano quando i percorsi suggeriti si modificano in base alle condizioni del traffico, informazioni che si ricevono automaticamente da altri utenti connessi. È quindi un modello di business che si basa sulla co-creazione di valore.*

*Infine la rivoluzione attuale è ricombinante e cioè ricomponne continuamente nuove forme utilizzando gli stessi “mattoncini”, un po’ come succede con le solite sette note musicali che generano brani sempre nuovi.*

*L’espressione più diffusa è che siamo di fronte ad un cambio di paradigma.*

*Per usare una metafora marinaresca è come se utilizzare materiali più sofisticati o potenziare il motore della barca, o le vele, non fosse più sufficiente per aumentarne la velocità; occorre cambiare paradigma, come si usa dire, e ridurre l’attrito, planare sull’acqua. Un po’ quello che si è visto nelle ultime regate della Coppa America.*

*Sono almeno due le direttrici lungo le quali si può cercare di interpretare il cambiamento in atto:*

*Innanzitutto, le tecnologie che si sono affermate, e di cui si è sinteticamente detto, hanno aumentato in maniera importante la componente di servizio rispetto alla produzione manifatturiera (Buera e Kabosky, 2012). Ciò ha comportato una reinterpretazione della dinamica di creazione del valore pertanto il cliente, e più in generale i vari stakeholder, sono diversamente coinvolti nel processo di creazione del valore (Rust, Huang, 2017).*

*La seconda direttrice è quella di un riallineamento nel rapporto tra l’uomo e la macchina (Rullani, Rullani, 2018), o quantomeno una concezione della relazione che non è la stessa rispetto a quanto si è assistito dalla prima rivoluzione industriale in poi.*

*I risultati dell’esperimento presentato si posizionano soprattutto lungo la seconda direttrice. Come anticipato il modello basato sulle reti neurali non avrebbe ottenuto i risultati raggiunti senza una costante correzione del programmatore.*

**Limiti della ricerca.** *I risultati che qui si presentano hanno superato una prima conferma con un data set diverso da quello iniziale ma ora sarà interessante ripetere l’esperimento con dati più vecchi e vedere se è effettivamente accaduto ciò che sarebbe stato prevedibile a suo tempo con questi modelli più “intelligenti”; a questo stadio, pertanto, è possibile solo prendere atto delle prime interessanti evidenze e sollecitare l’approfondimento sia su un livello metodologico sia sulle ricadute aziendali che si potrebbero verificare nel caso si confermassero i risultati.*

**Implicazioni pratiche.** *Già da qualche anno si cerca di ipotizzare le conseguenze dell’adozione di sistemi di intelligenza artificiale sulla numerosità e sulla composizione della forza lavoro. Pare esserci un certo consenso intorno all’idea che si verificherà una polarizzazione intorno alle figure più manuali e sulle più creative<sup>3</sup>.*

*Se i risultati di questo esperimento troveranno conferma l’impresa potrebbe decidere di modificare le procedure di misurazione dei consumi e sostituzione dei misuratori che presumibilmente manifesteranno dei malfunzionamenti e quindi adottare questa innovazione ai fini di ridurre le perdite anticipando il problema oppure potrebbe modificare le procedure di contabilizzazione basandosi sul fatto che, a quanto pare dei primi risultati, sono necessarie meno*

<sup>3</sup> Cft. Ford M. (2017) Il futuro senza lavoro. Accelerazione tecnologica e macchine intelligenti. Come prepararsi alla rivoluzione economica in arrivo, Il Saggiatore; Mangone A., Mazali T. (a cura di, 2016), Industria 4.0, Uomini e macchine nella fabbrica digitale, Guerini Associati; Bianchi P. (2018) 4.0 La quarta rivoluzione industriale, Il Mulino.

misurazioni del consumo. L'impresa potrebbe anche decidere di condividere maggiormente con il cliente i dati sui consumi andando così ad offrire un servizio aggiuntivo.

**Originalità del lavoro.** Le ricerche sulle applicazioni dei modelli di intelligenza artificiale iniziano a trovare spazio anche nelle discipline aziendali e non solo in quelle informatiche; questo lavoro intende descrivere gli effetti dell'applicazione e soprattutto contribuire a quella visione che ritiene che l'intelligenza umana continuerà a svolgere un ruolo essenziale soprattutto con riferimento all'interpretazione dei fenomeni e alla consonanza e risonanza tra sistemi (Golinelli, 2002).

**Parole chiave:** service management; intelligenza artificiale; co-creation

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# Le relazioni fra innovazioni digitali e sostenibilità della supply chain: uno studio nel settore del mobile imbottito

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**Obiettivi.** *Scopo del presente articolo è comprendere in che modo le innovazioni digitali, riconducibili a Industria 4.0, possono essere gestite per sviluppare una supply chain sostenibile. Più in dettaglio, obiettivo del paper è cercare di comprendere in che modo le innovazioni digitali applicate al processo distributivo nel canale retail impattino sul processo manifatturiero e sulla gestione della supply chain, ovvero sulle dinamiche relazionali dei rapporti di fornitura e sulla sostenibilità delle stesse, nonché sul contesto delle forniture del proprio network di riferimento.*

*Fenomeni complessi quali la crescente globalizzazione dei mercati, sia di sbocco che di approvvigionamento, l'evoluzione delle complesse esigenze sia dei consumatori che delle imprese, in ragione dei forti e spesso imprevedibili cambiamenti geopolitici, socio-economici e tecnologici, fanno emergere la necessità di mitigarne il rischio e rendono le supply chain molto più difficili da gestire (Craighead et al., 2007). Nel corso degli ultimi anni il tema della supply chain management è stato oggetto di studio da parte degli accademici in merito a molteplici aspetti, quali le scelte squisitamente logistiche, le metriche e l'analisi delle performances della supply chain, le problematiche inerenti le risorse umane, la strategia, la qualità, la gestione del rischio, l'innovazione di processo, la sostenibilità (Swanson et al., 2018) e la relazione fra Big Data e Supply Chain (Mani et al., 2017). In particolare il tema della sostenibilità nelle scelte di supply chain management è oggetto di attenzione sotto diversi prospettive: secondo Teuscher (2006), molte problematiche, con i connessi rischi, legati alla gestione sostenibile della supply chain sorgono a causa dell'assenza di buone partnership, pertanto sarebbe opportuno promuovere il coinvolgimento, il controllo e la valutazione di tutti i partner; secondo Harilainen (2014), il rischio di sostenibilità della fornitura è associato al rischio di make or buy e al rischio reputazionale, dunque gli autori approfondiscono in che modo il management può intervenire con le politiche di gestione per limitare il rischio.*

*La gestione sostenibile della supply chain è emersa come un argomento in crescita nel dibattito accademico (Carter et al., 2011), ricevendo crescente interesse per la sostenibilità e l'area di gestione della supply chain (Seuring et al., 2008) ed evidenziando le criticità più diffuse, quali la comunicazione inter-organizzativa (Gorgitano et al., 2012), il trasferimento delle responsabilità, la divisione dei costi (Fox e Worley, 2004; Smith, 2008), e le connesse esigenze di integrazione con i fornitori.*

*Un aspetto che risulta poco approfondito in letteratura, si riferisce alla modalità con cui le imprese manifatturiere possano gestire tali tecnologie digitali in maniera tale da garantire e alimentare la sostenibilità sociale, oltre che economica, dei processi di creazione di valore nella loro supply chain.*

*A tal fine, il paper analizza un interessante caso studio di un'impresa nel settore del mobile imbottito, la Natuzzi SpA, un'impresa manifatturiera globale, con un forte radicamento nel network distrettuale, che compone la filiera del mobile imbottito nell'area geografica di riferimento.*

*Il caso è interessante e si presta bene agli obiettivi di ricerca sia per le decisioni strategiche e operative che stanno cambiando l'assetto operativo dell'azienda, che per le implicazioni gestionali dell'utilizzo di tecnologie digitali innovative sull'intera supply chain e che spingono l'acceleratore sul processo d'integrazione verticale, evidenziando così numerosi risvolti sulla gestione del rischio e sulla sostenibilità delle relazioni di fornitura.*

**Metodologia.** *Un caso studio è stato analizzato nel settore del divano imbottito, i dati sono stati raccolti attraverso intervista in profondità ai manager dell'azienda osservata, in particolare i responsabili dell'area supply chain, IT e vendite. Le interviste sono state svolte nel periodo tra gennaio e febbraio 2019, affrontando i seguenti temi: la strategia di marketing (in particolare di brand management, di customer engagement e distributiva), le innovazioni digitali riconducibili ad Industria 4.0 applicate ai processi produttivi e distributivi, le strategie di gestione della supply chain. I dati sono stati analizzati secondo l'approccio di analisi qualitativa dei dati (Yin, 2014) che considera il caso*

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*studio come metodo efficace per esaminare un “caso concreto” in una “situazione di vita reale”; inoltre, Yin valuta la metodologia caso-studio particolarmente indicata per porre domande aperte sui temi oggetto di approfondimento, così come Eisenhardt (1989) considera il case study particolarmente apprezzato in una fase preliminare e di ricerca esplorativa, soprattutto se i confini tra fenomeno e contesto di vita reale non sono chiaramente evidenti. Inoltre, muovendo dall’approccio sistemico vitale (Golinelli, 2017; Barile, 2009), le risposte degli intervistati sono state interpretate al fine di comprendere il ruolo della struttura ampliata e della gestione delle relazioni con gli attori chiave della supply chain, nella costruzione di una supply chain sostenibile e nel garantire il più alto grado di sostenibilità sociale nel network di riferimento.*

**Risultati.** *Lo studio mostra come l’adozione, da parte dell’impresa osservata, d’innovazioni digitali nel retail e nel processo produttivo sia strumentale all’efficace implementazione delle strategie di coinvolgimento, attraverso il marketing esperienziale, del consumatore finale nella progettazione del ‘Living’, d’integrazione verticale a valle nel retail (attraverso la creazione, la gestione e il controllo totale degli stores diretti) e di allargamento della gamma produttiva a tutti i componenti dell’arredo casa.*

*In particolare le innovazioni digitali implementate nel retail fanno riferimento alle applicazioni Internet of Things a supporto del merchandising e alla configurazione del visore in 3D della realtà virtuale: la prima permette di conoscere in tempo reale l’esposizione in ogni punto vendita diretto e gestire le esposizioni che mostrano performance poco soddisfacenti. L’uso di questa tecnologia mira a creare sinergie e cogliere segnali da parte del cliente, al fine di ottimizzare i tempi col personale addetto al punto vendita, con gli stabilimenti e con i fornitori. I sensori IoT nel retail, consentono di rilevare quali prodotti in esposizione sono osservati e per quanto tempo: fornendo indicazioni sull’efficacia del posizionamento di un prodotto in un punto del negozio piuttosto che in un altro, di un certo colore, ecc.) permette alla direzione marketing ed allo store manager di ottimizzare l’efficienza di vendita nei singoli negozi, migliorandone la capacità espositiva.*

*La seconda consente di soddisfare il bisogno principale del consumatore di immaginarsi un divano in una casa per evitare di sbagliare il colore, la tipologia, la posizione. La gestione della vendita avviene attraverso la figura del Sales Assistant che diventa Sales Consultant, il quale si avvale di tecnologie digitali fortemente innovative basate sul marketing esperienziale: attraverso il dispositivo ottico, il potenziale cliente può vivere un’esperienza di realtà aumentata in cui riesce a vedere il divano che intende acquistare in un rendering 3D che gli propone la visuale di quest’ultimo all’interno dello spazio fisico reale della propria casa, così da valutare le dimensioni, il colore e soprattutto la piacevolezza a 360° dell’inserimento di un divano nuovo (e di ogni altro tipo di arredo o accessorio) nella zona Living della propria casa. Il configuratore in 3D di realtà virtuale supporta le campagne di marketing e la comunicazione verso il cliente: il fatto di permettere al cliente di scegliere, tramite il visore 3D, il colore, la posizione del divano, ha portato dei vantaggi sulle vendite, poiché il divano non viene più scelto poggiando la tela su un modello ma attraverso una scelta del cliente condivisa insieme al venditore circa la configurazione da utilizzare. L’azienda osservata usufruisce, in questo modo, di una stretta interazione tra sistemi: è in grado di qualsiasi momento di misurare e controllare tempi e costi lungo l’intera filiera. Queste tecnologie, inoltre, permettono di ottimizzare il processo di forecasting e di demanding.*

*Le innovazioni digitali adottate nel processo produttivo fanno riferimento alla prototipazione 3D del divano e la realizzazione a mezzo stampa digitale in scala 3D, dei prototipi con materiali plastificati, attraverso l’introduzione del PLM (product lifecycle management), ovvero uno strumento che dà l’idea del prodotto durante l’intero suo ciclo di vita, fino a realizzare un prodotto digital twin (prima di realizzare fisicamente il divano, lo si realizza digitalmente in scala reale); ai sensori IoT applicati al processo produttivo per il controllo completo e in tempo reale delle performances delle linee produttive di tutti gli stabilimenti del gruppo; a soluzioni d’Intelligenza artificiale applicate in linea produttiva per il controllo dei difetti estetici del prodotto nelle diverse fasi di lavorazione, così da bloccare in tempo reale l’avanzamento della linea produttiva; all’Intelligenza artificiale applicata alla pianificazione della gestione delle scorte delle materie prime (in maniera particolare la pelle), che permette di ottenere il giusto bilanciamento della gestione delle scorte di magazzino di pelle, che rappresenta la voce di costo per materie prime a più alto impatto sull’equilibrio economico-finanziario, l’intelligenza artificiale può aiutare a fare questo tipo di previsioni. Si tratta di sistemi che auto-apprendono dagli errori, basandosi sullo storico, con accesso a variabili che vengono messe in relazione (previsioni del tempo, utilizzo, localizzazione).*

*Tali strategie, orientate allo sviluppo sostenibile dell’azienda, sono propedeutiche all’obiettivo di brand positioning nel segmento alto del mercato e di sviluppo delle quote nei mercati ad alto potenziale, primo fra tutti quello cinese, e hanno comportato l’esigenza di un controllo totale sulla qualità delle forniture e dei processi manifatturieri, indispensabile per garantire il successo nel posizionamento del brand nel segmento alto di mercato.*

*In funzione di questo obiettivo è stata scelta la strategia di internalizzazione produttiva a monte, ovvero di integrazione verticale di alcune fasi del processo produttivo (in particolare l’assemblaggio del fusto del divano), scelta che comporta un sensibile rischio di sostenibilità sociale conseguente all’eventuale chiusura dei fornitori di fusti. Come gestire tale paradossale rischio? Ovvero, come gestire il rischio di ledere la sostenibilità sociale del network produttivo di riferimento (con la potenziale chiusura di stabilimenti produttivi di fusti in legno, dovuta alla mancanza di commesse) conseguente a scelte strategiche finalizzate proprio a garantire occupazione, quindi sostenibilità sociale ed economica, dell’azienda che commercializza il brand nel segmento luxury del mercato?*

*Ciò che emerge dall’analisi delle risposte degli intervistati è che la gestione dei cambiamenti, derivanti dall’adozione d’innovazioni digitali, orientata a sviluppare e garantire una supply chain sostenibile avviene attraverso*

il coinvolgimento dei fornitori nel cambiamento organizzativo.

Il coinvolgimento dei fornitori consiste, per l'azienda analizzata, nel cercare di trasformare la relazione di fornitura in una partnership forte finalizzata alla conquista congiunta di nuova clientela nel segmento alto, in modo da garantirsi sia volumi produttivi soddisfacenti per la propria struttura organizzativa che al tempo stesso, margini di guadagno superiori rispetto al segmento wholesale.

Nel caso studio osservato, l'azienda cerca di trasformare il fornitore di fusto finito in fornitore di pezzi modulari del fusto: la riduzione dei volumi produttivi del prodotto assemblato può essere controbilanciata dall'incremento del numero di fusti (da consegnare in pezzi modulari) derivante dal maggior numero di ordinativi sui mercati ad alto potenziale.

Questi elementi strategici e gestionali sono interpretabili, secondo la logica sistemico-vitale, come il ricorso ad un utilizzo più intenso e pregnante della struttura ampliata (Golinelli, 2017), ovvero delle componenti esterne e delle connessioni fra esse e il sistema aziendale che, attraverso la regolazione del grado di apertura del sistema, definisce una più ampia varietà di componenti e di relazioni strumentali a sviluppare le competenze della struttura specifica necessarie a rispondere efficacemente, ovvero in maniera consona, alle istanze del mercato.

Scendendo più nel dettaglio, l'applicazione d'innovazioni digitali nel processo produttivo e distributivo ha comportato l'adozione di scelte strategiche finalizzate a sviluppare una supply chain sostenibile che si basano su questa logica: l'azienda deve internalizzare la produzione del fusto in legno (semilavorato che incide fortemente sulla qualità del prodotto finito essendone la struttura portante, in particolare sulla 'seduta', ovvero sulla percezione di comfort e benessere derivante dall'accomodarsi sul divano; incide inoltre sulla vita utile del prodotto finito, nonché sui costi totali di produzione, dovendo usare per l'assemblaggio pezzi di legno massello di alta qualità, e sui costi di trasporto in ragione del loro peso specifico e dell'impossibilità di saturare i mezzi di trasporto con dei telai in legno ingombranti e ovviamente vuoti) innanzitutto per incrementare il controllo della qualità al fine di conquistare e mantenere quote sui segmenti medio-alti di mercati internazionali ad alto potenziale; la riduzione e/o l'azzeramento dei volumi di acquisto di fusti in legno pre-assemblati, può mettere in crisi i fornitori di fusti e ripercuotersi negativamente sull'immagine dell'azienda e del brand, specialmente all'interno del distretto produttivo e della comunità locale. Al fine di mitigare il rischio di ripercussioni negative di tali scelte sul brand e sulla sostenibilità sociale del distretto manifatturiero, l'azienda osservata pone in essere una strategia di risk management informale volta a supportare il fornitore di fusto nel sopperire alla riduzione dei volumi in due modi: trasformando il proprio assetto organizzativo in fornitura di pezzi modulari (secondo una logica win-win), in questo caso l'azienda percorre la via della relazione diadica con il fornitore volta a coinvolgere il partner in un cambiamento dell'assetto produttivo, cioè volto a una produzione di moduli di fusto in legno, a più alto valore aggiunto; oppure aumentando le commesse dai competitors (win-lose), in questo caso, l'azienda percorre la via del business networking informale, cioè usa le relazioni e il peso contrattuale che possiede, per fare in modo da convogliare commesse da attori esterni verso il fornitore di fusto.

La riduzione del volume produttivo (numero di fusti in legno pre-assemblati) e del fatturato (valore del fusto assemblato) è gestibile con l'incremento del volume di divani finiti e del prezzo unitario del divano, dunque del valore unitario dei singoli moduli assemblabili del fusto, a patto che vi sia il massimo coinvolgimento sul concetto della qualità totale e massimo impegno nella garanzia della produzione a difetti zero dei singoli moduli.

Allontanandosi dalla logica win-lose di esercizio del potere contrattuale derivante dalle quote di mercato e dalla connessa capacità produttiva, ma invece perseguendo una logica win-win, il coinvolgimento avviene in modo informale nell'ambito della business relationship stabile diadica che vede impegnati i due attori buyer-supplier.

È interessante notare che l'azienda, per porre in essere la sua strategia di gestione della supply chain orientata a garantire la sostenibilità sociale, ha utilizzato strumenti non formali di natura giuridica, ma solo ed esclusivamente strumenti relazionali di governo delle interazioni a disposizione dei referenti acquisiti e logistica, e ha fatto leva sulle risorse immateriali che compongono il network distrettuale del polo manifatturiero, ovvero l'atmosfera all'interno della quale si sviluppano le relazioni dei diversi attori, inclusi i fornitori di fusti in legno assemblati. Con questi ultimi, i team referents logistics and purchasing hanno avuto il delicato compito di spiegare il cambiamento in via di esecuzione e di trasmettere gli obiettivi e le prospettive di crescita dei segmenti di mercato più alti, oggetto di attenzione dell'azienda.

Si può notare che nelle strategie aziendali, d'internalizzazione del processo distributivo con l'apertura degli stores diretti gestiti dalla figura professionale del sales consultant, di coinvolgimento del consumatore nell'esperienza sensoriale di progettazione del 'living' attraverso il marketing esperienziale, e di coinvolgimento dei fornitori di fusti in legno pre-assemblati, emerge l'integrazione con attori esterni riconducibili alla struttura ampliata: nel primo caso si tratta di un processo d'integrazione verticale a valle vera e propria nel canale retail, finalizzato all'incremento dei volumi, nel secondo di "integrazione" del parere e percezione del consumatore finale attraverso il coinvolgimento emotivo mediato dalle tecnologie digitali innovative di Realtà Virtuale, nel terzo di "integrazione" degli obiettivi strategici dei fornitori attraverso il coinvolgimento degli stessi nell'esecuzione della strategia di marketing, orientata all'incremento delle quote nel segmento medio-alto del mercato globale dell'arredo casa.

Negli ultimi due casi, si pone l'accento sull'aspetto relazionale, quindi emotivo e psicologico, su cui gli attori aziendali, il sales consultant e il procurement manager, possono e devono far leva.

L'aspetto relativo all'integrazione con attori esterni riconducibili alla struttura ampliata non è emerso in maniera abbastanza chiara all'inizio dell'indagine, ma è il risultato di un'attenta ricostruzione della strategia di marketing e di brand positioning nei mercati esteri ad alto potenziale, specialmente quello cinese: se non fosse stato approfondito il tema degli obiettivi strategici di marketing dell'azienda, le risposte alle prime domande somministrate avrebbero fatto

*emergere soltanto la descrizione delle applicazioni tecnologiche digitali nei processi produttivo e distributivo, e i drivers sottostanti a tali scelte, ovvero l'ottimizzazione dei costi e l'incremento del grado di controllo sul processo di lavorazione, ma non sarebbero state sufficienti a svelare in modo più approfondito il nesso logico che lega la strategia di supply chain alla strategia di marketing, ma soprattutto il fatto che tale nesso logico, nel caso studio osservato, ha posto l'accento sull'esigenza del controllo totale della qualità delle singole lavorazioni, e l'azienda ha fatto leva su tale aspetto per costruire su di esso un coinvolgimento dei fornitori, proiettandoli in una sorta di avventura condivisa di conquista di nuovi mercati.*

**Limiti della ricerca.** *Il limite principale di questo studio è caratterizzato da un singolo caso analizzato; per questo motivo, è molto difficile estendere le prove empiriche e le implicazioni gestionali universalmente. Tuttavia, le conclusioni stimolano ulteriore curiosità e la necessità di approfondire i rapporti con i fornitori e il loro coinvolgimento in obiettivi di marketing strategico, sia nello stesso settore che in altri settori diversi, al fine di effettuare un'analisi comparativa. Lo studio è esplorativo di un settore che non è ancora stato affrontato in modo analitico attraverso lo studio qualitativo delle relazioni che emergono al suo interno, e l'analisi degli effetti network su determinati processi specifici è un elemento che richiede ulteriore approfondimento e ricerca.*

*Lo studio invita a moltiplicare gli sforzi in tal senso allo scopo di sviluppare una percezione più ampia e condivisa dell'impatto delle tecnologie digitali riconducibili ad Industria 4.0 sulla sostenibilità della supply chain. Uno sforzo congiunto può valere il superamento delle difficoltà iniziali dovute in parte alla scarsità dei riferimenti presenti in letteratura sui quali fare affidamento per costruire un solido background di ricerca.*

**Practical implications.** *Il coinvolgimento del fornitore nella condivisione degli obiettivi strategici di marketing emerge come una spinta al cambiamento nell'assetto organizzativo del fornitore e nella relazione di fornitura con l'impresa cliente.*

*Questo processo, da porre in essere attraverso strumenti squisitamente relazionali, rappresenta una modalità particolare di gestione delle risorse riscontrabili nella struttura ampliata: il ricorso a risorse comunicative che stimolino, all'interno della relazione diadica, il dialogo aperto, allontanano dalla mera negoziazione ma virano, verso la condivisione di obiettivi di riposizionamento di mercato, in maniera tale da garantire la sostenibilità economica e sociale della supply chain.*

*In alternativa a tale opzione, il ricorso all'utilizzo del business networking informale, ovvero delle relazioni e del peso contrattuale, per fare in modo da convogliare commesse da attori esterni verso i fornitori con capacità produttiva ridotta, in virtù delle scelte strategiche del lead customer, al fine di mantenere l'equilibrio nella supply chain e garantirne la sostenibilità, rappresenta altresì un valido esempio di efficace ricorso alle componenti e alle relazioni riconducibili alla struttura ampliata per contemperare le esigenze di mercato con le istanze degli attori rilevanti presenti a monte del processo di creazione del valore.*

*Questo driver, può supportare l'azienda da un lato nel mitigare il rischio reputazionale, dall'altro la sostenibilità sociale delle scelte d'integrazione verticale e rappresenta un potenziale collegamento tra il processo decisionale sulla gestione del rischio della supply chain e la sostenibilità.*

**Originality/value.** *Da un punto di vista accademico, è stata prestata attenzione limitata alla modalità con cui le imprese manifatturiere possano gestire le tecnologie digitali riconducibili ad Industria 4.0 in maniera tale da garantire e alimentare la sostenibilità sociale, oltre che economica, dei processi di creazione di valore nella loro supply chain.*

*L'originalità di questo lavoro sta nel fornire un interessante studio di un'impresa che, attraverso il ricorso al governo delle interazioni con le componenti della struttura ampliata e delle risorse di connessione inter-sistemica al suo interno, affronta la complessità del mercato attraverso il perseguimento di una strategia di sviluppo sostenibile della supply chain.*

**Parole chiave:** *innovazione digitale, sostenibilità, supply chain, struttura ampliata*

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# Convergenza digitale, demografia industriale e ciclo di vita del settore: un'analisi nel business degli smartphone

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**Obiettivi e contesto teorico di riferimento.** *A partire agli anni '80 del secolo scorso sono state condotte numerose ricerche empiriche finalizzate ad analizzare i cambiamenti strutturali e competitivi che nel tempo tendono a caratterizzare i diversi settori industriali. Tali ricerche sono state svolte nell'ambito di differenti filoni di studio di matrice economico-manageriale, quali quello della economia evolucionista (Nelson, Winter, 1982; Gort, Klepper, 1982; Klepper, 1996, 1997), del management dell'innovazione (Abernathy, Utterback, 1978; Utterback, Suarez, 1993; Audretsch, 1995) e della ecologia delle organizzazioni (Hannan, Carroll, 1992; Baum, 1996). Questi studi, pur nelle differenze di prospettiva adottate, sembrano concordare sul fatto che i settori tendono a evolvere seguendo un ciclo di vita contraddistinto da una fase iniziale di sviluppo durante la quale il numero di imprese ed organizzazioni cresce lentamente e da una successiva fase di crescita nella quale tale numero aumenta rapidamente fino ad un punto di picco a cui fa seguito un processo di consolidamento connotato dalla affermazione di un numero più ridotto di imprese di dimensioni medie maggiori. Tali studi, inoltre, mostrano che l'evoluzione della demografia settoriale e delle dinamiche competitive è influenzata dal tipo di fonti di conoscenza alla base dei processi di innovazione delle imprese (Agarwal, Sarkar, Echambadi, 2002).*

*I risultati delle ricerche empiriche hanno anche mostrato che esistono rilevanti differenze nei tassi di ingresso di nuove imprese durante l'evoluzione dei diversi settori industriali. Tale differenze sono state interpretate, specie dagli economisti dell'innovazione, in relazione ai regimi tecnologici alla base della creazione di nuova conoscenza che caratterizzano i singoli settori. I cambiamenti tecnologici hanno, infatti, diverse conseguenze sui meccanismi selettivi di ingresso e uscita delle imprese in base alla tipologia di competenze che alimenta i processi di innovazione (Audretsch, 1995, 1997). Se questi si basano sullo sviluppo di conoscenze e capacità esistenti, il settore si caratterizza principalmente per un cambiamento tecnologico 'rafforzatore' delle competenze già possedute (competence-enhancing) dalle imprese incumbent, riducendo di norma, durante l'evoluzione del settore, le possibilità di ingresso e la forza competitiva delle imprese nuove entranti. Se, invece, i processi di innovazione si basano su nuove forme di conoscenza, il settore tende a evolversi in forza di un cambiamento tecnologico 'distruttore delle competenze' (competence-destroying) che, nello svalutare il valore delle risorse complementari di norma possedute dalle imprese incumbent, può favorire l'ingresso nel settore di un numero elevato di nuovi operatori (Anderson, Thusman, 1990; Teece, 1986).*

*Tra i principali fenomeni che negli ultimi anni stanno provocando forti discontinuità tecnologiche in numerosi settori, dando luogo a cambiamenti tecnologici di tipo 'competence-destroying', rientrano i processi di convergenza digitale, che hanno determinato la confluenza e la fusione di molti mercati precedentemente separati, specie nell'ambito dei comparti di attività collegati all'ICT (Hacklin, Marx, Fahrni, 2009; Ancarani Costabile, 2009; Lindt, 2005). I processi di convergenza digitale provocano infatti, di norma, forti discontinuità nelle architetture produttive e tecnologiche a livello settoriale, determinando la ridefinizione delle strutture industriali dei business convergenti e, quindi, delle relative curve del ciclo di vita settoriale. È stato osservato in proposito che "se sono in fase di evoluzione le curve del ciclo di vita di più settori simultaneamente", laddove tali settori entrino in convergenza, queste curve "formeranno uno spazio n-dimensionale aggrovigliato di reciproche convergenze" (Lind, 2005, p. 16).*

*La letteratura di management ha però solo parzialmente affrontato il tema della relazione tra processi di convergenza settoriale, ciclo di vita dei settori convergenti e meccanismi selettivi che operano a livello di settore nel definire l'evoluzione della demografia delle imprese coinvolte da tali processi. È invece questo un tema rilevante se si osserva che nei settori interessati da processi di convergenza digitale, specie nei casi in cui essi siano causati dallo sviluppo di tecnologie molto innovative, le imprese incumbent hanno spesso difficoltà ad adeguare la propria base di conoscenze per rispondere alle nuove opportunità tecnologiche offerte da questi processi. Ciò apre alla possibilità di ingresso nel settore di un numero elevato di nuove imprese che, sfruttando il basso livello cumulativo delle conoscenze tecnologiche possedute dalle imprese incumbent, possono acquisire rapidamente posizioni rilevanti di mercato concentrandosi sullo sviluppo delle nuove tecnologie e dei prodotti e servizi nati in conseguenza del processo di convergenza (Stieglitz, 2003).*

*È stato quindi svolto un lavoro di ricerca finalizzato ad esaminare tale tematica nell'ambito di uno dei settori che negli ultimi 20 anni è stato maggiormente influenzato dal processo di convergenza digitale, quello degli apparati di telefonia mobile, processo che ha portato alla nascita del business degli smartphone. Come si avrà modo di descrivere,*

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lo sviluppo di tale settore, attivato dalla sovrapposizione del settore degli apparati di telefonia mobile e quello dei 'computer palmari' (Personal Digital Assistant - PDA), ha determinato nel tempo radicali mutamenti nelle caratteristiche strutturali e nelle dinamiche di innovazione e competitive di una serie di settori interessati, con intensità differenti, dagli effetti del processo di convergenza digitale.

Obiettivo del presente lavoro di ricerca, ancora in corso di svolgimento, è quello di esaminare il processo di convergenza digitale che ha portato allo sviluppo del settore degli smartphone, al fine di analizzare:

- l'andamento delle curve del ciclo di vita dei principali settori interessati dal processo di convergenza;
- l'evoluzione della curva del ciclo di vita del settore degli smartphone (anche per verificare se essa ha seguito l'andamento tipico proposto dagli studi sul ciclo di vita del settore);
- i processi di ingresso ed uscita delle imprese nel settore degli smartphone (anche al fine di verificare se un settore nato da un processo di convergenza digitale di tipo 'competence-destroying' favorisca, come ipotizzato, l'ingresso di nuove imprese nel business e il relativo potenziale competitivo);
- l'impatto della evoluzione delle piattaforme tecnologiche sulle dinamiche strutturali e competitive del business degli smartphone.

**Metodologia.** Dal punto di vista metodologico è stata svolta un'analisi di tipo quali/quantitativo finalizzata a studiare in profondità il ciclo di vita del settore degli smartphone e i fattori che ne hanno influenzato l'evoluzione. Si è quindi proceduti in primo luogo a costruire la curva del ciclo di vita del settore degli smartphone, e quella dei principali settori convergenti - Features phone, Personal Digital Assistant e Sistemi operativi per smartphone - elaborando i dati di mercato forniti dai principali istituti di ricerca specializzati del settore, quali Gartner Group, International Digital Corporation (IDC) e Counterpoint Research. È stato poi svolto un lavoro di ricerca finalizzato ad descrivere l'evoluzione nel tempo del numero e della tipologia di imprese operanti nel settore degli smartphone a livello globale. Sono stati quindi opportunamente elaborati i dati relativi alle imprese produttrici di smartphone attive nel periodo 2004-2016, forniti dal database gestito da GSM Arena. GSM Arena è un sito web indipendente che raccoglie nel continuo informazioni sulla produzione nel mondo di dispositivi di telefonia mobile e conduce accurate analisi sulle caratteristiche tecnologiche di tali dispositivi. La validità dell'utilizzo di tale database a supporto dell'analisi è confermata da precedenti lavori di ricerca di natura economico-manageriale svolti nel settore della telefonia mobile (tra gli al.: Giachetti, Marchi, 2010; Giachetti, Dagnino, 2014; Koski, Kretschmer, 2007), che fanno ormai di detta fonte un riferimento per gli studi condotti in questo ambito di attività. Le modalità di elaborazione dei dati sono descritte nel corso del lavoro.

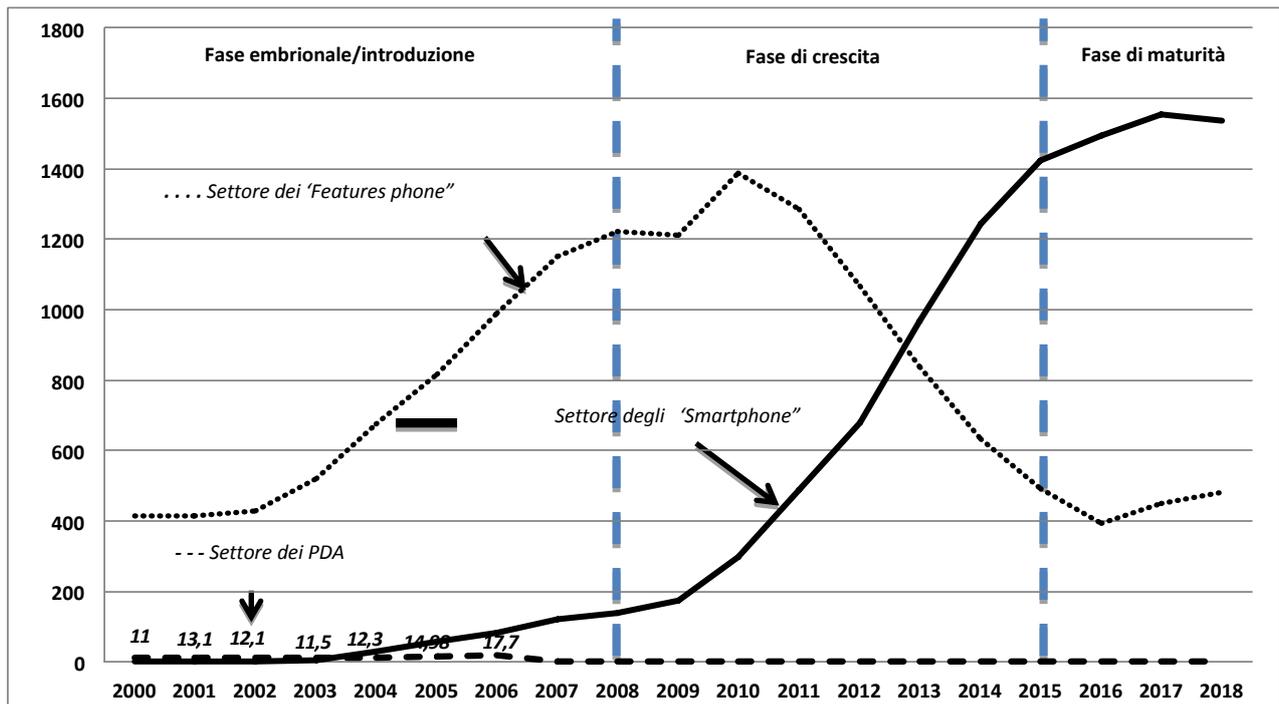
**Risultati.** Il lavoro di ricerca, ancora in fase di svolgimento, ha già consentito di raggiungere alcuni interessanti risultati. In primo luogo è stato esaminato il processo di convergenza che ha determinato lo sviluppo del business degli smartphone. In estrema sintesi, è possibile evidenziare che tale settore nasce in forma embrionale alla fine degli anni '90 quando furono lanciati sul mercato alcuni terminali ibridi avanzati di telefonia mobile che combinavano in un unico dispositivo digitale le funzioni di base dei telefoni cellulari con quelle dei 'computer palmari' (Personal Digital Assistant) e che integravano al loro interno sistemi digitali audio e video, consentendo inoltre di accedere in mobilità ad una serie di servizi via internet (Kim, Lee, Koh, 2005). Il settore degli smartphone nasce quindi in conseguenza di un processo completo di convergenza tra il settore dei telefoni cellulari e quello dei Personal Digital Assistant e di una sovrapposizione parziale di questi due settori con quello dei dispositivi digitali mobili audio e video. Ma è a partire dal 2007, anno in cui Apple, con il lancio sul mercato dell'iPhone, ha svolto il ruolo di "apripista" verso una nuova modalità d'uso dello smartphone (West, Mace, 2010), che si è verificata una seconda fase del processo di convergenza digitale che ha interessato il settore nascente degli smartphone e quelli del software e dell'hardware per computer, provocando il definitivo passaggio del business degli smartphone da una fase di introduzione, a una di crescita sostenuta.

Se si analizza l'andamento delle vendite di mercato nel settore degli smartphone (esprese in termini di numero di dispositivi), esso sembra ripercorrere, come graficamente illustrato nella figura 1, l'evoluzione-tipo descritta dagli studiosi del ciclo di vita del settore. Dal grafico emerge infatti una fase embrionale/introductiva del business che si protrae fino al 2008, anno a partire dal quale si è registrato un tasso di crescita medio annuo delle vendite molto elevato, che ha determinato il passaggio del mercato verso una fase di crescita. A partire dal 2015, invece, il settore sembra entrato in una fase di maturità. Il tasso di crescita delle vendite è infatti fortemente diminuito, fino a registrare una sostanziale stabilità delle vendite nel 2018 rispetto al 2017. Dall'analisi dei dati di vendita risulta anche che l'evoluzione del mercato è collegata ad un processo di convergenza/sostituzione dei terminali di telefonia mobile tradizionali (features phone), con funzionalità di base, e dei Personal Digital Assistant, con gli smartphone<sup>1</sup>. Come si evidenzia nella figura 1, infatti, il mercato dei 'features phone' ha toccato un picco di vendite nel 2010, al quale ha fatto seguito, in corrispondenza della fase di crescita accelerata degli acquisti di smartphone, una fase di declino che in pochi anni ha portato le vendite di tale tipologia di cellulari ad assestarsi su valori molto più contenuti, anche se a partire dal 2017 si è assistito ad una leggera inversione delle vendite, specie in relazione all'aumento della domanda di primo acquisto dei telefoni cellulari nei mercati emergenti, quali in particolare l'India (Counterpoint Research, 2019).

<sup>1</sup> La distinzione tra smartphone e telefoni cellulari di prima generazione (features phone) è stata effettuata sulla base dell'inserimento, all'interno dei dispositivi, di un sistema operativo software, aspetto che caratterizza solo gli smartphone.

La crescita definitiva del mercato degli smartphone è stata inoltre accompagnata dal declino definitivo del settore dei Personal Digital Assistant. Tale business, nato a metà degli anni '90, agli inizi del 2000 si trovava in ancora in una fase di sviluppo iniziale. In effetti, essendo il PDA un prodotto che si rivolgeva principalmente ad un mercato di tipo business, le relative vendite, che avevano raggiunto nel 2006 - come emerge dalla figura 1 - un picco massimo di circa 18 milioni di unità, non avevano fatto evolvere il settore verso un mercato di massa. Il processo di convergenza digitale che alla fine degli anni '90 diede l'avvio alla produzione di dispositivi di telefonia ibridi portò rapidamente ad una distinzione sempre meno netta tra PDA e smartphone, in quanto da un lato furono inserite negli smartphone le funzionalità tipiche dei PDA, e dall'altro i PDA, che inizialmente disponevano solo della connessione via internet, furono dotati anche della comunicazione vocale tipica dei cellulari. Dal 2007, quindi, nelle rilevazioni degli istituti di ricerca specializzati, le vendite di PDA sono state conteggiate nell'ambito del nuovo business degli smartphone, sancendo la fusione definitiva di tali settori.

Fig. 1: Vendite nel mondo di 'Smartphone', 'Features phone' e 'Personal Digital Assistant (PDA)' (milioni di unità) e fasi del ciclo di vita del settore degli Smartphone. Anni 2000-2018



Fonte: ns. elaborazione su dati Gartner Group, International Digital Corporation (IDC), Counterpoint Research.

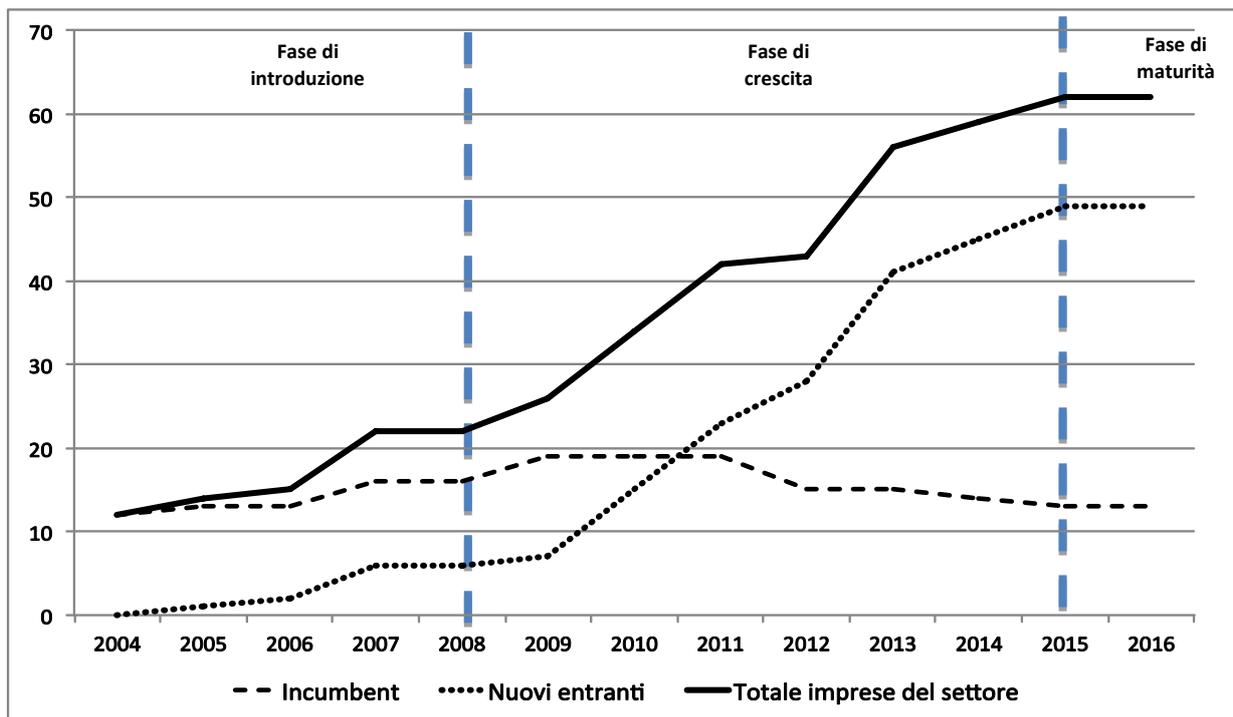
Dopo aver descritto l'evoluzione del ciclo di vita degli smartphone sulla base dei dati di vendita, è utile analizzare, in linea con gli obiettivi conoscitivi del lavoro, le dinamiche di ingresso ed uscita delle imprese nel settore degli smartphone durante le varie fasi di sviluppo del business, anche al fine di verificare se un settore nato da un processo accelerato di convergenza digitale, di tipo 'competence-destroying', favorisca, come ipotizzato, l'ingresso e il potenziale competitivo di nuove imprese nel business.

Per fare ciò, come evidenziato in fase di descrizione della metodologia della ricerca, sono stati elaborati i dati forniti dal database 'GSM arena' per esaminare l'andamento del numero di imprese attive nel settore degli smartphone nel periodo 2004-2016. Per individuare le imprese produttrici di smartphone presenti nel database (distinguendole da quelle specializzate nella produzione di features phone) sono state selezionate le aziende che hanno prodotto dispositivi mobili per la comunicazione vocale dotati di sistemi operativi software, escludendo inoltre quelli in forma di tablet. Dall'analisi è risultato che le imprese che hanno operato nel settore degli smartphone nel periodo indagato sono state complessivamente 76, di cui solo 62 ancora attive nel 2016. Successivamente, si è proceduto ad analizzare l'andamento del numero di imprese produttrici di smartphone durante il ciclo di vita del settore distinguendo tra imprese incumbent e imprese nuove entranti. Tale distinzione è stata svolta in base al settore convergente di provenienza delle imprese. Sono state classificate come incumbent le imprese provenienti dai due settori la cui sovrapposizione ha dato origine al settore degli smartphone, quello dei telefoni cellulari e quello dei Personal Digital Assistant. Queste imprese sono infatti quelle che hanno immesso sul mercato le prime forme di smartphone agli inizi del 2000. Sono state, invece, classificate come imprese 'nuove entranti' quelle che hanno fatto il loro ingresso nel business in prevalenza a partire dalla fine del periodo di introduzione, provenendo da settori che solo in una seconda fase del processo di convergenza sono entrati in sovrapposizione con quello degli smartphone, quali in particolare quelli del software e dell'hardware per computer. Per effettuare tale classificazione è stato svolto un lavoro di indagine che ha consentito, sulla base di

fonti derivate, di individuare per ogni impresa attiva nel periodo oggetto di indagine il settore originario di appartenenza.

Il risultato di tali analisi è graficamente sintetizzato nella figura 2. Come risulta dalla figura, in linea con le ipotesi alla base del modello del ciclo di vita del settore, nella fase di introduzione del business degli smartphone il numero di imprese è rimasto ancora piuttosto limitato, ma tale numero è cresciuto in maniera spinta nella fase di crescita, assestandosi poi in prossimità della fase di maturità. Più nello specifico, dalla figura 2 risulta che il numero di imprese incumbent si è mantenuto tendenzialmente stabile nel tempo, anche se esso è la risultante di un processo di entrata e uscita che ha portato ad un tasso di sopravvivenza medio delle imprese - calcolato come rapporto tra numero complessivo di imprese incumbent operanti nel mercato nel periodo 2004-2016 e numero delle imprese ancora attive alla fine del periodo analizzato (anno 2016) - del 56%. Basti evidenziare in proposito che le due imprese leader del settore nel 2007, Nokia (proveniente dal settore della telefonia cellulare) e RIM/Blackberry (proveniente dal settore dei PDA), che controllavano rispettivamente circa il 50 e il 10 per cento delle vendite di smartphone, sono poi uscite dal mercato nel 2013 e nel 2017.

Fig. 2: Andamento del numero di imprese produttrici di smartphone nelle fasi del ciclo di vita del settore: imprese incumbent e imprese nuovi entranti. Anni 2004-2016



Fonte: ns. elaborazione su dati GSMarena (www.gsmarena.com).

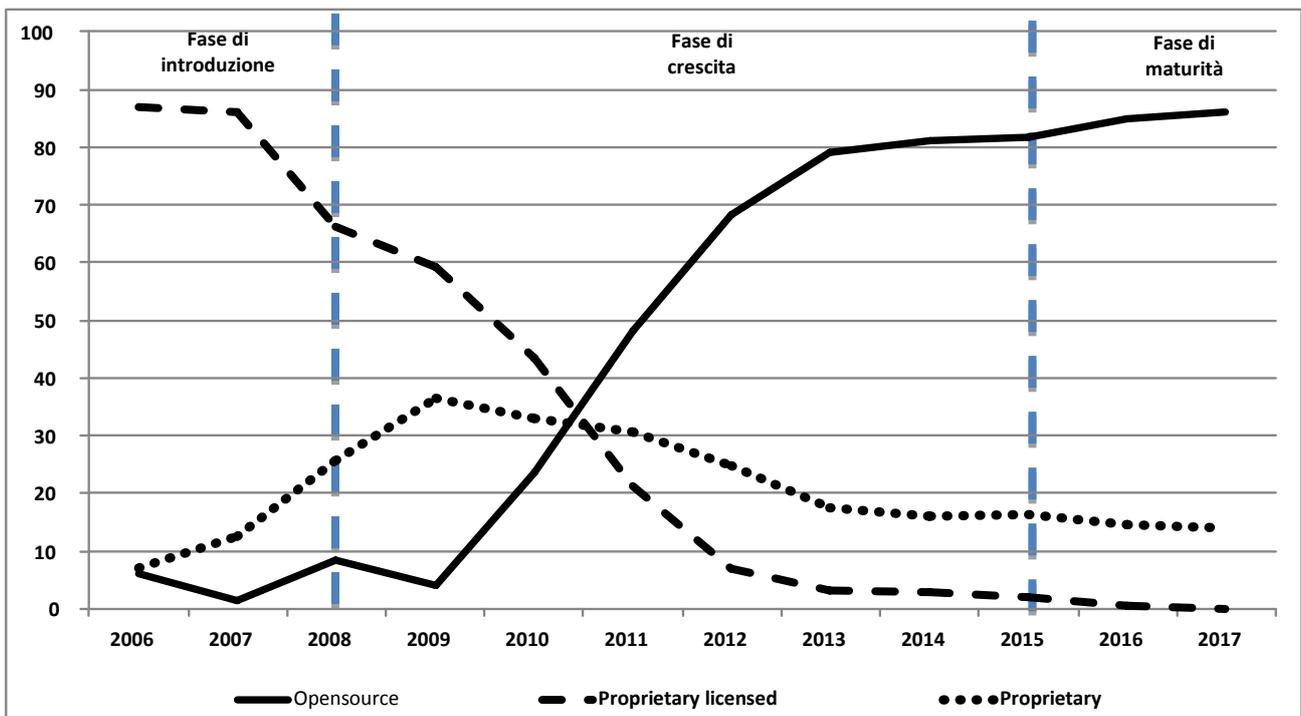
Se si analizzano, invece, i dati relativi alle imprese nuove entranti, si evidenzia che il loro numero è rapidamente aumentato, specie nella fase di crescita del settore. Tali imprese sembrano aver dimostrato anche una maggiore capacità di adattamento all'evoluzione del settore, in quanto per esse il tasso di sopravvivenza medio, calcolato sempre come rapporto tra numero complessivo di imprese nuove entranti operanti nel mercato nel periodo 2004-2016 e numero delle imprese nuove entranti attive nel 2016, è superiore al 90%. A dimostrazione della maggiore capacità delle imprese nuove entranti di adattamento ai mutamenti delle dinamiche strutturali e competitive del settore, le quote di mercato al 2018, pur segnalando ancora la leadership di una impresa incumbent - Samsung, proveniente dal settore dei telefoni cellulari, che controlla il 19 per cento delle vendite totali in termini di unità -, evidenziano la posizione preminente nel mercato delle imprese nuove entranti. In particolare emerge il ruolo sempre più rilevante rivestito negli ultimi anni da alcune imprese del sud-est asiatico (come Huawei, Xiaomi ed OPPO), che stanno rapidamente e costantemente erodendo quote di mercato ai due leader del settore (Samsung ed Apple) in forza di tassi di crescita delle vendite molto elevati.

Per approfondire l'esame dei fattori alla base dell'evoluzione del ciclo di vita del settore degli smartphone fin qui descritta, è opportuno procedere anche all'esame dei cambiamenti avvenuti nel tempo della piattaforma tecnologica di tipo software utilizzata per i nuovi terminali intelligenti di telefonia mobile. La piattaforma software ha rappresentato, infatti, un fattore chiave per l'affermazione degli smartphone rispetto ai telefoni cellulari con funzioni di base, così come confermato dai risultati degli studi economico-manageriali che negli ultimi anni hanno contribuito a comprendere il ruolo dei sistemi operativi nello sviluppo dell'innovazione nel mercato della telefonia mobile (Campbell-Kelly et al., 2015; Fautrero, Gueguen, 2013; Kenney, Pon, 2011; West, Mace, 2010). In effetti, l'andamento delle vendite di smartphone è strettamente collegato a quello dei sistemi operativi per dispositivi mobili. È infatti

l'inserimento di tali applicativi software nei cellulari ad aver distinto in maniera netta i features phone dagli smartphone. Il processo di convergenza che ha determinato la nascita degli smartphone ha quindi dato vita anche al settore dei sistemi operativi per smartphone che, nei livelli di vendita, equivale a quello degli smartphone, in quanto ad ogni vendita di smartphone corrisponde la vendita di un sistema operativo. Il livello di collegamento tra tali settori è pertanto molto elevato, anche in relazione alla forte interdipendenza tra operatori dei due business nello sviluppo dei processi di innovazione. In altre parole, l'evoluzione di tali settori è strettamente interrelata, in quanto le potenzialità di sviluppo e le strategie delle imprese produttrici di smartphone dipendono dalle innovazioni realizzate nel campo delle piattaforme software, e viceversa (Campbell-Kelly et al., 2015).

Per comprendere più a fondo le connessioni tra tali business, è utile esaminare come siano evoluti, nelle diverse fasi del ciclo di vita del settore degli smartphone, i processi di sviluppo e di adozione delle piattaforme software. Per fare ciò, sono stati elaborati i dati relativi alle vendite di sistemi operativi per smartphone, in relazione alle varie fasi evolutive del settore, raggruppandoli per tipologia di sistema operativo. Come si evince dalla figura 3, infatti, i sistemi operativi per smartphone si distinguono in tre macro-categorie: piattaforme proprietarie chiuse ('Proprietary'), per le quali la produzione del software è realizzata dall'impresa che produce lo smartphone e tale software equipaggia in maniera esclusiva il dispositivo telefonico di proprietà; piattaforme proprietarie in licenza ('Proprietary licensed'), per le quali l'integrazione dei sistemi e la produzione del software avviene sotto il controllo di un unico soggetto, anche in forma di consorzio, che fornisce poi il sistema operativo in licenza ai produttori di smartphone; piattaforme 'open source', per le quali l'integrazione dei sistemi e la produzione del software avviene sotto il controllo di un unico soggetto - spesso nella forma di consorzio - che consente poi ai produttori di smartphone l'accesso 'open source' e gratuito al sistema operativo.

Fig. 3: Sistemi operativi per smartphone divisi per tipologia di piattaforma software: quote di mercato cumulative in termini di unità vendute (dati percentuali). Anni 2006-2017



Fonte; ns. elaborazione su dati Gartner Group.

Dalla figura 3 emerge che nel 2006, nella fase iniziale di sviluppo del settore, i sistemi di tipo 'proprietario in licenza' erano quelli leader del mercato. Nello specifico, il primo sistema operativo specifico per smartphone fu quello lanciato nel 1998 dalla joint venture Symbian, creata e controllata dalle imprese che detenevano in quel momento la leadership del mercato degli apparati per la telefonia mobile - Nokia, Motorola ed Ericsson - in collaborazione con Psion, un'impresa operante nel settore dei PDA (Ancarani, 2001). Il sistema operativo Symbian era una piattaforma proprietaria sviluppata in primo luogo per soddisfare le esigenze delle imprese consorziate, ma che veniva poi ceduta in licenza anche ad altre imprese che necessitavano di sistemi operativi per cellulari, quali ad esempio Samsung. Un secondo importante operatore che operava nel mercato tramite un sistema operativo proprietario in licenza era Microsoft. Tale impresa aveva adattato per i telefoni cellulari il sistema software utilizzato anni prima per i propri PDA, creando nel 2003 il Windows Mobile, un sistema operativo che veniva fornito in licenza a determinati produttori di smartphone. Infine, un terzo operatore che operava nel mercato con un sistema proprietario fornito in licenza era Palm, che equipaggiava con il sistema operativo 'Palm OS' sia gli smartphone di sua proprietà, che quelli di altri

operatori tramite licenza. Complessivamente le piattaforme 'proprietarie in licenza' controllavano nel 2006 più dell'80 per cento del mercato, con una grossa predominanza del sistema Symbian, che equipaggiava quasi i 2/3 degli smartphone venduti sul mercato. Accanto ai software di tipo proprietario in licenza, nel 2006 quote residuali del mercato, inferiori al 10 per cento, erano invece controllate da piattaforme di tipo proprietario e di tipo open source. L'unica piattaforma proprietaria attiva in quell'anno era quella sviluppata dalla Research In Motion (RIM) per equipaggiare in via esclusiva i propri dispositivi di telefonia BlackBerry, che per alcuni avrebbero detenuto una rilevante posizione competitiva nel mercato degli smartphone a livello globale (Campbell-Kelly et al., 2015). La piattaforma di tipo 'open source' era, invece, quella che aveva dato vita al sistema operativo Linux Mobile. Tale sistema era stato creato dalla LiMo Foundation, una alleanza strategica tra operatori delle telecomunicazioni, adattando per i dispositivi mobili un software di tipo 'open source' da tempo disponibile per i desktop computer (Kenney, Pon, 2011).

Come si evince dalla figura 3, a partire dal 2008 si sono verificati dei cambiamenti radicali nella configurazione del settore dei sistemi operativi mobili dal punto di vista delle tipologie di piattaforme software adottate. Tali cambiamenti sono dovuti all'ingresso del settore di due imprese che, sfruttando gli effetti del processo di convergenza digitale, sono entrate nel mercato degli smartphone e dei relativi sistemi operativi, contribuendo in maniera determinante, con le loro innovazioni, alla crescita di tali business. La prima impresa è Apple, che alla fine del 2007 lanciò sul mercato il modello iPhone. Per l'iPhone Apple creò un sistema operativo proprietario esclusivo, l'iOS, adattando il software usato per i propri personal computer. Il sistema operativo dell'iPhone fu molto innovativo in quanto adottava un'interfaccia grafica basata sull'utilizzo di 'icone' di facile selezione che consentiva di interagire con lo smartphone in maniera semplice e rapida (soluzione poi imitata dalla maggior parte dei competitors e affermata come standard). Inoltre, la creazione nel 2008 dell'App Store, all'interno del quale venivano rilasciate una serie di applicazioni multimediali tematiche da utilizzare con l'iPhone, resero sempre più il terminale di telefonia mobile uno strumento multifunzione che consentiva di accedere ad una serie di servizi avanzati via internet (West, Mace, 2010). La seconda impresa che con il suo ingresso nel mercato dei sistemi operativi per smartphone, nel 2008, ha modificato le logiche competitive del business, è Google. L'impresa coinvolse 35 imprese nell'ambito di alleanza strategica - la 'Open Handset Alliance' (OHA) - finalizzata allo sviluppo di una piattaforma avanzata aperta per dispositivi mobili, il sistema operativo 'Android'. L'approccio di business adottato da Google si distinse rispetto a quello dei principali concorrenti di mercato proprio perchè il sistema operativo Android, a differenza di quelli di tipo proprietario, era "libero da licenza" e "selettivamente aperto" (Fautrero, Gueguen, 2013; Querbes-Revier, 2011; Kenney, Pon, 2011).

Dalla figura 3 risulta che nella fase di crescita del business si è definitivamente affermata come tipologia di piattaforma software, quella di tipo 'open source'. I dati per operatore, in particolare, fanno emergere l'affermazione di un duopolio di cui sono protagonisti da un lato l'unico sistema operativo per dispositivi cellulari di tipo 'open source' ancora attivo, quello di Google, che ha visto progressivamente aumentare le sue vendite, fino a fargli raggiungere nel 2018 una quota di mercato nel mondo superiore all'85 per cento; dall'altro Apple, che, con il 15 per cento del mercato coperto, è rimasta l'unica nel 2018 a contrastare il software Android, tramite il sistema proprietario chiuso che equipaggia in maniera esclusiva lo smartphone iPhone. La diffusione della piattaforma software di tipo 'open source' controllata da Google ha rappresentato un fattore che ha impattato fortemente sull'evoluzione del settore degli smartphone e sulle relative dinamiche di competizione. In primo luogo perchè la sua diffusione ha fatto aumentare l'utilizzo del cellulare per l'accesso ai servizi erogati tramite internet. Come osservato (Kenney, Pon, 2011, p. 249), il sistema operativo "Android ha accelerato l'adozione dei 'mobile digital services' e l'utilizzo in mobilità dei servizi internet esistenti, incluso Google". In secondo luogo, poichè la disponibilità sul mercato di un sistema operativo di tipo 'open source', a cui possono quindi accedere i produttori di smartphone senza pagarne la licenza, ha di fatto ridotto le barriere all'ingresso nel settore degli smartphone collegate agli elevati investimenti necessari per la produzione e la gestione di una piattaforma software proprietaria o, in alternativa, per l'accesso a piattaforme software in licenza e, quindi, a pagamento. Questo è uno dei motivi alla base del successo che negli ultimi anni sta caratterizzando, come precedentemente evidenziato, alcuni operatori del sud-est asiatico, che proprio grazie all'esternalizzazione della produzione della componente software, realizzata grazie all'accesso al sistema operativo open source 'Android', hanno potuto penetrare il mercato, facendo leva sulla vendita di dispositivi di telefonia in prevalenza di una fascia di prezzo medio-bassa.

**Limiti della ricerca.** Un limite relativo della ricerca riguarda l'impossibilità di estendere i risultati raggiunti a settori di attività diversi da quello oggetto di indagine. Altri limiti sono invece connessi ai risultati delle analisi statistiche che sono attualmente in corso di svolgimento per la realizzazione del secondo step della ricerca. La descrizione di tali limiti sarà svolta in fase di stesura definitiva del lavoro.

**Prime conclusioni e sviluppi della ricerca.** L'analisi svolta ha consentito, in linea con gli obiettivi conoscitivi del lavoro, di descrivere l'andamento delle curve del ciclo di vita dei principali settori interessati dal processo di convergenza digitale che ha dato vita al business degli smartphone. Dall'analisi è emerso che il ciclo di vita del settore degli smartphone sembra ripercorrere l'evoluzione-tipo descritta dagli studiosi del tema, e che tale evoluzione è stata accompagnata dalla simultanea trasformazione delle curve del ciclo di vita dei due settori dalla cui sovrapposizione è nato il settore degli smartphone, quello dei telefoni cellulari tradizionali e quello dei PDA. La ricerca ha inoltre permesso di esaminare l'evoluzione della demografia industriale del settore degli smartphone, tramite la misurazione

dei movimenti in ingresso ed uscita delle imprese nel business lungo l'intero ciclo di vita del settore. Anche in questo caso, i risultati hanno mostrato, in linea con le ipotesi alla base del modello del ciclo di vita del settore, che nella fase di introduzione del business il numero di imprese è rimasto piuttosto limitato, crescendo poi in maniera rapida nella fase di crescita ed assestandosi in prossimità della fase di maturità. L'approfondimento di analisi ha anche consentito di mostrare che, come ipotizzato, il processo di convergenza digitale ha favorito nel tempo l'ingresso nel business di un numero elevato di nuove imprese. L'analisi svolta ha evidenziato, inoltre, un tasso di sopravvivenza nel settore delle imprese nuove entranti molto superiore a quello che ha caratterizzato le imprese incumbent, nonché una crescita continua delle quote di mercato controllate dalle imprese newcomer. Ciò indica una maggiore capacità di adattamento delle imprese nuove entranti rispetto agli incumbent all'evoluzione delle dinamiche di innovazione e competitive di un settore interessato da un processo di convergenza digitale. Infine, la ricerca ha permesso di descrivere la stretta relazione tra l'evoluzione delle piattaforme tecnologiche di tipo software e il cambiamento della struttura industriale e concorrenziale nel business degli smartphone.

In conclusione, è importante ribadire che i risultati descritti sono il frutto di un primo step di un percorso di ricerca più esteso, che prevede un'analisi più approfondita delle relazioni causa-effetto tra i diversi fenomeni analizzati. È infatti attualmente in corso di svolgimento uno studio finalizzato a misurare, tramite tecniche statistiche, l'evoluzione, lungo l'intero ciclo di vita del settore degli smartphone, delle relazioni tra livello delle vendite di mercato, numero di imprese nuove entranti, tassi di uscita delle imprese nuove entranti e delle imprese incumbent, quote di mercato delle imprese nuove entranti e tassi di innovazione di prodotto, nonché a valutare l'impatto su questi fattori dell'affermazione nel tempo di una piattaforma software standard di tipo open source.

**Originalità del lavoro.** La letteratura economico-manageriale, pur avendo affrontato in profondità il tema dell'evoluzione del ciclo di vita del settore, anche dal punto di vista di diverse prospettive di studio, non sembra aver ancora sufficientemente esaminato la tematica della relazione tra processi di convergenza settoriale, regimi tecnologici e ciclo di vita dei settori convergenti. Per questo motivo, come osservato (Hacklin, Marxt, Fahrni. 2009, p. 724) "sono necessarie ulteriori ricerche esplorative e esplicative per comprendere le conseguenze della convergenza come forma di innovazione" e il suo impatto sulle dinamiche di sviluppo dei settori convergenti. Il lavoro fornisce un primo contributo originale in questa direzione.

**Parole chiave:** ciclo di vita del settore; convergenza digitale; smartphone; incumbent; nuovi entranti; piattaforme tecnologiche.

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# La digitalizzazione delle micro, piccole e medie imprese: una scelta consapevole?

ALESSANDRO BIGI\* ALESSIA ZOPPELLETTO\* DAVIDE MIGLIORANZI<sup>▲</sup>

**Obiettivi.** *Obiettivo di questo studio è identificare e illustrare i pattern di evoluzione digitale, attraverso un'analisi esplorativa dei processi e degli obiettivi di trasformazione, delle micro, piccole e medie imprese (MPMI), valutandone il livello di preparazione digitale di partenza e le dinamiche di innovazione, incrementale piuttosto che differenziale, ricercate e perseguite, in ottica di industria 4.0.*

*Se, da un lato, i mutamenti basati sulle tecnologie digitali, sono un sottoinsieme delle iniziative di evoluzione organizzativa e hanno attratto particolare attenzione da parte della ricerca, per diversi decenni (Venier, 2017), dall'altro il termine trasformazione è utilizzato per sottolineare la magnitudine della variazione strategica, insita nell'adozione di nuove tecnologie (Goerzig e Bauernhansl, 2018). I cambiamenti e le spinte alla digitalizzazione sono innestati da modifiche ed evoluzioni del contesto, all'interno del quale le imprese operano. La letteratura divide l'innovazione tecnologica, essenzialmente, in due forme antitetiche: incrementale, continua, rivoluzionaria o differenziale, discontinua e evolutiva (Yu e Hang, 2010). Nel primo caso, si assiste a una progressiva modifica della dotazione digitale d'impresa, attraverso un'attività di miglioramento ed evoluzione dei processi esistenti, mentre, nel secondo caso, si osserva una reazione di rottura, con una rivoluzione dei processi interni e della struttura organizzativa (Purchase et al., 2011).*

*Esaminando la propensione al cambiamento e la preparazione alla trasformazione digitale, diversi sono gli studi che hanno esaminato e valutato la maturità delle imprese ad affrontare i nuovi paradigmi dell'ambiente competitivo (Lichtblau et al., 2015; Schumacher et al., 2016). In particolare, sono state identificate, in letteratura, nove dimensioni di analisi che consentono di valutare quanto le imprese manifatturiere siano prossime e orientate al cambiamento: strategia, leadership, clienti, prodotti, operation, cultura, persone, governance e tecnologia (Schumacher et al., 2016). Tuttavia, tali variabili si riferiscono a imprese manifatturiere di medie e grandi dimensioni, che operano come realtà industriali di produzione, con macchinari propri e hanno una modalità di produzione e di approccio al mercato strutturata e consolidata.*

*Al fine di comprendere il comportamento di imprese di minori dimensioni e non strettamente industriali, sono state esaminate recenti analisi economiche, che hanno sottolineato l'esistenza di un rapporto tra caratteristiche demografiche, culturali e comportamentali degli imprenditori e/o dei manager, performance competitive e propensione all'investimento (Bloom e Van Reenen, 2010). In particolare, i fattori che portano all'investimento in innovazione nelle piccole imprese risultano essere: impresa, rete e contesto. Con impresa si intendono le competenze interne e la cultura dell'innovazione interna all'azienda. La rete identifica la filiera economica nella quale le imprese si innestano, la sua evoluzione tecnologica e il grado di apertura alle innovazioni. Infine, il contesto corrisponde alla dinamicità del territorio di riferimento e alla sua apertura all'innovazione, sia in termini tecnici e di infrastrutture, che strutturali (Gosetti, 2017). Il processo di definizione di innovazioni digitali differenziali identifica come elementi fondamentali per l'adozione di innovazioni differenziali sia gli elementi interni che quelli esterni all'azienda che devono combinarsi con elementi di innovazione tecnologica (Chan et al., 2019).*

**Metodologia.** *La ricerca prende spunto dal progetto congiunto tra l'Università di Verona e la Camera di Commercio di Verona "Impresa 4.0 e Digital Transformation per le MPMI di Verona - Training, accompagnamento e mentoring", avente l'obiettivo di supportare le MPMI delle principali filiere del territorio nella trasformazione digitale e nell'adozione delle tecnologie di impresa 4.0.*

*Il progetto ha previsto il coinvolgimento di 100 MPMI del territorio veronese che hanno manifestato un concreto interesse alla crescita digitale. L'intervento, della durata complessiva di 16 mesi, ha previsto il coinvolgimento di tutte le 100 micro/piccole/medie imprese in un processo di selezione, indirizzo e supporto per la realizzazione di attività di digital transformation. Delle 100 aziende esaminate, 75 hanno fornito informazioni complete e utili allo sviluppo del modello di indagine, e sono state, di conseguenza, inserite nel campione in oggetto. Un'ulteriore selezione ha portato*

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ad escludere dall'analisi nove aziende che hanno chiesto miglioramenti di processi non digitali, e che si sono, in tal modo, poste al di fuori dello scopo della presente indagine.

La modalità di raccolta dati è avvenuta, in via preliminare, attraverso la somministrazione di un questionario compilato in maniera autonoma dalle aziende e, successivamente, attraverso interviste in profondità presso le aziende. Le imprese coinvolte, che hanno fornito informazioni complete, sono, nell'81,6% dei casi micro imprese, con un fatturato minore di 2 milioni di euro e con un organico inferiore alle 10 persone, nel 16,3% dei casi, piccole imprese, con un fatturato minore di 10 milioni di euro e un organico inferiore ai 50 dipendenti e, nel 2% dei casi, medie imprese con un fatturato minore di 50 milioni di euro e un organico inferiore a 250 dipendenti.

Per raggiungere l'obiettivo proposto, è stata condotta un'analisi che ha consentito di identificare lo stato dei processi di trasformazione digitale delle MPMI, analizzandone, da un lato, il livello di preparazione digitale iniziale, soffermandosi sulle competenze interne, identificate, come illustrato in precedenza, come espressione di preparazione delle imprese al cambiamento, dall'altro la tipologia di sviluppo ricercata, incrementale piuttosto che differenziale.

Sulla base dell'osservazione delle realtà imprenditoriali di micro e piccole dimensioni, si è cercato di identificare alcune variabili esplicative dei processi di trasformazione digitale. Le variabili proposte sono, pertanto, la tensione al cambiamento digitale, la tipologia di cambiamento digitale richiesto e, infine, la tipologia di cambiamento digitale realizzato. Tali variabili sono state proposte dopo una accurata osservazione delle dinamiche e dei processi di cambiamento adottati dalle imprese appartenenti al campione.

Nello specifico, la tensione al cambiamento digitale identifica il vigore e la costanza con la quale le MPMI si avvicinano alle dinamiche di cambiamento digitale nel tempo. Difatti, in fisica la tensione indica lo stato derivante dall'applicazione di una o più forze di trazione. La tipologia di cambiamento digitale richiesto valuta il carattere incrementale o differenziale dello sviluppo digitale ricercato. Infine, la tipologia di cambiamento digitale realizzato valuta l'effettiva misura del cambiamento/aggiornamento digitale adottato.

**Analisi. Tensione al cambiamento digitale.** La prima variabile di analisi, la tensione al cambiamento digitale, è stata identificata per misurare, l'orientamento al cambiamento e la prontezza ad affrontare la trasformazione digitale. Tale variabile è stata misurata valutando una serie di elementi caratterizzanti le imprese del campione, con un approccio trasversale alle tre dimensioni (impresa, rete, contesto) precedentemente identificate come caratterizzanti l'approccio alle tecnologie delle MPMI (Gosetti, 2017) e non considerando semplicemente l'adozione o la non adozione di nuovi strumenti tecnologici. In particolare, sono stati valutati gli investimenti in ICT di qualsiasi tipo (sia software che hardware), la partecipazione del personale a corsi di aggiornamento digitale (sia specifici che generici) e, infine, la creazione di elementi e processi innovativi dal punto di vista digitale.

Dovendo operare su realtà variegata e misurare la propensione all'innovazione digitale in termini relativi e non assoluti, al fine di neutralizzare le differenze di dimensioni e di conseguenza di investimenti possibili, è stata sviluppata una scala di tre punti con i seguenti valori: nessun investimento di rilievo in tecnologia/cultura digitale (1); investimenti in tecnologia/cultura digitale adeguati al mantenimento dello status quo (2); investimenti in tecnologia/cultura digitale orientati al pieno utilizzo degli strumenti informatici (3). In altre parole, si è valutato l'approccio storico delle imprese all'innovazione digitale, senza tuttavia concentrarsi esclusivamente su aspetti meramente tecnici, ma valutando anche elementi facilitanti l'adozione di tecnologie digitali, sia incrementali che differenziali, quali la partecipazione ad attività di formazione e di orientamento del personale interno all'azienda.

Delle 66 imprese esaminate, il 24% ha dimostrato storicamente una scarsa tensione al cambiamento digitale (1), non investendo nei due anni precedenti né in acquisto di nuove tecnologie (hardware e software), né nello sviluppo di competenze digitali interne, attraverso partecipazioni a conferenze e corsi di formazione. Il 40% delle imprese esaminate ha effettuato investimenti in tecnologia e formazione compatibili con l'adozione delle tecnologie implementate, senza tuttavia orientarsi verso ulteriori innovazioni (2). Il 36% delle imprese, invece, ha dimostrato una tensione costante al cambiamento digitale che si è palesata attraverso investimenti e attività strutturate di accrescimento del personale (3).

**Analisi. Tipologia di cambiamento digitale richiesto.** L'analisi della visione strategica digitale è stata effettuata identificando la magnitudine del cambiamento richiesto, misurandolo su una scala di 5 punti che rileva la tipologia e la rilevanza dell'innovazione tecnologica richiesta dalle aziende e dove 1 identifica cambiamenti di natura puramente incrementale e che non richiedono modifiche all'assetto aziendale, sia esso organizzativo o tecnico e 5 identifica cambiamenti destinati a rivoluzionare l'approccio al mercato, l'organizzazione interna e anche il modello di business. L'investimento in tecnologia non è stato, infatti, valutato né nella sua pervasività interna all'azienda (difficile da misurare in micro aziende caratterizzate spesso dalla presenza del singolo imprenditore e da pochissimi collaboratori), bensì nella sua capacità di essere disruptive. Si definisce disruptive innovation un processo innovativo nel quale l'uso di elementi di novità consente alle imprese, anche di piccole dimensioni, di competere con realtà maggiori, cambiando le regole del mercato (Christensen, 2015). L'analisi condotta, in linea con le analisi precedenti, si è concentrata sull'impatto che lo sviluppo tecnologico desiderato potrebbe avere sia sui processi interni, rivoluzionando le metodologie di lavoro, che sull'approccio al mercato, misurando la consistenza del cambiamento sia in termini di servizio, che di prodotto offerto. Basandosi su tali considerazioni, sono state identificate e valutate soluzioni digitali, identificandone la gradazione di impatto sui sistemi e sulle procedure aziendali (fig.1).

Tab. 1: Tipologia di cambiamento digitale richiesto

Livello di innovazione differenziale	1	2	3	4	5
Tipologia di investimento	SEO; Formazione digitale.	CRM; Gestione digitale del magazzino; Implementazione sistema GDPR.	ERP; Domotica; Sicurezza informatica di base; Digitalizzazione documentale; Digitalizzazione flussi di lavoro; Sentiment analysis.	E-commerce; MES; Sviluppo software su misura; Virtual reality; Sicurezza informatica avanzata.	Industria 4.0; Business Intelligence; Sviluppo piattaforme software su misura.

Fonte: nostra elaborazione.

Delle 66 imprese esaminate (fig. 2), 9 hanno richiesto modifiche di basso impatto innovativo, mentre all'estremità opposta, 8 hanno richiesto interventi che comportano attività di elevata innovazione differenziale.

Tab. 2: Numerosità di imprese per tipologia di cambiamento digitale richiesto

Tipologia di innovazione differenziale (1 basso, 5 alto)	1	2	3	4	5
Numero aziende	9	25	11	13	8

Fonte: nostra elaborazione.

**Analisi. Tipologia di cambiamento digitale realizzato.** La terza variabile oggetto di indagine misura l'effettiva dimensione del cambiamento/adequamento digitale implementato, con valori che vanno dallo 0 (nessun cambiamento digitale) al 5 (cambiamento disrupting). La decisione definitiva sulla tipologia dei cambiamenti adottati ha tenuto conto delle competenze interne e della solidità della struttura che deve affrontare il cambiamento digitale. Le imprese sono state intervistate e, sulla base di un questionario destrutturato, si è identificato il livello di innovazione tecnologica più adatto alle esigenze aziendali, e, quindi, compatibile sia con la struttura aziendale, che con il suo organigramma, che con il mercato di riferimento. Anche in questo caso si sono misurati gli interventi su una scala a 5 punti, caratterizzata nello stesso modo della precedente (fig.3). A differenza della scala precedente, però, è stato considerato anche il livello 0, corrispondente alla mancata realizzazione di qualsivoglia sviluppo digitale.

Tab. 3: Tipologia di cambiamento digitale adottato

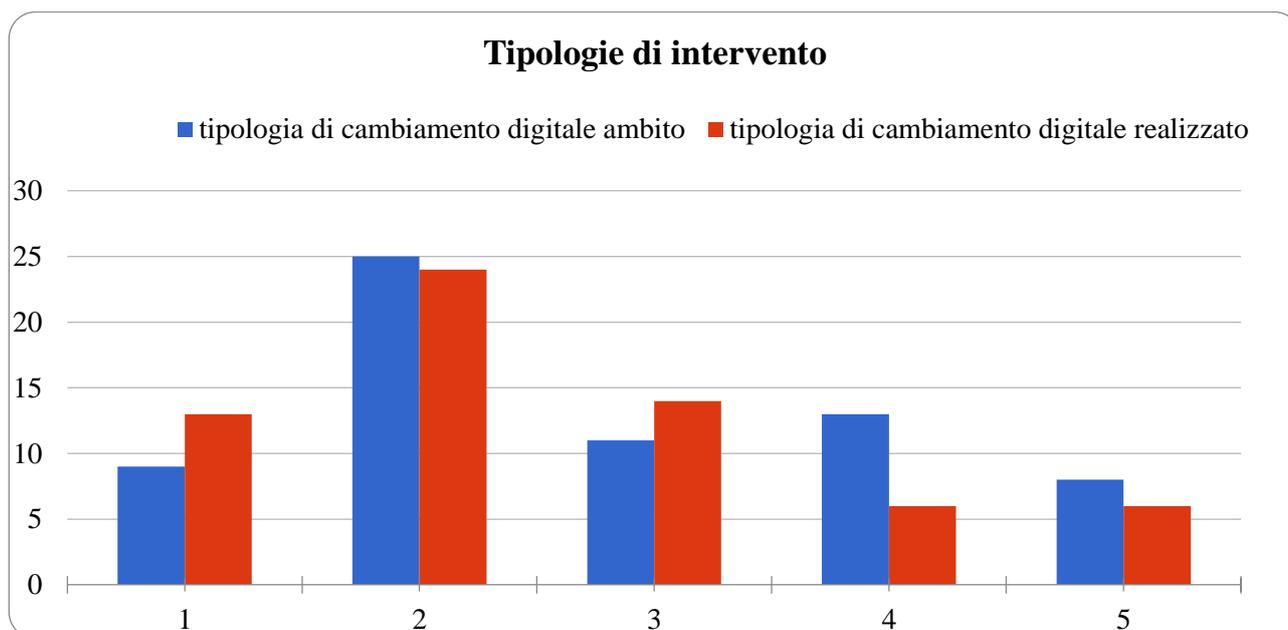
Livello- di cambiamento digitale adottato (1 basso, 5 alto)	0	1	2	3	4	5
Numero aziende	3	13	24	14	6	6

Fonte: nostra elaborazione.

**Analisi congiunta.** Nell'analisi conclusiva, sono state esaminate le tipologie di intervento digitale richiesto e realizzato (fig.1) e si è potuto verificare come i desiderata delle aziende spesso non corrispondano alle reali possibilità di realizzazione e come ambiziosi progetti di digital transformation vengano in breve tempo ridimensionati in attività dal minore impatto e dalla minore complessità. Le motivazioni che portano a tale ridimensionamento sono le più svariate, dalla incomprensione delle dinamiche di trasformazione digitale, alle carenze di budget e di competenze digitali interne. Il risultato è, pertanto, un'analisi dello "scollamento" tra i desiderata e la realtà.

Appare evidente come, le imprese, al momento della realizzazione dei progetti, ridimensionino le proprie esigenze, optando per soluzioni più facili ed economiche, ma anche meno incisive sul futuro digitale dell'azienda.

Fig. 1: Differenze tra il cambiamento digitale richiesto e il cambiamento digitale realizzato

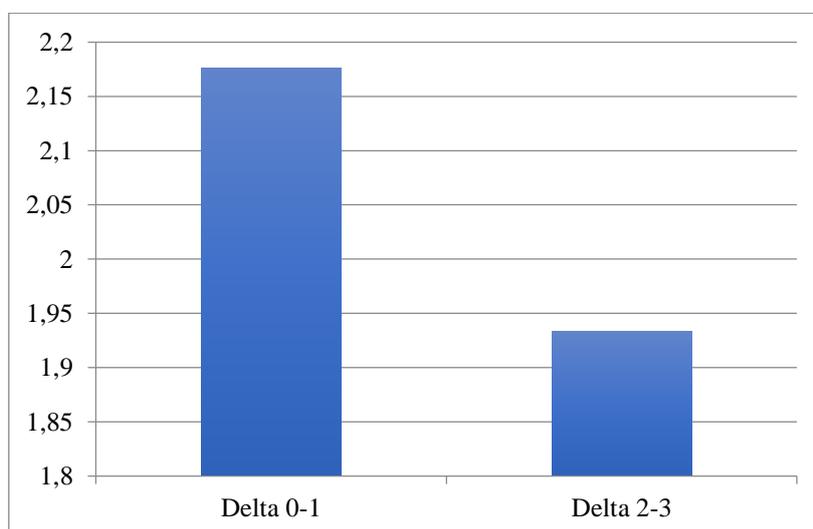


Fonte: nostra elaborazione.

In particolare, esaminando le variazioni tra le attività di trasformazione digitale richieste e quelle realizzate, emergono due differenti cluster di imprese. Il 79% delle imprese non si discosta, se non marginalmente, dalla tipologia di intervento desiderato, mentre il 21% modifica radicalmente la propria richiesta di innovazione digitale.

Un successivo approfondimento dell'analisi (fig.2) consente di verificare che il cluster composto dalle imprese che restano fedeli alla tipologia di richiesta iniziale o non si dissociano in maniera radicale (delta 0-1) ha una maggiore tensione al cambiamento digitale (valore di 2,17), rispetto alle imprese che modificano radicalmente (delta 2-3) la tipologia di intervento richiesta (valore di 1,93).

Fig. 2: Tensione al cambiamento digitale dei due cluster



Fonte: nostra elaborazione.

**Conclusioni, limitazioni e opportunità di futura ricerca.** Dalle analisi effettuate emerge come il cambiamento digitale sia associato, nelle imprese del campione preso in esame, ad un percorso di crescita digitale consapevole e costante nel tempo. Maggiore è stato l'interesse, l'attenzione e il coinvolgimento in attività digitali nel passato, maggiore è la richiesta cosciente di attività correlate a progetti di cambiamento digitale espressa. La comprensione dei processi di innovazione, e la costante tensione al cambiamento porta le imprese a progettare il futuro con maggiore precisione e preparazione, identificando le azioni da svolgere con più intenso scrupolo, piuttosto che richiedendo processi di cambiamento scomposti, difficilmente realizzabili, sia per la scarsa adeguatezza delle strutture e degli organismi coinvolti che per la carenza di risorse economiche.

*Il presente articolo si basa su un progetto attualmente in corso di innovazione digitale promosso dalla Camera di Commercio di Verona, con un numero di imprese limitato geograficamente e poco rappresentativo della pluralità di settori. Sarà auspicabile proseguire l'analisi ampliando il campione e suddividendolo per dimensione e tipologia d'impresa.*

*Inoltre, l'analisi condotta è di tipo esplorativo. Sarà, pertanto, di particolare interesse condurre un'analisi approfondita dei legami e delle variabili impattanti sulla relazione tra la tensione al cambiamento e il livello di innovatività del cambiamento digitale richiesto e realizzato al fine di una più ampia comprensione del percorso di sviluppo digitale delle imprese.*

**Keywords:** *Industria 4.0; digital transformation; MPMI.*

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# New determinants of Foreign Direct Investments in agriculture: climate physical risk and food security

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**Objectives.** *The majority of the existing studies on MNEs strategies has considered climate to be a more minor variable as a predictor of firm strategy, however, climate can influence firm behavior, and therefore it is an important, but underexplored, area of research (Pinkse and Gasbarro, 2019; Budde-Sung and Peacock, 2019; Gasbarro et al., 2016). Agricultural sector is one of the most vulnerable to climate change (Winn et al., 2011; IPCC 2014) but is also considered a critical sector for developing countries in term of weight it has in their economies (Slimane et al., 2015). Agricultural investments are the most effective and important strategy for reducing poverty and food insecurity in rural areas (World Bank, 2008). However, recently IPCC (2014) and FAO, IFAD, UNICEF, WFP and WHO (2018) maintain that climate change, together with conflicts, is among the key driver of the recent rise in global hunger, of food crises, and it is negatively affecting all dimensions of food security. According to the 1996 World Food Summit (FAO, 1996) food security is met when “all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life”. The lack of food security leads to phenomena of undernutrition, poor economic development, low income and widespread poverty, which undermine social stability and economic development and negative affects FDI inflows (Blonigen and Piger, 2014; Walsh and Yu, (2010). In this perspective, our study aims to investigate the relationship between climate physical risk, food security and agricultural foreign direct investments (FDI) by attempting to address three related issues.*

*Firstly, the relationship between climate risks and agricultural FDI is explored. In our knowledge only a bunch of studies showed empirically the impact of natural disasters and FDI. Then, Escaleras and Register (2011) showed that plant location managers take into account natural hazards when making investment decisions. They tested this hypothesis by considering five natural hazards (earthquakes, floods, volcanoes, landslides, and windstorms) occurring between 1959 and 2003 in 94 countries, and they found that: firstly, natural disasters are negatively and significantly correlated with foreign direct investment; secondly, foreign direct investment decisions are driven more by relatively recent events than those in the more distant past; thirdly, while each of the disasters studied bears a negative relationship with foreign direct investment, the strongest of these is windstorms. Another study confirmed that the occurrence of natural disasters negatively affects FDI though with some time lag in Thailand (C. Anuchitworawong, K. Thampanishvong, 2015). In both studies natural disasters encompass both natural hazards which can be driven by climate change (e.g. windstorms, floods, landslides, etc.) and those unrelated such as earthquakes and volcanoes. Focusing more specifically on climate change's effect on foreign expansion and location choice, Budde-Sung and Peacock (2019) showed that climate is an important factor in location choices, in particular, US multinational companies tend to have fewer foreign subsidiaries in countries with extreme climates, and they prefer locations with warmer climates, avoiding locations with colder climates. Considering that climate change is associated to an increase frequency and intensity of some extreme weather events (i.e. climate extremes; IPCC, 2012) and that agricultural sector is one of the most vulnerable (Winn et al., 2011; IPCC 2014) we can hypothesize that an increase in climate extremes, and therefore an increase in climate physical risks, negatively affect agri-FDI. Therefore, we posit:*

**H1:** Climate physical risk negatively affects agricultural FDI inflows

*Secondly, we investigate the relationship between agricultural FDI inflows and food security. The related literature has been recently focused on the effect that FDI inflows can have on food security, rather the contrary. The results of these studies are controversial. In fact, on the one hand some scholars found a positive effect of FDI on food security. As an example, Slimane and colleagues (2015) found that FDI in the agriculture sector improves food security and FDI in the secondary and tertiary sector increases the food insecurity and that FDI contribute directly to the availability and the use of food by increasing food supplies, in addition they found a significant FDI's spillover through the agricultural production to food security. The World Bank (2008), FAO, WFP and IFAD (2012) argue that agricultural investment plays an important role in promoting agricultural growth, reducing poverty and hunger. On the other, Häberli and Smith (2014) argue that agri-FDI may lead to a loss of local food security in weak state, since investor may exploit weak domestic legal infrastructure to ‘grab’ large areas of prime agricultural land, leaving only*

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marginal land for domestic production. Agricultural investments can generate several developmental benefits but these benefits do not occur automatically, and large-scale land acquisitions may imply disadvantages outweighing the benefits to the local community according to the local rights and the quality of governance (Liu, 2014). Cotula et al. (2009), focussing on Africa, highlighted that foreign investors threaten food security because of, among others, large-scale water use, and use of pesticides and fertilizers that favour natural degradation. The 2010 World Bank report sheds light on both positive and negative effects of FDI on food security, in fact, agri-FDI may improve food security by expanding rainfed cultivated land, while it may hamper food insecurity in case of inability of host country public institutions to safeguard the rights, including that to food, of the more vulnerable groups. Santangelo (2018) studied in depth the influence of FDI in land grabbing in agriculture in developing countries, affecting host country food security. Her findings suggest a different impact depending on the investor's country of origin: "FDI in land by developed-country investors positively influence food security by expanding land used for crop production because of home institutional pressure for human rights respect and responsible farmland conduct, in addition to positive spillovers; instead, FDI in land by developing-country investors negatively influence food security by decreasing cropland due to home institutional pressure to align to national interests and government policy objectives, in addition to negative spillovers". This debate has so far missed the reverse link between food security and FDI. In fact, past research established that FDI depends on internal and external determinants at the parent, subsidiary, industry, and country level (Slangen and Hennart, 2007). Among the macroeconomic variables influencing FDI flows at host country level, previous works have found the size and growth potential, economic stability, the degree of openness, the income level, the level of development as well as the quality of institutions Walsh and Yu, (2010). Further factors concerning the ability of a country to attract investments from abroad are: the trend of internal, structural demand, the specialization in certain sectors or the availability of raw materials and finally political, social and government stability and quality of the institutions (Blonigen and Piger, 2014). In addition, it seems that investors prefer countries with weak land ownership and, at the same time, guarantee high levels of investor protection (Anseeuw et al. 2012, Deininger and Byerlee, 2011), which turn out to be the poorest and those that are less involved with world food trade (FAO, 2012). Furthermore, in agricultural investments, countries with fertile land and irrigation possibilities, with good accessibility and considerable population density, are preferred (FAO, 2012). However, if FDI are expected to have an impact on food security, the contrary may happen as well. In fact, food security is closely linked to social stability and economic development in these areas, where poverty can reach very high levels Slimane et al. (2015). Therefore, we hypothesize that an improvement in the food security of a country could lead to an increase in foreign direct investments since an increase in food security would impact the socio-economic conditions, such as the social stability and economic development.

## H2: Food security positively affects the agricultural FDI inflows

Finally, the moderating effect of food security on the relationship between climate risk and agricultural FDI inflows is further investigated. Food security is dependent both on food production and on availability and food access, utilization, and overall stability of the food system. Then, these production and non-production aspects of food systems are driven by climate and non-climate elements as shown in figure 2 (IPCC, 2014). According to the IPCC (2014) all these aspects will be affected by climate change to some extent, then the impact of climate change on food security is expected to be greater than those on food production alone. For instance, climate weather extremes and related disasters are considered among the main drivers of food insecurity, by affecting stability of food availability and prices, with consequent impacts on access to food (e.g. floods and tropical storms by destroying livelihood assets and drought contributing to a negative impact on nutrition). The increased frequency and intensity of climate extremes can drive to an increase of food prices as shown by Lobell et al. (2011), estimating a price increase of 19% to the impacts of temperature and precipitation trends on supply, and by Ivanic et al. (2011), highlighting that the heat wave, which affected Russia in 2010, and subsequent export ban contributed to the more than doubling of global wheat prices by the end of the year. The concern related to food prices is also related to poverty and then access to food. In fact, an increase of food prices has disproportionately negative effect on poor consumers, due to the high share of income they spend on food (FAO, 2011), as happened when the food price increase in 2010 contributed to a net increase of 44 million people in extreme poverty in low and middle-income countries (Ivanic et al., 2011). An increase of food price may in turn lead to a decrease in nutritional food value, negatively impacting food security especially in developing countries (Angelo and Du Plessis, 2017). Both agricultural producers who are net food buyers and low-income agricultural dependent economies that are net food importers are particularly vulnerable, because they could experience significant losses in food access associated climate change through a double negative effect on reduced domestic agricultural production and increased food prices on global markets (IPCC, 2014). In addition, the increased incidence of climate extremes reduces the propensity to invest in agricultural production especially for poor smallholders with limited or no access to credit and insurance. In fact, where insurance markets do not function very well, greater exposure to climate risk leads to: investing in low-risk subsistence crops at low-return (Fafchamps, 1992; Heltberg and Tarp, 2002); a lower likelihood of using purchased inputs such as fertilizer (Kassie et al., 2008; Dercon and Christiansen, 2011); a lower likelihood of adopting new technologies (Feder et al., 1985; Antle and Crissman., 1990); and lower in general investments (Skees et al., 1999). These reactions generally lead to lower farm profits (Rosenzweig and Binswanger, 1993; Hurley, 2010). Moreover, according to the IPCC (2014) for the major crops (wheat, rice, and maize) in tropical and temperate regions, climate change by 2050 will negatively impact production, up to a loss of 25%, in particular in low-latitude countries, although individual locations may benefit, and it may have positive or negative effects in northern latitudes. The increase in temperatures also leads to: a decrease in water

available for agriculture, thus decreasing food production (Charles, 2011); an increase of CO<sub>2</sub>, pathogens, insect and fungi, growth of desertification and extreme weather event, decrease in pollinating insects and worse working conditions in countries where agricultural mechanization is not developed (Myers et al, 2017). Therefore, we hypothesize that since climate risk affect negatively FDI (hypothesis 1) and food security (IPCC, 2014), and since food security can affect FDI (hypothesis 2), then when climate physical risk is high but food security is high too, there is a lower negative effect on FDI.

H3: Food security moderates the negative effect of climate physical risk on agricultural FDI.

**Originality of the study.** In the last decades, the world has witnessed an increasing incidence and frequency of some types of extreme events related to climate change (IPCC, 2012). The physical changes related to climate change, and especially the extreme weather events, usually result in fatalities and high material damages to buildings and infrastructure, as well as significant crop losses in agriculture (Munich Re, 2017). The scale of losses depends on the exposure and vulnerability of buildings, infrastructure and crops as well as the development of adaptation measures and regulation. Therefore, the climate physical risk is becoming a salient issue not only for policymakers and society but also for enterprises (Gasbarro and Pinkse, 2016). In order to deal with the climate physical risk, firms are often inclined to reconsider their strategy in terms of location or relocation (Linnenluecke et al. 2011; Pinkse and Gasbarro, 2019). According to this perspective, climate physical risk is also expected to influence the business strategies in terms of Foreign Direct Investments (FDI) choices. The perception of the likelihood of disaster occurrence and the potential impacts caused by natural disasters (White and Fan, 2006; Pinkse and Gasbarro, 2019) enable companies to look for less risky or more adaptive host countries or to ask for more favourable conditions by local governments. In the business literature, the impact of macroeconomic variables on FDI has been widely explored. Among the macroeconomic variables which mainly influence FDI flows, previous works have found the size and growth potential of local market, economic stability, the degree of openness, the income level, the level of development as well as the quality of institutions Walsh and Yu, (2010). In contrast, only few empirical papers have recently moved the focus on the relationships between FDI and climate physical risk (e.g. Budde-Sung, 2019; Escaleras and Register, 2011; Anuchitworawong and Thampanishvong, 2015). In addition, our research study contributes to a better understanding of the relationship between climate risk and FDI by specifically looking at the moderate role of food security. On one hand, climate change is recognized a potential risk for food security (IPCC, 2014). New evidence continues to signal a rise in world hunger and a reversal of trends after a prolonged decline (FAO, IFAD, UNICEF, WFP and WHO, 2018). According to FAO, IFAD, UNICEF, WFP and WHO (2018), the cumulative effect of changes in climate (i.e. climate variability and extremes), together with conflicts, are among the key drivers behind the recent rise in global hunger and one of the leading causes of severe food crises, and it is undermining all dimensions of food security – food availability, access, utilization and stability. By reducing food security, climate physical risk is expected to directly and indirectly affect the FDI inflows. On the other hand, the literature has already widely asserted the existing link between FDI and food security (e.g. Slimane et al., 2015; Häberli and Smith, 2014; Santangelo, 2018), even if most of the researches have focused on the role of FDI inflows in supporting the increase of food security (Slimane et al., 2015; World Bank, 2008; FAO, WFP and IFAD, 2012). However, we hypothesize that an improvement in the food security of a country could lead to a potential virtuous circle by attracting additional FDI since an increase in food security would impact the socio-economic conditions, such as the social stability and the economic development by increasing the adaptation potential of local systems to climatic risks and consequently by offering more stable conditions for investments of foreign companies. In this light, food security might moderate the negative impact of climate risk on FDI inflows, too.

**Methodology.** An unbalanced panel dataset involving 130 countries and 10 years from 2004 to 2013 is built by merging data from different sources. FDI Market is used to compute the total value of agricultural FDI projects inflows per country. The climate physical risk refers to The Global Climate Risk Index (CRI) developed by Germanwatch which analyses the quantified impacts of extreme weather events - both in terms of fatalities and economic losses that occurred - based on data from Munich Re NatCatSERVICE, which is worldwide one of the most reliable and complete data bases on this matter. The food security index is defined through a factorial analysis process which specifically includes data from World Bank database such as kilocalories per person per day, the percentage of the rural population using an improved drinking water source and the vegetable yield (kg per hectare). A number of control variables are further introduced in order to achieve more robust results. Some controls concern the most common development indicators at country level such as the GDP per capita and its growth, the population density, the unemployment rate, the exports of goods and services (% of GDP). In addition, some specific controls are also included as referred to agricultural development such as the agricultural land area and the percentage of rural population. A set of panel regression models with individual and time random effects is finally operationalized to test the relationship between climate risk, food security and FDI. Random is here preferred to fixed effects since we intend to control for developing countries dummies too. In addition, more robust estimations are defined by computing Huber/White clustered standard errors. Moreover, the dependent variable is differently lagged from 1 to 3 years in order to control for long-run time effects. Exploratory variables are firstly introduced one-by-one. In the full model, direct as well as interactive effects are finally experienced.

**Findings.** The results of preliminary models appear to confirm the research hypotheses. On one side, climate risk negatively affects FDI. The higher the climate risk of a country, the lower is the country attractiveness for agricultural

FDI inflows. On the other side, food security positively affects FDI. Thus, the higher the food security of a country, the higher the agricultural FDI inflows in that country. Finally, the interaction effect between climate risk and food security on FDI is negative and significant. This means that a balance between climate risk and food security is less performing than unbalance. In other words, the most attractive environments for agricultural FDI inflows require low climate risk and high food security. When climate risk increases, different levels in food security can differently drive the strategic investment choices of foreign firms.

**Practical implications.** The findings suggest some important practical implications. Policy makers need to implement climate adaptation strategies to mitigate climate risks, since these negatively influence FDI. Although, it has been widely argued why FDI can boost the food security improvement, it should be underlined that a country with a higher food security level is more attractive to foreign companies. In this sense, food security and FDI (agricultural FDI in particular) draws a virtuous circle with positive effects on economic development and sustainability. Better food security conditions can also moderate climate risk. In this perspective, policies for supporting learning and technological development oriented to improve food security can foster the social and economic local growth, making the country more competitive if compared to less secure countries, more attractive for foreign investments and feeding the virtuous circle with FDI by moderating climate risks.

**Research limits.** Firstly, regional data rather than country data might be explored. Disentangling developed and developing countries could be an additionally contribute. Secondly, in the literature, there is not agreement on the way to measure the climate risk and food security. Different indicators could be included with different results. In addition, this study specifically investigates the agricultural FDI inflows. However, extending to different types of FDI may catch out new claims. Finally, a qualitative approach oriented to collect the perception of companies investing in foreign countries may be very useful to understand the leverages for local government to build an effective policy platform.

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# The choice between Greenfield joint ventures or partial acquisitions: the role of knowledge

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**Objectives.** *In the International business field, there is an extensive literature on the determinants of firm entry mode choice with many papers investigating the choice between joint venture and wholly owned subsidiary or the choice between greenfield and acquisition. What the previous research has missed is to identify what determines the difference between greenfield joint venture and partial acquisition. Surprisingly this choice, an alternative that many companies have to face when entering in a new market, has been scarcely investigating with very few exceptions (Arslan and Larimo, 2015; Chen, 2008).*

*Given this general lack of knowledge concerning the specific choice between greenfield joint venture and partial acquisition, we investigate these alternative modes of entry. Using a Transaction costs approach we focus our analysis on the role of knowledge. More specifically we investigate the role played by the knowledge internally developed by firms and codified in their books but also on the knowledge that is external to the firms but location-bounded as it is the knowledge typically located in regional clusters.*

*The aim of the paper is to investigate the role of knowledge when two firms decided to make a partnership and should choose whether it is better to set up a new greenfield joint venture creating a new entity or through a partial acquisition.*

*According to Transaction Cost Economics, assets that are difficult to transact are crucial determinants of the choice between alternative entry modes. We focus on one specific asset that is typically difficult to transact: knowledge. In our analysis, we consider both the firm-specific knowledge owned by the investing firm but also the knowledge owned by the partner firm in the host country. With regard to the host country firm we include in our analysis both the knowledge internally generated and the knowledge available in the area when the target firm is located into a regional industrial cluster.*

*More specifically, based on TCE considerations we develop the following hypotheses:*

*Hypothesis 1: the higher is the firm-specific codified knowledge developed by the local target firms the higher would be the probability of a greenfield joint venture rather than a partial acquisition*

*Hypothesis 2: the higher is the firm-specific codified knowledge developed by the investing target firms the higher would be the probability of a greenfield joint venture rather than a partial acquisition*

*Firms benefit from the cooperative external environment because each firm is functional to the activity of the others. Because of these advantages, well reported in the literature, industrial clusters in recent times have attracted an increasing number of foreign direct investments. MNEs entering a foreign market show an increasing attraction to locate near to incumbent firms in related industries. One of the main reasons for this phenomenon is that foreign firms try to tap the local knowledge that is produced in industrial districts as reported by Belussi and Caldari (2009).*

*However, to be part of the local network that characterised industrial districts is a complex and long process. We assume that when investments are targeted to firms located into industrial district partial acquisition are more likely. This because through acquisitions the investing firms can directly have access to the dense network of local relationship that characterize firms located in a local cluster. Moreover, a greenfield joint venture would imply to increase the number of competitors in the district increasing the probability of retaliation.*

*Thus, we posit:*

*Hypothesis 3: When MNEs are interested in the specific knowledge developed by firms located into industrial clusters the probability of a greenfield joint ventures would be more likely than partial acquisitions*

*Different authors (Brouthers and Brouthers, 2000; Somlev and Hoshino, 2005) argue that the product-specific knowledge has an impact on the establishment choice if the investing company is going abroad to manufacture a*

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product that does not produce elsewhere. In this case, the MNE lacks the product-specific knowledge. In this case to acquire this tacit knowledge in disembodied forms through the greenfield is difficult and costly (Slangen and Hennart, 2007). Therefore, MNEs that are entering a foreign market to manufacture a product unrelated to their business are more likely to choose a partial acquisition investment. Based on these arguments we posit:

Hypothesis 4: *If the MNE is interested in the product-specific knowledge of the local firm a partial acquisition is more likely than a greenfield joint venture*

**Methodology.** We use a sample of 355 foreign entries made by firms from 31 different countries in Italy, over a ten-year period (2005-2015). The sample has been drawn from Zephyr, a dataset provided by Bureau van Dijk. We collected data on all partial acquisitions and greenfield joint ventures made in Italy from a foreign firm and a local target/partner. The deals were completed in the period ranging from 01/01/2005 to 12/31/2015. We select investments based on two requirements. First, the MNE should not have an initial stake in the local firm in case of a partial acquisition. Second, with the investment, the MNE should acquire at least 10 per cent of stakes. The sample is composed of 200 greenfield joint ventures and 155 partial acquisitions.

To test our hypotheses, we use the logistic methodology. We estimate five models. Model 1 includes only control variables, then in Model 2, 3, 4, and 5 we add one independent variable per time for each of the 4 hypotheses. Our complete model is Model 5. Models are reported in Table 1.

Our dependent variable is the establishment mode and is identified by a binary variable that is coded "1" if the foreign entry is a greenfield joint venture with a local partner and "0" if the establishment mode is a partial acquisition of the local firm. The threshold used to define a joint venture is the 95 percent of equity (Chen, 2008; Padmanabhan and Cho, 1999).

The main independent variables included in the models are: the intangible assets of both the MNE and the local firm (Local Intangible and MNE intangibles); a dummy variable defining whether or not the local firm is located in an Industrial district and a variable (Product specific knowledge) that proxy the experience of the investing company in the activities performed by the target firm. The two variables Local Intangible and MNE intangibles are measured using the intangible assets reported in the balance sheet respectively of the local partner and of the MNE. The variable Industrial district is a binary variable based on data collected from the Italian National Institute of Statistics (ISTAT). The variable Industrial district is coded "1" if the city of the local partner is located in an industrial cluster in 2001 and/or 2011. To measure the effect of the product-specific knowledge we build a binary variable equal to "1" if the local partner is a manufacturing firm active in a different 3-digit SIC industry from the investing firm (Hennart and Park, 1993).

We included in our model the following control variables.

**Diversification.** Diversified firms are able to reduce the transaction costs related to new acquisition investments because through diversification they have developed management control system capabilities (Drogendijk and Slangen, 2006; Slangen and Hennart, 2008). We measure the diversification with the number of 3-digit SIC industries in which the investing firm is active.

**Country Experience.** Previous experience in the host country allows the investing firm to have a specific knowledge of the host country reducing the transaction costs. Thus, previous experience in the host country is likely to affect positively the probability to make a greenfield joint venture. We measure the variable MNE Country Experience with a binary variable coded "1" if the MNE made previous investments in Italy.

**Industry Growth.** In industries growing at a fast rate the entry barriers deriving from the incumbent firms are likely to be more severe than in industries with a low growth rate. Thus, a high growth industry is likely to affect positively the likelihood of a greenfield JV rather than of an acquisition (Brouthers and Brouthers, 2000). We collected data from the Eurostat website on the industry growth rate lagged by one year on the year of the investment.

**Relative size.** We controlled for the effect of the relative size of the two firms involved in the partnership using the ratio of total sales. The greater is the local firm relatively to the MNE, the more difficult will be for the MNE to acquire the local company.

**Psychic Distance.** Psychic distance is likely to positively affect the probability of greenfield investments because it makes difficult to transfer MNE's practices in the acquired firm. While, in a new subsidiary established from scratch, the employees are more likely to accept new practices. We measure the psychic distance between the home and the host country using the Dow and Karunaratna (2006) index.

We also control for the year effect.

**Findings.** Our findings support three of our four hypotheses. The results are reported in Table 1. The coefficient of the variable Local Intangibles is positive and significant ( $p < 0.001$ ), meaning that if the local firm owns codified intangibles assets the probability of a greenfield joint venture increases. Thus, our first hypothesis is supported. The coefficient of the variable MNE Intangibles is not significant, thus our second hypothesis is not supported. Our results do not confirm the hypothesis that the codified knowledge of the investing companies impacts the establishment mode choice. Our third hypothesis states that, if the local firm is located in an industrial district, the MNE will prefer a partial acquisition rather than a greenfield joint venture. The coefficient of the variable testing this hypothesis is negative and significant ( $p < 0.05$ ), thus our third hypothesis is supported. The fourth hypothesis is also supported

( $p < 0.10$ ). If the local firm owns product-specific knowledge, the MNE is more likely to partially acquire the local firm rather than to make a greenfield joint venture.

Among the control variables, the Psychic distance has a coefficient positive and significant. Thus, the higher is the psychic distance between the home and the host country, the more likely is a greenfield joint venture. Thus, in case of a high psychic distance, the MNE will try to avoid integration cost with a psychically distant partner and will prefer greenfield joint venture. In this way, it avoids integration costs with the partner but it is able to exploit the country knowledge of the local partner through a greenfield joint venture. All the other control variables in our models do not significantly impact the establishment mode choice.

Tab. 1: Results of the Logistic Regression (Dependent Variable: Greenfield Joint Venture=1; Partial Acquisition=0)

Variable	Model1	Model2	Model3	Model4	Model5
Local Intangibles		0.106***	0.102***	0.113***	0.122***
MNE Intangibles			0.026	0.028	0.025
Industrial district				-1.588**	-1.603**
Product Knowledge					-0.646*
Diversification	-0.108	-0.148	-0.229	-0.155	-0.044
Country Experience	-0.103	-0.097	-0.178	-0.192	-0.252
Industry Growth	-1.146	-2.225	-2.338	-3.276	-3.465
Relative size	0.000	0.000	0.000	0.000	0.000
Psychic Distance	0.117	0.146	0.153	0.231*	0.264**
Year	Controlled	Controlled	Controlled	Controlled	Controlled
_cons	-0.650	-1.251**	-1.334**	-1.451**	-1.515**
N	355	355	355	355	355
Log-likelihood	-208.497	-201.465	-200.734	-194.958	-192.794
AIC	448.995	436.930	437.468	427.916	425.588
Pseudo-R2	0.106	0.136	0.139	0.164	0.173

We run many robustness tests to check the consistency of our results and they confirm our main results. Also, we address the endogeneity issue eventually generated by the knowledge internally generated by the firm and measured in our analysis by the intangible assets. To address it we use the propensity score matching method (Puck et al., 2016; Reeb et al., 2012). Our results are confirmed also using the propensity score matching procedure. To address the endogeneity generated by Intangible assets we use a variable named Intangible High, which is equal to 1 if the firm has intangible assets higher than the average of the firms in the sample. The groups of firms with intangibles higher than the average is the Treated group while the firms with intangible assets lower than average are the Control group. We matched these two groups on the basis of our control variables previously used. With this procedure, we reduced the differences between firms with the notable exception of Intangible assets level that remain different between the Treated and the Control group. Then, we estimate the propensity score, i.e. the probability of the firm to have Intangible assets higher than the average. Finally, we use this propensity score to estimate the probability to choose a greenfield joint venture rather than a partial acquisition if the firm has intangible assets higher than average. We used this procedure both for the intangible assets of the local firm and for the MNE.

The average treatment effect is positive and significant at 1% level ( $p=0.000$ ) for the local firm, while it is not significant for the MNE. Thus, after controlling for endogeneity, as in the main model (see Table 1, Model 5), the first hypothesis is supported, while the second is not.

**Research limits.** This paper is not free of limitations. First, we do not have data on the local partner's network relationships. Second country experience variable is a binary variable.

**Practical implications.** Reports from international consulting companies such as PriceWaterhouseCoopers and McKinsey state that greenfield joint ventures are increasingly growing in comparison to M&A. Firms enter foreign countries increasingly through a partnership. This choice is driven by the need to have a local partner with complementary assets such as technology, access to the market, local knowledge or simply because of legal restrictions. However, the partnership can be obtained both through a greenfield joint venture or partially acquiring a local firm. Surprisingly this choice has been scarcely investigated in the literature. When managers should opt for greenfield joint venture rather to a partial acquisition? Our paper answer to this question showing what factors impact on this choice and guiding managers when they have to choose how to partner with a local firm.

**Originality of the study.** With this paper, we make several contributions to academic literature. First, we contribute on the literature on transaction cost economics theory investigating how different types of knowledge (the usual specific asset in this theory) affect firms' strategic decisions, as for instance the choice between different kind of partnerships. Building on transaction cost economics theory we add to previous studies providing evidence on how different types of specific knowledge (intangible assets of the local firm and the MNE, industrial district specific knowledge, and product-specific knowledge) affect the choice. Second, we contribute to the literature on industrial

districts and on the debate on the drivers of foreign direct investment into local districts. This literature to the best of our knowledge has not been integrated with entry mode literature. Thus, this is the first paper which investigates entry mode choice on industrial districts.

Third, we contribute to the literature on entry modes, in particular on the specific choice between greenfield joint venture and partial acquisition.

**Keywords:** Knowledge; industrial districts; partnerships; greenfield joint venture; partial acquisition; entry mode

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# Family-centered goals and export performance in family firms

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**Objectives.** *Prior studies have widely investigated the relationship between a firm's ownership structure and its international performance, suggesting that whether and how firms reach satisfactory levels of export performance often depends on the identity of the dominant coalitions of owners (e.g., Fernandez and Nieto 2006, Thomsen and Pedersen 2000, George, Wiklund, and Zahra 2005). All those studies have argued that, to gauge better what owners really aim to achieve in terms of international endeavors, it is important to understand what their goals are, consistent with the idea that goals are a key predictor of firms' outcomes (Kotlar et al., 2018).*

*The family firm context, characterized by the involvement of a family in ownership and/or management, offers a unique setting in which to investigate distinctive family-centered goals (Zellweger et al., 2013, Gomez-Mejia et al., 2007, Aparicio et al., 2017), which can also drive firms' export behavior and performance. When making strategic choices, family decision makers can be pulled in two different directions: the pursuit of business goals on one hand and the accomplishment of family-centered goals on the other (De Massis et al., 2018, Lubatkin et al., 2005, Schulze, Lubatkin, and Dino 2003). This juxtaposition is rooted in the fact that, in addition to financial goals, family members care about the preservation of the stock of affect-related value that the family has invested in the firm, namely socioemotional wealth (Berrone, Cruz, and Gomez-Mejia 2012, Gomez-Mejia et al., 2007). In line with recent studies stressing the relationship between family-centered goals and strategic decisions as well as their effects on performance (Williams et al., 2018, Chua et al., 2018), we argue that it is important to consider family-centered goals directly as the main predictor of family firms' export performance by taking into account their multidimensional nature synthesized in the distinction between family-centered noneconomic (FCNE) and family-centered economic (FCE) goals (Basco 2017). More precisely, family-centered economic (FCE) goals are those oriented towards benefitting the controlling family by providing various forms of economic wealth and financial security for family members, such as improving their economic status, guaranteeing financial security, or providing job opportunities; conversely, family-centered noneconomic (FCNE) goals pertain to the various noneconomic utilities that the family can derive from its controlling position and generally include the safeguarding of family harmony, the promotion of the family's social status, and the preservation of the family and firm identity linkage (Basco, 2017; Chrisman et al., 2012; De Massis et al., 2018). The focus that family firms place on family-centered goals is crucial to predict their behavior and performance (De Massis et al., 2018) also in the context of internationalization (Pukall and Calabrò, 2014). Nevertheless, prior studies on family firms and internationalization have neglected to address the role of family-related goals directly, instead focusing on the effect of different forms of family involvement and producing mixed evidence. All these studies have built on the notion that the extent of family involvement is strongly associated with the relevance of family-related goals in driving the firm decisions. Indeed, the family involved in the ownership/management can use its power and discretion to influence decisions and foster the pursuit of family-centered goals (Chrisman et al., 2012; Chua, Chrisman, & Sharma, 1999; Kotlar and De Massis, 2013), thus leading to the assumption that the higher the family involvement the higher the pursuit of family-centered goals (Gomez-Mejia et al., 2007; Zellweger et al., 2013). However, we believe that this approach fails to consider that family members involved in the business may ceteris paribus place different emphases on the accomplishment of family-centered goals and therefore influence international behaviors differently.*

*Hence, the aim of our study is to theoretically and empirically answer the following research questions: How does the pursuit of FCNE goals influence the export performance in family firms? What happens to the export performance when FCNE goals interplay with FCE ones? Moreover, considering that goals are contingent on the context conditions, which might alter the degree of perceived risk linked to the adopted international strategy, we explore whether the impact of family-centered goals on export performance might vary depending on the type of geographic focus (Banalieva and Eddleston 2011, Hutzschenreuter, Kleindienst, and Lange 2016, Qian, Li, and Rugman 2013), that is, regional (perceived as less risky) versus global (perceived as more risky), of the international strategy pursued.*

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**Methodology.** *This study was conducted by collecting data through a survey of the CEO of medium and large German family firms. We followed the European definition of medium and large enterprises, specifically firms with more than 50 employees and at least 50 million euros in annual turnover. Following previous studies (see Basco 2013, Basco and Voordeckers 2015), to be considered as a family firm, they should meet at least one of the following two criteria: 1) the presence of family members in the board or in the top management team; and/or 2) at least 51% of the ownership held by members of the same family. To test our hypotheses, we ran multiple linear regression models with moderator effects employing the bootstrapping approach on a final sample of 205 family firms.*

**Findings.** *Our findings show that FCNE goals negatively affect export performance in family firms, especially when family owners are simultaneously pursuing FCE goals too. This evidence suggests that it is not being a family firm per se that shapes international performance but the different salience given to family-centered goals. The empirical evidence supports our idea that the extent of FCNE goals, such as the safeguarding of family harmony, the promotion of family social status, and the preservation of the identity between the family and the firm, can predict international performance. Specifically, family firms with a greater extent of FCNE goals exhibit a lower export performance, in line with our contention that pursuing this type of goals hinders export performance by promoting slower, less flexible, non-proactive, and non-cooperative behavior in foreign markets (Gallo and García Pont 1996, Lin 2012, Ramón-Llorens, García-Meca, and Duréndez 2017, Zaefarian, Eng, and Tasavori 2016). Moreover, our findings reveal that this negative influence is stronger if family owners also place a strong emphasis on FCE goals, that is, those goals oriented towards providing family members with economic wealth and financial security. This finding indicates that the concurrent pursuit of FCNE and FCE goals is even more detrimental to export performance, thus indicating that the accomplishment of FCE goals may lead to misallocation of resources to the benefit of the owning family and at the expense of international efforts (Graves and Thomas 2006, Calabro et al., 2016, De Massis et al., 2018). Further, when considering the moderating effect of regional strategies, the results show that family firms that are concurrently chasing FCNE and FCE goals have a better performance when embarking on regional rather than global strategies. Thus, pursuing a regional strategy weakens the negative effect of family-related goals on export performance. This can be explained by the lower liability of foreignness that family firms may encounter when foreign sales are regionally bounded (Banalieva and Eddleston 2011, Oh and Rugman 2007, Rugman and Verbeke 2004, Pisani et al., 2017). Indeed, a regional strategy compared with a global one may counterbalance the constraints generated by the pursuit of family-centered goals by reducing the family firm's risk aversion (Pongelli, Calabrò, and Basco 2018) and requiring a smaller amount of resources, thus indicating that family firms have greater international growth opportunities when staying in the home region.*

**Research limits.** *This study is not without limitations and offers different directions for future studies. While we focus only on one type of internationalization, which is exporting, future studies could further explore whether and how much the extent of FCNE and FCE goals influence in the same way other and more capital-intensive internationalization strategies, such as foreign direct investments. Moreover, we focus only on the firm-level factors that can influence export performance, but we know that institutions may differ considerably in their effects on international decisions and performance (He, Brouters, and Filatotchev 2013, Hernández and Nieto 2016). It would be worthwhile complementing this study with the effects of the institutional quality of host countries on export performance. We measure the home region focus as a dummy variable. Future studies could use a finer-grained approach defining, for example, different degrees of distance and understanding how they influence goals and performance.*

**Practical implications.** *Our study suggests that a strong emphasis on family-centered goals is detrimental to international performance, especially when FCNE and FCE goals are pursued concurrently. This indicates that, when family owners are torn between various types of family-centered goals, they may act blindly to benefit the owning family without considering that this could represent a limit to the firm's growth, which in the long run will have negative implications for the wealth of the owning family. In other words, to pursue their particularistic interests, family owners do not properly consider actions that exactly oppose these interests. Thus, the pursuit of multiple goals can represent a limit for family firms, and family owners and managers should carefully consider that with the aim of prioritizing the various goals appropriately and defining which goals should actually drive certain strategic decisions.*

**Originality of the study.** *Our study contributes to the ongoing scholarly debate on the internationalization of family firms. To investigate the family effect on international performance, prior studies have mainly focused on different types of family involvement in the firm (e.g., Calabrò et al., 2013, Sciascia et al., 2012, D'Angelo et al., 2016, Majocchi and Strange 2012, Fernandez and Nieto 2006). The focus on family involvement in ownership, management, and/or governance has allowed prior studies to investigate the ability of family members to engage in distinctive behaviors related to internationalization (De Massis et al., 2014); by focusing on family-related goals, we expand their contribution and make the first attempt to take into account their actual willingness to do so as well, thus leading to a finer-grained depiction of family firms' internationalization. Accordingly, this work represents one of the first attempts to measure empirically the extent of different types of family-centered goals across family firms (Basco 2017, Aparicio et al., 2017), also adding to the recent academic discussion on family firms' heterogeneity (Kraus et al., 2016). Indeed, the salience that family-related goals, both FCNE and FCE, have within the family firm should not be considered to be unvaried across family firms. In this respect, our study shows that different family firms place different emphases on*

family-related goals and that this influences their international performance. Further, by offering a goal-based perspective, our study supports recent research on the beneficial effect of regional strategies compared with global strategies, especially for family firms (Banalieva and Eddleston 2011).

**Key words:** *Internationalization; family firms; export performance; family-centered goals; geographic focus*

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# Capturing value in sharing economy: understanding issues and approaches

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**Objectives.** *The sharing economy offers new opportunities of generating revenue. In contrast to traditional business, sharing platforms allow users to share or sell products or services and the successful mediation between firms and consumers create value (Kathan, 2016). Therefore, the new platform-based system requires the building of a business model able to success in a multi-sided market.*

*Recently, some authors pointed out six main failure factors in sharing economy business models, and two of them are related to the revenue decisions. The first is related to the low customer lock-in, when the transaction-centered nature of sharing economy business models does not creates low switching costs between platforms. The second refers to the low transaction frequency, when business models address a market in which product or service transactions occur infrequently (Tauscher and Kietzmann, 2017).*

*On the same issue, Lobbers et al. (2017) states the need to identify new methods in the field of value capture and it is a critical aspect for success. Consistently, Kannisto (2017) pointed out that the mechanisms for generating revenue represent another aspect of the business model remain overlooked within the SE.*

*Revenue streams and their role in business models have been discussed in the recent past, whereas some studies proposed mainly lists of different revenue models (Rappa, 2004) or focused on specific industry (Kemppainen et al., 2018). Some scholars have taken a business model perspective applied to the sharing economy, however they have focused their attention mainly on the all aspects of the framework (Tauscher et al. 2018). Despite the increasing attention on the sharing economy, the literature on this topic is still limited and results remains fragmented and controversial.*

*Giving that the multi-sided platforms add a level of complexity to the revenue decisions, addressing the revenue model block specifically is becoming worthy of investigation. Furthermore, the findings in literature are inconsistent and fragmented. Starting from these premises, this work aims to present a first overview of the landscape about value capture in sharing economy and to draft a set of research propositions that could lead the development of the research in a second step.*

*To address the aim of the study, a literature analysis was carried out in order to:*

- 1) *identify the state-of-the art on the topic and find out the relevant issues related to the revenue decisions;*
- 2) *identify the main variables through which the value capture process can be described;*
- 3) *highlight the inconsistencies among data emerging from previous studies.*

*Basing on this, in the first instance a desk research on 105 sharing companies has been developed to find out the common practices and investigates if there are any differences in terms of revenue decisions in the most funded companies compared to the others.*

*According to the literature, service firms recently developed concepts that transform revenue models from traditional transactions in which products were exchanged against money into more sustainable streams in which revenues are generated indirectly or over time through cross subsidization or life cycle values. Furthermore, adding new revenue sources such as cross-selling or integrated service contracts is gaining importance (Clauss, 2017).*

*Indeed, two-sided or multi-sided platforms may have different revenue sources, so revenue model need to be investigated by going beyond what is traditionally defined as the “stream of revenue”. Some scholars suggested the distinguishing between the “money side”, who pay for the service ad for additional features, and the “subsidy side”, who use the platform for free (Wang et al 2014).*

*Increasing attention, from both academic and managerial point of view, is being paid to the lock-in strategies. It refers to “those business model elements that create switching costs or enhanced incentives for business model participants to stay and transact within the activity system” (Zott and Amit, 2017, p. 21)*

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Previous studies suggest that e-businesses enhance lock-in by enabling customers to customize products, services, or information to their individual needs. Revenue model can be used to increase the lock-in effect.

A case in point is the recurring-revenue model, a mechanism of value capture that is creating new opportunities across all the industries, also known as subscription or usage-based models. Many surveys have presented evidences of the trend to shift towards a subscription revenue model. CFO Research and Salesforce.com (2018) carried out a survey on senior finance executives that showed how recurring revenue models are well established and growing. More than half (53%) of the CFO Research/Salesforce survey respondents said at least 40% of their organizations' revenues were recurring, that is, sold via a subscription- or usage-based model. Gartner (2019) predicts that by 2023, 75% of organizations selling direct to consumers will offer subscription services and in its "Digital Commerce State of the Union survey", found that 70% of organizations have deployed, or are considering the deployment of, subscription services.

Academic literature on value capture stresses some main issues related to the choice of the most effective revenue model to be adopted and on the ways it could be managed.

Wang et al. (2014) focused on mobile social networks that face the critical issue of the indirect network effect (one/both sides of the market benefit from increasing adoption and/or consumption of the other side), and found out that the most common model is the "freemium" one. Considering that freemium business model could be a "promising approach to solving the "chicken-and-egg" problem of bringing "onboard" both sides (p.1316)" their research quantitatively characterizes the relationship among participation levels of free and premium users and illustrates the mutual enhancement among those participants.

Muzellec et al. (2015) reveals that the business models of Internet ventures show a clear pattern of evolution from inception to maturity, and the specifically the revenue models move from "none" in the embryonic stage towards a monetization on the businesses side. Thus, in the growth and maturity phase the value is captured from the B2B markets and by involving companies as partners.

Kemppainen et al. (2018) addressed the "How does a personal data platform operator capture value with revenue models?" research question, pinpointing that these platforms adopt two models: "no-advertising" and "free for users". The first means that none of the personal data platform operators use advertising as a source of revenue. In this case the lack of advertisement revenues and the need for money for getting the business up and running before the data sharing capability are reasons for introducing membership fees and service fees for individuals at the early stage of the platform service. The latter "free for users" personal data platform operators offer individuals with a free service and cover the costs of operating the platform by charging the organisations using the data, thus service providers.

Täuscher K. et al. (2018) found out that 72% of marketplaces generate revenues from commission fees. Another 22% generate subscription fees, while listing/bidding fees (3%) and advertising (2%) are the exception (sample 100 firms operating in the sharing economy).

Wagner et al. (2014) examined 317 freemium users of music platforms. Results indicate that companies providing freemium services can increase the probability of user conversion by providing a strong functional fit between their free and premium.

By adopting a business model approach, some studies have identified three different main dimensions: 1) the "value proposition", related to the solutions for customers and how they are offered; 2) "the value creation" (referring to those elements that allow the distribution of the value produced to a specific target segment) and 3) the value capture (i.e. how the organization transforms the value produced and distributed into revenue flows and possibly profits (Richardson, 2008; Clauss, 2018; Baden-Fuller et al., 2013; Abdelkafi et al., 2016; Teece, 2010).

In the specific field of value capture, three different subconstructs have been identified (Clauss, 2017; Bocken et al., 2014; Richardson, 2008; Osterwalder et al. 2005; Tauscher et al. 2017):

- the revenue model, that defines how a business model is financed
- the price differentiation mechanisms refers to adding features to a standard product or service to meet the specific needs of one or more customers;
- the cost structure, definition of major cost sources and determination of cost or value driven structures.

Recently, Kemppainen et al. (2018) have showed that in SE and personal data platform that can be summarized in 14 revenue models, from the most common ones (advertising or transaction) to the rare ones. In table 1, the main revenue models proposed in the literature are summarized. Although the models are presented in the table separately, revenue models can be combined in different ways to achieve competitive advantage (Lumpkin and Dess, 2004).

Tab. 1: Some revenue models in SE literature

Author/s (year)	Revenue models
Botsman and Rogers, 2010	Transaction, Subscription, Flat membership, Subscription plans, Membership plus usage, White label, Freemium
Tang, 2016	Freemium, Paid, Free-advertising
Roma and Ragaglia, 2016	Free, Paid, Freemium
Kohler, 2015	Transaction, Subscription, Service fees for clients, Advertising
Kannisto, 2017	Paid by user, Free/early free, Third party revenue, Brokering
Tauscher et al., 2017	Commission, Subscription, Advertising, Service sale
Kemppainen et al. (2018)	Advertising, Subscription, Commission, Freemium for individuals or , businesses, Pay-per-use, Time-based billing, Transaction based model, Free for users, Affiliation, No advertising model, Direct sales revenues, No free users, Volume based billing

**Methodology.** To present a first overview about value capture in sharing economy and support the formulation of our research propositions, a desk research has been carried out on a sample of 105 platforms. This research also aims to identify which revenue model approaches are used by the most funded companies in the SE and if a correlation is evidenced among these variables.

The sample is composed by companies operating in different industries, extracted from the Crunchbase database (in March 2019) which provides a lot of information including the amount of funding collected. Crunchbase is, according to Fortune 500s magazine, one of the most up-to-date databases in the world about sharing economy enterprises and is also often used in academia to conduct empirical research (Dalle et al. 2017, identified over 90 contributions with data from this database).

Companies were selected using the following keywords: “sharing economy”, “collaborative economy”, “Peer-2-Peer economy”, and integrated with those emerged from a snowballing search.

Tab. 2: The sample selection process

SE companies in Crunchbase database (double cancelled)	744
Companies not included because closed/not funded /with few information	428
Companies not include because without website/ with few information about revenue model	219
Snowballing search	8
Final sample	105

The variables were selected on the basis of the existing literature (Tab. 1) and following the inductive category development approach whereby researchers immerse themselves in the data to allow new insights to emerge (Kondracki and Wellman, 2002). This process led to the definition of the following categories and variables:

Tab. 3 Revenue model and pricing approaches in SE

VALUE CAPTURE	Revenue model	Subscription	A periodically fee is charged by the platform provider independent of peer usage.
		Transaction	The platform provider retains a certain percentage of the transaction value after successfully matching supply and demand
		Advertising	The sale of advertising is the main source of revenue
		Freemium	The platform provider offers basic services or usage for free. Additional features and benefits are subject to charge
	Source of revenue	Provider	Money are raised from the supplier side
		End customer	Money are raised from the end-user side
		Provider and customer	Money are raised from both suppliers and end-users
		Third part	Money are raised from other partners i.e. advertiser
	Pricing	Fixed price	The economic value is not negotiable
		Differentiated price	The economic value is defined and it varies in relation to different variables
		Bargained price	The economic value is defined from time to time during the bargaining phase

**Results.** In this first step a frequency analysis has been carried out to understand the sample distribution concerning the analysed variables. In so doing, the sample was divided according to the amount of funds they received so far, to gauge if any difference is evincible in terms of revenue strategies. Thus, the analysed companies have been divided into two groups: the top funded (first quartile) and the remaining.

Tab. 4: Frequencies of different value capture dimensions

		First quartile (26 cases) %	Other companies % (79 cases)	
VALUE CAPTURE	Revenue model	Subscription	23.1	6.3
		Transaction	73.1	86.1
		Advertising	0	3.8
		Freemium	3.8	3.8
		TOTAL	100	100
	Source of revenue	Provider	3.8	19
		End customer	57.7	58.2
		Provider and customer	38.5	19
		Other (i.e. advertiser)	0	3.8
		TOTAL	100	100
	Pricing	Fixed price	23.1	34.2
		Differentiated price	42.3	26.6
		Bargained price	34.6	39.2
		TOTAL	100	100

Some differences emerge between the two groups concerning the investigated variables. As for the revenue model, regardless of the received funds, there is a general predominance of the transaction model, where the platform owner

takes a percentage of the transaction that happens between the supplier and the demander. However, it is thought-provoking to note that an interesting percentage of cases in the first quartile presents a revenue model based on subscription (23.1%), while revenue models other than transaction are marginal in the remaining part of the sample.

A same pattern is also evidenced for the source of revenue. Indeed, a general trend is that of charging end customers, and both the groups of companies have this option for the most part of the sample. On the other hand, what emerges is that providers are also charged in some companies belonging to the first quartile (38.5%) where different sources of revenues are merged. This aspect is less prominent in companies belonging to the remaining part of the sample (19%), even if more cases where only providers are charged are evidenced (19%).

To what concerns the pricing strategy, there is not a prevalent option that is common across the identified groups. A slightly higher percentage of companies in the first quartile adopt a differentiated price (42.3%) that varies according to specific variables, while companies in the remaining part of the sample are quite equally divided among the three identified options.

In a second step, to understand the extent to which these differences in terms of association between the groups of companies and the analysed variables are statistically significant, a chi-square test for the independence of categorical variables was performed. What emerges is that significant association between the following variables:

- quartile and revenue model ( $X^2(3, n = 105) = 6,62, p < ,005$ );
- quartile and source of revenue ( $X^2(3, n = 105) = 7,04, p < ,005$ ).

While it was no significant association between the top funded/other quartile companies and the pricing strategies.

Also, we tried to analyse the relation between the revenue model and the age of the companies to see if any trend is assumable. What emerged from the contingency table is that some models seem to have increased over the years while others seem to decrease. In particular, the percentage of the adoption of a subscription model has increased from 6.7% in companies that are more than 10 years old, to around 11% in companies founded from 2010 on. A same trend is evincible for the transaction model, that as aforementioned is the most diffused option, whose adoption shows a steady growth from older to younger companies.

Conversely, advertising and freemium models show a drastic decrease in the analysed sample, to the point that they are completely absent in younger companies with less than 5 years.

Tab. 5: Relation between the revenue model and the year of foundation

		Year of foundation		
		2005-2009 (> 10 yrs)	2010-2014 (5-10 yrs)	2015-OGGI (< 5 yrs)
Revenue model	Subscription	6,7%	11,3%	10,5%
	Transaction	73,3%	83,1%	89,5%
	Advertising	6,7%	2,8%	0
	Freemium	13,3%	2,8%	0
Totale		100%	100%	100%

**Research limits.** The study present some limitations, most of all for the size and characteristics of the sample that examines a large but not complete number of platforms, and for the performed desk analysis where the subjectivity of the researchers might have had an influence even if measures to avoid it have been taken.

The identified research propositions will be addressed through an empirical research based on qualitative case studies analysis.

**Practical implications.** This first step allows to present an overview of the landscape concerning value capture in sharing economy. Starting from the literature review and the desk analysis performed on a sample of 105 sharing economy platforms to investigate some variables related to the revenue model, a set of research propositions are here proposed to drive the future empirical research.

Preliminary data from the desk research shows that the revenue model is different between the top funded/other quartile companies, it thus follow that:

Proposition P1: The choice of a specific revenue model have an influence on the success of the companies in terms of received funds

The transaction-centered nature of sharing economy business models creates low switching costs between platforms leading to a low customer lock-in, even more for the low transaction frequency (Tauscher and Kietzmann, 2017). This coupled with the increasing in the subscription model from older to younger companies and with the higher percentage of this model among the companies that received more funds.

Proposition P2: The value capture mechanism can be leveraged to increase the lock-in effect and the customer retention

There is a constant need for sharing economy companies to generate new revenue sources and/or to innovate the ones they adopted in order to establish more sustainable streams in which revenues are generated indirectly or over time through cross subsidization or life cycle values (Clauss, 2017). This process goes in parallel with the evolution of the platform itself following a sort of pattern of innovation as far as the company grows (Muzellec et al., 2015).

Proposition P3 *The value capture mechanism has to be innovated over time consistently with the life cycle of the platform*

**Originality of the study.** *The originality of the paper comes from its intent to deepen the discourse of value capture in sharing economy platforms, also taking insights from different streams of literature. In this way it can also provide some answers to the severe issue of sharing economy companies high rate of failure, that is often linked to the hardship of balancing the need to be appealing and competitive with that of establish and manage the proper streams of revenues.*

**Key words:** *value capture; sharing economy; revenue model; recurring revenue*

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# Innovation as dynamic and networking capabilities result. Exploration or exploitation to support firm's performance

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**Introduction.** *In the present work, the authors investigate the relationship between exploitation, exploration processes and firm performance in the ecosystem of the Italian sharing economy in the face of change.*

*This fundamental question has engaged scholars from disciplines as disparate as management, strategy, organizational, sociology, psychology, and economics that contributed also to re-define the firm concept.*

*On these considerations, in the present work the firm will be considered as a complex and adaptive system composed of tangible and intangible components in interaction to achieve survival by creating and maintaining dynamic relations with numerous and heterogeneous stakeholders (Golinelli, 2010; Barile, 2009; Barile et al., 2012; Basile et al., 2016; 2018).*

*The relational capabilities identify the firm as a dynamic component of a supra system (place/territory, industry, district) influenced by the other social and economic systems in direct or indirect relationships between them (Yolles, 1999; Barile et al., 2018).*

*These interactions, due to the great level of inter-relatedness of system parts, introduce nonlinearities concept in the dynamics of the system (Anderson, 1999). The no-linear condition shows relationships between systems create inputs and outputs that will in generate not be strictly plannable but stochastly predictable.*

*The nonlinearity attribute allows the authors to define objectives, methodologies and results considering them as a scientific contribute and not a basis for "a best way" definition.*

*As a result of the endogenous and exogenous large number of interactions, complex adaptive systems react showing "emergent properties" as for example organization behaviors in a dynamic context (Cohen, 1984; Morel, and Ramanujam, 1999).*

*In this scenario the authors consider that firms, to survive, must self-organize reducing the environmental information variety, demonstrating capabilities to adapt itself trough strategies and politics aimed to dealing with circumstances and to anticipate future events creating sustainable relations with relevant stakeholders (Ashby, 1956; Wheelan, 1996).*

*As argued Schumpeter in 1934, new information and knowledge (exogenous and endogenous) can create opportunities defining, in this way, a firm as an owner of dynamic capabilities.*

*In many ways, much of the traditional literature on organizational adaptation is consistent with dynamic capabilities (Miles and Snow, 1994). In particular, both, the strategy and organizational behaviour literature emphasize adaptive conditions between and amongst strategy, structure and processes.*

*In this theoretical scenario, the authors consider the innovation as the interconnection of two capabilities:*

- 1. dynamic adaptability, useful to overcome chaotic states, to reduce the contextual complexity, reaching a state enabling the firm/system to satisfy consumer/user needs (Kirzner, 1973; Teece, 2007; Basile et al., 2018);*
- 2. creating and maintaining networking with relevant stakeholders as owners of resources essential for the firm's economic and social survival.*

*According to the first point, in the work will be considered that the dynamic adaptability is reached by means exploration and exploitation activities (O'Reilly III, and Tushman, 2008).*

*About the second point, the system capabilities to create and maintain relations with stakeholders are a property on which the 'network-ification' trend is based.*

*Much more scientific streams consider that these capabilities are useful to both create and stimulate dynamic capabilities of co-creation conditions, up-stream and/or downstream, and to deal with competitive challenges and social needs (Chesbrough, 2003; Smart et al., 2007; Azadegan et al., 2013; Camarinha-Matos and Afsarmanesh, 2006).*

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**Dynamic, adaptive and networking capabilities: shaping innovation on the base of exploration and exploitation activities.** Teece et al. (1997, p. 516) define dynamic capabilities as “the firm’s ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments”.

Moreover, Eisenhart and Martin (2000) argued that dynamic capabilities consist of well-known processes such as alliancing, product development and strategic decision making, whose value for competitive advantage lies in their ability to alter the resource base.

These authors identified as important preconditions cross-functional R&D teams, new product development routines, quality control routines and certain performance measurement systems.

The reconfiguration highlights the competence system adaptation that it represents a qualitative change in form at some level of consideration, and this accompanied by a change in the patterns of its behavior (Yolles, 1999; pp. 136-164).

On the basis of this scenario, the Complex Adaptive System shows an ability to adapt itself through the emergent dynamic characteristic of self-organization. The self-organization is the result of the inter-dependency, networking capability, of endogenous and exogenous individuals or agents, and the isomorphism processes, that the firm tackles when conform itself to beliefs, norms and values (Greenwood et al., 2010).

Regarding that, in the organizational scientific stream, institutional theory claims that the firm context presents beliefs and rules for organizational structures (Scott, 2013). These implicit and explicit rules emerge due to the interaction and networking between multiple institutions and firm/system contributing to shape/innovate the organizational behaviors. Laursen and Salter (2005) found out that many innovative firms have changed their way to search for new ideas, by adopting open search strategies that involve the use of a wide range of external actors and sources, that help them achieving and sustaining innovation.

Therefore, self-organization is a steady state capability by which under its own dynamics, a system spontaneously gets increasingly more organized (Thompson, 1967).

Talking of networking capabilities and innovation, interfirm alliances have to become commonplace as firms attempt to access or absorb the capabilities of other firms (Rocha-Goncalves and Goncalves, 2011). We define an alliance as any independently initiated interfirm link that involves exchange, sharing or co-development (Gulati, 1995). In literature, the use of alliances with regional external knowledge partners, is seen, by some authors (Huggins and Johnston, 2010) a point of strength to achieve higher innovation (Lee et al., 2011)

In such systems, the level of connectivity (i.e. the number of systems with which a given firm interacts) is a crucial parameter (Derrida and Weisbuch 1986). When the connectivity is very low (each system interacts with only one or two other systems), these systems risk to become a close system that, without external exchanges, is addressed to not survive. But when the networking capability can increase, these systems can display self-organizing behavior before becoming chaotic (Langton 1990).

This shaping or innovation could be based on employment of capabilities already known, innovation for exploitation, and or on the development of new capabilities, innovation for exploration.

Therefore, exploitation capability focuses on utilizing what firms have already known (March, 1991). An exploitative orientation relies on the assumption that the firm has complete information about external opportunities and internal capabilities. Exploitative firms expect to work within well-established problem-solution frameworks, under which problems and solutions can be clearly defined. Organizational attention is focused on existing or grown businesses or existing ways of doing businesses and on employing available information and capabilities to achieve short-term organizational goals and market positions. Exploitation involves low levels of uncertainty and has high rates of success (Chen, 2017).

Exploration centres on the belief that firms may have not yet reached their maximum capabilities, so they need to stretch their existing capabilities (Wang and Chen, 2015), transform existing capabilities (Teece, 2007), or develop new capabilities (Capron & Mitchell, 2009). Unlike exploitation, exploration consumes resources in the short run and its returns are uncertain, distant, and delayed (Arend & Chen, 2012). It creates new possibilities, but it often produces early failures and results in temporary performance declines. Exploration involves high levels of uncertainty and has low rates of success (Chen, 2017).

Although a growing number of studies reveal the importance of exploitation and exploration as key sources of sustainable competitive advantage, there are three areas of research that need further development (Takehiko Isobe et al., 2004). First, most studies do not distinguish clearly between the effects of exploitation and the effects of exploration on performance (Zott, 2003).

Second, previous studies have provided limited evidence to demonstrate how the balance between exploitation and exploration can be struck and under what conditions this would occur (Esposito and Ferri, 2018). In particular, Levinthal and March (1993) argue that overexploitation results in obsolete competences and the under-utilization of new opportunities, and that over-exploration results in small returns from new ideas.

Finally, most previous studies have not explicitly examined the interaction between exploitation and exploration. Given that dynamic capability is defined as a process rather than a rent-generating asset (Eisenhardt and Martin, 2000), the management of the interaction between exploitation and exploration is critical for the development of sustainable competitive advantage.

On these areas of research Takehiko Isobe et al. (2004) revealed that exploitation relates more positively to operational efficiency than exploration, and conversely, exploration to strategic performance, such as technological innovation and new product development, than exploitation; concluding that, exploitation and exploration have

different effects on firm performance, and that neither activity is independent or mutually exclusive, although exploration tends to be enhanced by exploitation.

Starting from this study, the authors investigate the relationship between exploitation, exploration and performance on a sample of Italian Manufacturing SMEs.

**Research Question.** A network is characterized by the presence of numerous and heterogeneous 'horizontal' relations between the players, who are, among others, suppliers, consumers/users, public institutions, financiers, social communities. In this scenario, the network components interact to co-create and innovate products, services, improve states of mutual well-being, provide knowledge, skills and other elements. In this line, the authors analyse an Italian manufacturer ecosystem with entrepreneurs displaying the following different 'networking perceptions':

- stable alliances
- occasionally inter-firm relations
- no relations.

The different dynamic and adaptive capabilities' applications of the entrepreneurs in terms of their ability to innovate, are:

- Exploitation, which refer to the efficient utilization of internal existing resources as new managerial techniques, organizational changes, commercial practice;
- Exploration, which refers to searching flexibility and innovation trough development of new products, new services, acquisition of license, etc.

Table 1 and 2 give an overview over the sampled firms of the networking perception with respect to exploitation and exploration instruments.

Tab. 1: Exploration and networking

Exploration	stable	occasional	no relation
creation of new goods	28,21%	28,85%	31,69%
creation of new services	9,40%	3,85%	4,50%
license/patents	0,00%	2,88%	0,42%
acquisition of machinery	62,39%	64,42%	63,38%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Source: our elaboration

Tab. 2: Exploitation and networking

Exploitation	stable	occasional	no relation
new managerial techniques	11,11%	16,67%	16,85%
commercial practice changes	22,22%	16,67%	29,21%
organizational changes	66,67%	33,33%	34,83%
Training	0,00%	33,33%	19,10%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Source: our elaboration

The authors will investigate the impact of the exploration and exploitation activities on the firm's performance, making a distinction between operational efficiency and strategic performance and assuming that, in line with Takehiko Isobe et al. (2004), exploitation relates more positively to operational efficiency than exploration, and conversely, exploration relates more positively to strategic performance.

Finally, the authors analyse the relations between exploitation and exploration activities of firms to identify if they are positively associated with each other or not.

The research hypotheses are the following:

Hypothesis 1: The greater the capacity for exploitation, the greater the ability of a firm to enhance its operational efficiency.

Hypothesis 2: The greater the capacity for exploration, the greater a firm's ability to enhance its strategic performance.

Hypothesis 3a: The exploitation and exploration activities of firms are positively associated with each other.

Hypothesis 3b: The exploitation and exploration activities of firms are negatively associated with each other.

**Research methodology.** The analysis is based on a survey made by the Italian Institute Tagliacarne on around 3.500 Italian manufacturing firms. The sampled firms were extracted from the CERVED-Infocamere official archive (Italian Chambers of Commerce archive), after a stratification with respect to manufacturing sectors and company's size. A structured questionnaire was posted with the CATI System to the extracted companies, with a response rate of 85%. In the questionnaire, the entrepreneurs answered referring to the year 2016. The final sample was about 1.400 firms, by restricting the analysis only on those firms declaring to have made innovation in the considered period.

From the survey data, it is possible to verify how firms consciously belonging in a network may innovate and improve their business performance compared to those affirming to operate in an isolated and/or autonomous way. The notion of network applied in the study includes both, formal collaborative links between companies (i.e. consortia, industrial districts, temporary associations of enterprises, network contracts, etc.) and informal ones.

Innovation is distinguished between its exploration and exploitation activities. Exploration includes, for example, the creation of new products or services, the introduction of advanced processes, the purchase of new machineries and software or other new technologies; on the other hand, exploitation includes training activities, new advanced managerial techniques or the adoption of new marketing or commercial practices.

The Cerved-Infocamere database allows to match the information derived from the survey with some economic and financial indicators useful to give a more in-depth vision of the dynamic and adaptive applications of the sampled companies, like the value added, export, geographical localization and employment.

**Expected main findings.** We expect that the propensity to adapt dynamically to the environment is significantly higher for companies being aware of belonging to a network. These companies should prefer to innovate by exploration or exploitation also in relation to the stability of their networks.

Moreover, we expect a positive relation between exploration and strategic performance results, and between exploitation and improvement in the operational efficiency.

This corroborates the idea that the contextual environment plays a crucial role in strengthening the network and innovation performance.

Although the study acknowledges limitations in terms of number of observations, it could contribute to the literature in several ways. First, based on a methodological and theoretical grounding in the systems view of the firm and the adaptive (dynamic) capabilities. For this reason, we introduce the networking adaptive capability that could be considered a managerial skill.

Moreover, the analysis aims showing that networking and dynamic capability are not synonymous terms.

**Key words:** innovation; exploration and exploitation; dynamic capabilities; systems thinking

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# Social innovation and organized crime: the role of universities as innovation catalysts

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**Objectives.** *This research which is a work-in-progress seeks to determine how social innovation could be deployed as a 'weapon' for fighting organized crime with research and development as the fulcrum. Put in another way, the study examines the mediating role of universities in the relationship between the government and the industry to produce innovations that address social problems.*

*Two major antecedents prominent in social innovation literature are internal factors and external factors (Damanpour et al., 2018; Walker, 2014). The internal factors are features that take their origin from the firm, entrepreneurs or managers while the external factors originate from the non-firm environment (Zur, 2016). This study thus aims to focus on the external antecedents of social innovation, with particular emphasis on the role played by universities in facilitating the production of innovation through interactions with the government and industry. Among the several definitions and illustrations of social innovation found in literature, so fascinating was that given by the National Endowment for Science, Technology and the Arts, in which social innovation was described as similar to the relationship that exists between trees and bees (NESTA, 2007). The 'trees' are the government, big firms and other big actors while the 'bees' refer to the small organisations in the innovation ecosystem. In this regard, the economic agents which facilitate the connection between the bees and the trees are referred to as innovation catalysts. Thus, universities, as centres of research and development, are expected to connect the other stakeholders in the ecosystem to produce useful innovations targeted at solving social problems. It is in the light of this that we investigate how universities mediate between the government and industry to produce social innovations within the Italian tourism sector.*

*Moreover, recent studies on the concept of social innovation have emphasized the institutional dimensions of social innovation such as the culture, norms, beliefs as well as the formal rules and regulations or the policy framework surrounding the environment in which innovation is produced (van Wijk et al., 2018; Herrera, 2015). They maintained that for social innovation to be effective, it must be institutionally embedded, as no social innovation could thrive outside its surrounding institutional framework (van Wijk et al., 2018). In a similar vein, Vona (2014) recognised the indispensability of research and development in the production of useful innovation in the technology sector.*

*Using a single case study approach, Ferraris & Grieco (2015) advocated the inclusion of intermediaries, otherwise known as innovation catalysts in designing a functional innovation ecosystem. However, the authors pointed out that their research was limited in scope and methodology and therefore made suggestion for a macro analysis. It is on this note that this study chooses to expand the framework for examining the role of intermediaries in the production of social innovation by conducting a critical review and analysis of the role played by Italian Universities in mediating between the government and the Italian tourism industry to produce innovations aimed at solving social problems, especially prostitution and human trafficking.*

*Empirical evidence linking the concepts of social innovation with organised crime appears scanty. However, Freilich & Newman (2016) studied the relationship from an ex-ante perspective; by examining Situational Crime Prevention (SCP) which focuses on innovative strategies that help reduce chances for crimes, as a social engineering for building a virile crime prevention policy. Conversely, Giugni, Stott & Vona (2018) explored the link between social innovation and organised crime from an ex-post viewpoint by analysing the activities of Cooperativa Siani; an unconventional anti-mafia social enterprise in the Ecorlano town of Southern Italy, leading to the proposition of 'radical cultural entrepreneurship' strategies for dealing with legality issues that might arise in setting up social enterprises aimed at fighting organised crimes. This study therefore hopes to strengthen existing research on social innovation and organised crime by focusing on prostitution and human trafficking which are social problems that have defied conventional solutions not only in Italy but also in other developed and developing countries across the globe (Lobasz et al., 2019; Foley, 2018) and have therefore continued to attract research attention in contemporary management studies (Benoit et al., 2018; Maculan et al., 2017).*

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*Specifically, the central research objective this study aims to achieve is to investigate the role of Universities in the production of social innovation that address the problems of human trafficking and prostitution. In order to achieve this broad objective, we will examine the mediating role of Universities in connecting the main elements of the social innovation pyramid- the government and the industry. This study concentrates on the Italian tourism industry since extant literature has stressed the relevance of social innovation in the hospitality and tourism sector (Alegre & Berbegal-Mirabent, 2016). As our contribution to the literature on social innovation, we extend the social innovation pyramid proposed by Ferraris & Grieco (2015) by introducing a seventh element, 'law', to the previous six stakeholders identified in the pyramid- citizens, public administration, B2C firms, B2B firms, Education and Research. By so doing, we can explore the legal perspective of the social innovation process but only limited to the rules and regulations guiding the participation of Universities in networking with the government and tourism industry to produce social innovation.*

**Methodology.** *Qualitative methodology will be employed in this study, involving the use of multiple case studies. The main objective of this empirical study is to investigate the mediating role of Universities in the production of social innovations that address the problem of organised crime using the Italian tourism Industry as case study. Relevant literature on the concept of social innovation have been reviewed to gather information that establish a link between social innovation and organised crime. This gives room for a background understanding of the concepts involved in this study as well as the status of research on the identified problem, thus identifying the gap to filled in the academic literature.*

*Furtherance from this, we will develop interview guides with which we will obtain qualitative data from stakeholders in selected Italian Universities where there is on-going research activities or social interventions in the area of organised crime. We will also interview managers of selected tourist centers/firms in Italy. In order to ensure data obtained is representative of the population, the choice of Universities and tourist firms would be based on a simple random sampling of Italian Universities and tourist centers.*

*The methodology we have chosen will produce more generalizable findings and it will also open up the possibility for a cross-country analysis of the roles played by Universities in facilitating the production of innovations targeted at solving social problems.*

**Expected findings.** *This study will make significant contributions to the body of academic knowledge on social innovation. The first and major contribution to theory is a model that will evolve at the end of this study- The 'extended social innovation pyramid' which comprises seven major stakeholders involved in the social innovation process. Not only will this comprehensive model provide better understanding of the social innovation process, it can also be adopted by business managers as well as national, regional or local authorities in designing an effective social intervention program for citizens.*

*The second finding from this study will be the functions performed by Universities in mediating between the government and the Italian tourism industry for the production of innovations relevant for addressing social problems. Universities are supposed to be the fulcrum connecting the industry and the government, this study will uncover the specific activities engaged by universities in living up to this societal expectation . Having a grasp of such activities is essentially useful for policy makers in formulating effective policies not just to ensure an efficient implementation of social innovation policies but also to aid the diffusion of innovation across the society.*

*The third finding from this study is the legal framework surrounding the participation of Universities in the social innovation value chain. Knowledge in this regard is useful for both academia and policy makers. For the academia, this will be a good contribution to the social innovation literature as it provides the rules and regulations that govern the participation of Universities in the social innovation processes, especially those targeted at addressing the problems of prostitution and human trafficking.*

**Research limits.** *In order to prevent chasing the shadow, we have defined our major research objective as investigating the role of universities in the production of social innovations aimed at addressing the problems of prostitution and human trafficking in Italy. In as much as this is a macro study, it is still limited in scope. Therefore, future studies can conduct a comparative analysis between developing and developed nations, with a focus on other organised crimes like drug trafficking and terrorism which are equally becoming the bane of socio-economic development in most countries.*

*Another limitation of this research is that we extended the social innovation pyramid by only one element, which is the legal aspect. Future studies could consider the political economy surrounding the social innovation process.*

**Practical implications.** *The model we hope to develop in this study will have practical implications for the academia, industry and policy makers. For the academia, the model put forward in this study will provide a new perspective to the social innovation process. The legal framework is identified as a useful element of the social innovation ecosystem. The model will also help Universities identify areas in which they can key into the social innovation process for solving social problems, especially prostitution and human trafficking.*

*For the industry, the 'extended social innovation pyramid' that will evolve at the end of this study can be adopted by managers to form strategic network with universities in addressing social problems. The extended social innovation pyramid which has its theoretical foundation in the triple helix model involving three major actors in the society- the*

government, industry and universities, is one that explicates the real interactions that produce economic development. Although, our study used the Italian tourism sector as case study, it has practical implications across other sectors as we are particular about the social innovations produced from the collaboration of universities, industry and the government. Therefore, this model can be replicated in other sectors such as, agriculture, technology, food processing or textile where social innovations can also be produced either as a result of deliberate intervention or as spin-offs from business activities.

Moreover, the seventh element (law) which is our contribution to the social innovation pyramid provides business managers with the understanding of the legal framework that surrounds the engagement of universities in the production of social innovation. Understanding the legal structure involved in the production of social innovation through an interaction with other economic agents will avail business managers with the needed knowledge to develop memoranda of understanding for formal business engagements, even in the process of proffering solutions to social problems.

Furthermore, the findings emanating from this study can be helpful in developing sector-specific social innovations aimed at addressing the problems of prostitution and human trafficking in Italy and other developing countries. Our focus on the tourism industry will help identify innovative practices which universities and the government can leverage upon to design social intervention programs.

**Originality of the study.** To the best of our knowledge, this is the first empirical study that examines the mediating role of Universities in the production of social innovations targeted at addressing prostitution and human trafficking. Our conceptual framework of the 'extended social innovation pyramid' is itself an incremental innovation which builds on the model proposed by Ferraris & Grieco (2015). It presents a novel idea that includes law as one of the major stakeholders of the social innovation process.

The choice of human trafficking and prostitution as the organised crimes to be considered in this research further underscores the originality of our study. Having observed the common social problems in Italy through theoretical lens as well as physical observations, we discover that prostitution and human trafficking stand top among the list of persistent social problems. This study was thus purely driven by the objective of proffering solution to the social problems of human trafficking and prostitution using the Italian tourism industry as case study. Nevertheless, the model we put forward could be adopted across other industries and nations.

We provide new conceptualized definitions of some constructs and variables in this study. Based on the review of academic literature, it is safe to assume that there is no universal agreement on the definition of organised crime, as several authors have defined the concept from different perspectives. We therefore offer a new definition of organised crime as 'planned illegal activities by a group of people in order to make money'. Following this perspective, we define prostitution as 'the act of engaging in sexual activities in exchange for money', or simply coined as, 'sex for money'. One thing resonates from our definition of prostitution; it is not gender-based as it encompasses both the male and female folks involved in such activity. This deviates from the norm of defining the construct from a framework that takes into account only the females. We define human trafficking as 'the business of forcefully taking people's freedom for economic gains'. Our definition of human trafficking delineates the concept to mean involuntary enslavement, so as to be specific on the type of activities considered under this paradigm. Moreover, this definition also allows us to draw a boundary between human trafficking and prostitution which is another organised crime considered in this study.

In conclusion, extant studies on social innovation do not consider the mediating role of universities in the social innovation process, which is the main focus of this study. Our major objective in this study is to investigate the role of Universities in the production of social innovation that address the problems of human trafficking and prostitution. In order to achieve this, we will first examine the functions performed by Universities as the fulcrum connecting the government and industry which are the other two main elements of the social innovation ecosystem. In addition, this research is also original in that it extends the social innovation pyramid proposed by Ferraris & Grieco (2015) to include a seventh element (which we referred to as 'law'), to the other six stakeholders identified in literature. Through this contribution to theory, we explore the legal perspective of the social innovation process especially the rules and regulations that guide universities' interplay with government and industries in the production of social innovation.

**Key words:** Social innovation; organized crime; innovation catalyst; extended social innovation pyramid

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# Green innovation: a multidomain systematic review and future research agenda

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**Objectives.** Nowadays, it is widely recognized that the integration of environmental and sustainable practices into a firm's competitive strategy represents a crucial issue due to the increasing pressure from social, environmental and political forces. For example, the "Europe 2020 strategy" framework adopted by the European Commission emphasizes the importance of smart, sustainable and inclusive growth as a way to overcome the structural weaknesses in Europe's economy, improve competitiveness and productivity and underpin a sustainable social market economy. Within this context, the importance of green innovation management is constantly growing, both in practice and in academia (Tietze et al., 2011).

According to the Organisation for Economic Cooperation and Development, green innovation can be defined as "the creation or implementation of new, or significantly improved, products (goods and services), processes, marketing methods, organizational structures and institutional arrangements which – with or without intent – lead to environmental improvements compared to relevant alternatives" (OECD, 2009, p. 5). Therefore, the aim of adopting a green innovation strategy in a firm's product/service and process development is to achieve economic, environmental, and social goals which, in turn, enhance the survival and performance of the firm (Albort-Morant et al., 2016; Laforet 2009).

Despite the rising call to adopt sustainable practices in product and process development has stimulated a significant growth of green innovation research over the last few years, the field is still marginal within the broader innovation management literature and lacks a comprehensive overview of the status quo. Recent literature reviews (e.g. Shi and Lai, 2013; Bossle et al., 2016; Melander, 2017; Zubeltzu-Jaka et al., 2018) are subject-specific, since they focus on specific topics - like the determinants of green innovation (Bossle et al., 2016, Zubeltzu-Jaka et al., 2018) – or on specific kinds of innovation practices, like green and low carbon technology (Shi and Lai, 2013). Such reviews, while contributing to shed light on relevant portions of the phenomenon, do not provide a wide-ranging overview of the existing body of literature in the field of green innovations.

This study aims to provide an original contribution to innovation management literature by proposing a comprehensive assessment of the output of green innovation research through a systematic literature review based on 293 papers published in business and management journals between 1942 and 2018. The specific purposes of the study are to a) offer an integrated and "panoramic" view of the main trends of green innovation research, b) assess its evolution in term of journal outlets, research methods, geographic distribution, themes/contents, and supporting theories and c) propose a research agenda for future research avenues.

**Methodology.** As suggested by Tranfield, Denies and Smart (2003), "Undertaking a review of the literature to provide the best evidence for informing policy and practice in any discipline is a key research objective for the respective academic and practitioner communities". In management and business literature, the systematic review method has been developed over the last two decades and plays a major role in evidence-based research (Deng & Smyth 2013; Crossan and Apaydin, 2010), since it provides a replicable and transparent protocol that enable researchers to search for and explore areas of studies relevant to a particular subject.

Based on the typical protocol of a systematic review, the first step of the analysis conducted in this study included the selection of keywords and search terms. Based on the multidisciplinary nature of the green innovation concept (Schiederig et al., 2011) - which leads to the employment of different expressions to describe the same subject or approach, such as "eco-innovations", "ecological innovation", green innovations" (Bossle et al., 2016; Schiederig et al., 2011) - a choice was made to search for articles published on EBSCO, ProQuest, Science Direct, Web of Science,

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JSTOR, Emerald Insight, and Business Source Complete databases containing the following keywords in the title, abstract, and subject terms search streams: “green innovation”, “eco-innovation”, and “ecological innovation”.

The analysis period was set from 01/01/1942 to 30/11/2018. This timeframe was considered coherent with the purpose of tracking the evolution of green innovation research from its early stage to the present time. The search query included peer-reviewed articles in the management and business-related areas. The analysis was conducted in November 2018 and a total of 492 articles were retrieved in the initial search. The co-authors individually screened and grouped the articles on the basis of the abstracts. As a result of the initial screening, 129 papers were omitted because the actual themes (corporate social responsibility, social innovations, and open innovations) were not related to the green innovation field. Furthermore, 16 articles were excluded as they were not full peer-reviewed papers but editorials in special issues. Finally, the original database was clean from duplicates. After the screening, a final list of 293 full papers matched the specific target of analysis of the review.

The classification of the methodological profile of the articles was based on research conducted by Caldas, Tonelli, and Lacombe (2002), who classified research types as theoretical/conceptual; empirical; or theoretical and empirical. Similarly, Creswell’s (1998) method was used to assess the research approach and to distinguish among a) qualitative; quantitative; or quali-quantitative studies and b) theoretical; empirical; or theoretical and empirical studies. The study design employed in the articles were classified into a survey/questionnaire; semi-interviews; single case study; or multiple case study. Articles were also classified based on the region of focus using a modified version of Guthrie and Murthy’s (2009) original classification of geographical regions of study: North America (US and Canada) Australasia (Australia, New Zealand, parts of Asia, China, India, Malaysia, Singapore, Thailand, Taiwan, Japan), UK (England, Scotland, Wales, Ireland), Europe (Italy, Sweden, Germany, France, Denmark, Africa, South America, and others (UAE). The articles not limited to one geographical region were categorized as Global. Finally, the themes/focus of articles were categorized using a modified version of Guthrie and Murthy (2009) classification as follows: management and strategy; performance (financial; non-financial; or financial & non-financial); antecedents/drivers; consumer- behavior; or others. The results of the analysis are discussed in the following sections.

## Findings

### Time sequence and journal outlets

As shown in Table 1, articles on green innovation were found in a total of 124 business and management journals. According to our analysis, the five most prolific journal outlets are *Business Strategy and the Environment* (37 papers), *Technological Forecasting and social change* (22 papers), *Journal of Business Ethics* (13 papers), *Industry and Innovation* (12 papers), and *Research Policy* (12 papers). The above-mentioned journals produced 32.78% of the total research papers reviewed. The fragmented nature of the field is shown in the analysis of the publication ranges in Table 1.

In the first range, 80 journals published only one article on green innovation, representing the biggest share of the total journal outlets (64.51%). The second range, which comprises journals that published from 2 to 5 articles, includes a total of 35 outlets (28.22%). The third range, which consist of journals that published from 6 to 9 research papers, includes a total of 4 journals, representing the smallest share (3.22%). And finally, in the highest range, it was found only a total of 5 journals (4.03%) which published more than 10 papers on the subject.

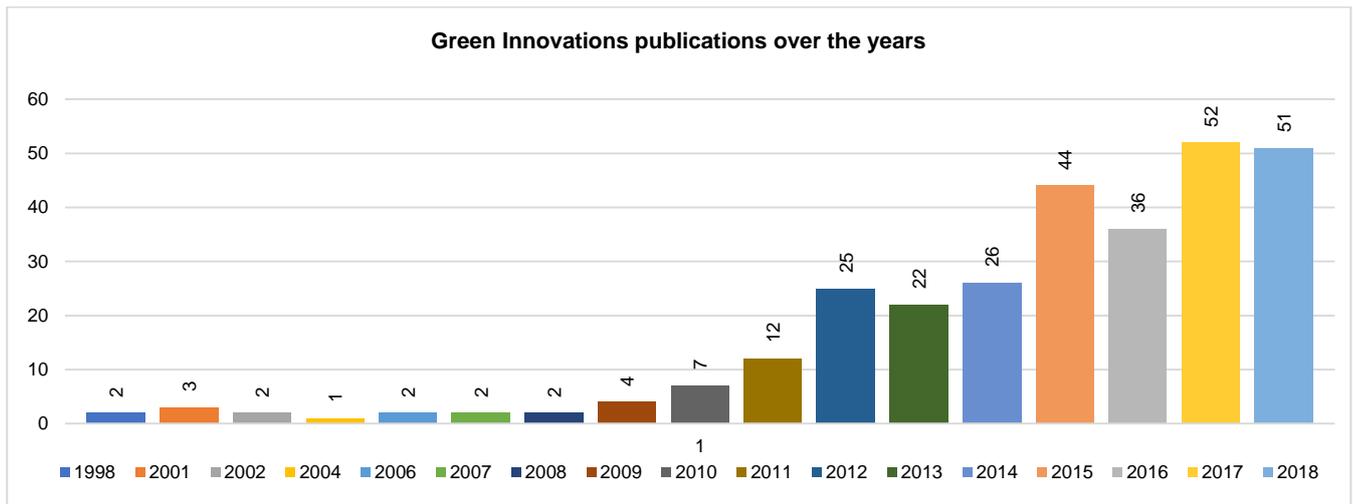
Tab. 1: Top 5 Journals on green innovation and publications ranges

Journal name	Number of publications	Share of total	N* of Outlets per publications range	Share of total	
<i>Business Strategy and the Environment</i>	37	12.63%	1 publication	80	64.51%
<i>Technological Forecasting and social change</i>	22	7.51%	2-5 publications	35	28.22%
<i>Journal of Business Ethics</i>	13	4.44%	6-9 publications	4	3.22%
<i>Industry and Innovation</i>	12	4.10%	10> publications	5	4.03%
<i>Research Policy</i>	12	4.10%			
<b>Total</b>	96	32.78%	<b>Total</b>	124	100.0%

Authors’ Analysis Output (2019)

Figure 1 shows the distribution of publications over the period from 1998-2018. Results of the analysis demonstrate that from 1998 to 2009, research on green innovation was virtually non-existent, with only 18 articles appearing in the mainstream literature. The first article in the topic retrieved in the database was conducted in 1998 (Azzone and Noci, 1998). Starting from 2010, however, there was an impressive growth in the number of articles, with a total of 275 articles of the 293 articles reviewed in this study published between 2010-2018. Interestingly, 103 papers were published between 2017 and 2018, which indicate a recent “acceleration” of scholars’ interest in his topic and further growth in the next future.

Fig. 1: Distribution of publications over the period 1942-2018



Authors' Analysis Output (2019)

Countries and Regional Focus

As reported in Table 2, the majority of the studies (26.62%) are multi-country, while five single countries account for more than half of the studies (154): China (11.26%), Spain (11.26%), Germany (10.92%), Italy (10.32%), USA (10.58%), and Taiwan (8.87%). At the regional level, the most researched region is Europe with 131 articles (44.71%), followed by Australasia 74 (25.25%). Africa and South America clearly emerged as under-investigated areas, with only 6 (2.04%) and 9 (3.07%) articles, respectively. Eleven (11) papers did not specify the regional focus of the study.

Tab. 2: Country and regional focus of research

Country Focus (Top 8)		Regional Focus	
China	33	Africa	6
Germany	32	Australasia	74
USA	31	Europe	131
Italy	32	North America	14
Spain	33	Global	48
Taiwan	26	South America	9
France	16	Others	11
UK	19		
Multi-country	78		
<b>Total</b>	<b>293</b>		<b>293</b>

Authors' Analysis Output (2019)

Methodological profile

From a methodological point of view, the articles were analyzed according to the following criteria (Table 3): research type; research approach; and study design.

Based on the research type, empirical studies (studies that present concepts and data analysis) accounted for the vast majority of the articles (86.69%), followed by theoretical/conceptual studies (studies that focus on concepts without any data analysis) (7.17%). In terms of research approach, quantitative studies accounted for 56.67% (166) of the articles reviewed, followed by a qualitative study (30.72%), and quali-quantitative (9.89%). The majority of studies used a survey/questionnaire (55.29%), followed by multiple case studies (11.45%), and single case studies 10.24%. Interestingly, of the five most cited articles (Chen et al., 2006, 801 citations; Chen, 2008, 637 citations; Pujari, 2016, 534 citations; Kesidou and Demirel, 2012, 389 citations), four are empirical and based on quantitative survey/questionnaire studies while one was empirical but based on a qualitative multiple case study (Dangelico and Pujari, 2010). It was also observed that, out of 8 previous systematic reviews, only two were based on meta-analysis or quantitative review approach (Zubeltzu-Jaka et al., 2018; Bossle et al., 2016).

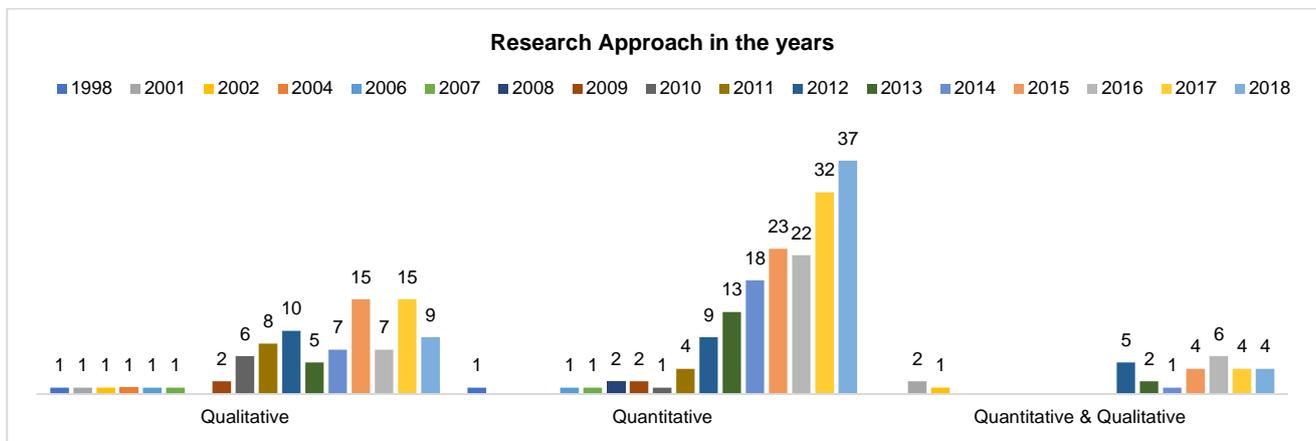
Tab. 3: Methodological profile of articles

Research Type		Research Approach		Study Design	
Theoretical/Conceptual	21	Qualitative	90	Experiment	3
Conceptual & Empirical	10	Quantitative	166	Single case study	30
Empirical	254	Quali-Quantitative	29	Multiple case study	35
Review	8	Quantitative review	2	Interviews & open-ended questions	31
		Qualitative review	6	Survey/questionnaire	162
				Semi-interviews	3
				Theoretical reviews	29
<b>Total</b>	<b>293</b>	<b>Total</b>	<b>293</b>	<b>Total</b>	<b>293</b>

Authors' Analysis Output (2019)

The trend of the research approach (Figure 2) suggests a decline in the number of studies employing qualitative and quali-quantitative studies in 2017 and 2018 (15 to 9) and (6 to 4), respectively. Conversely, there is a significant growth in the number of studies using only quantitative approach (32 to 37 between 2017-2018).

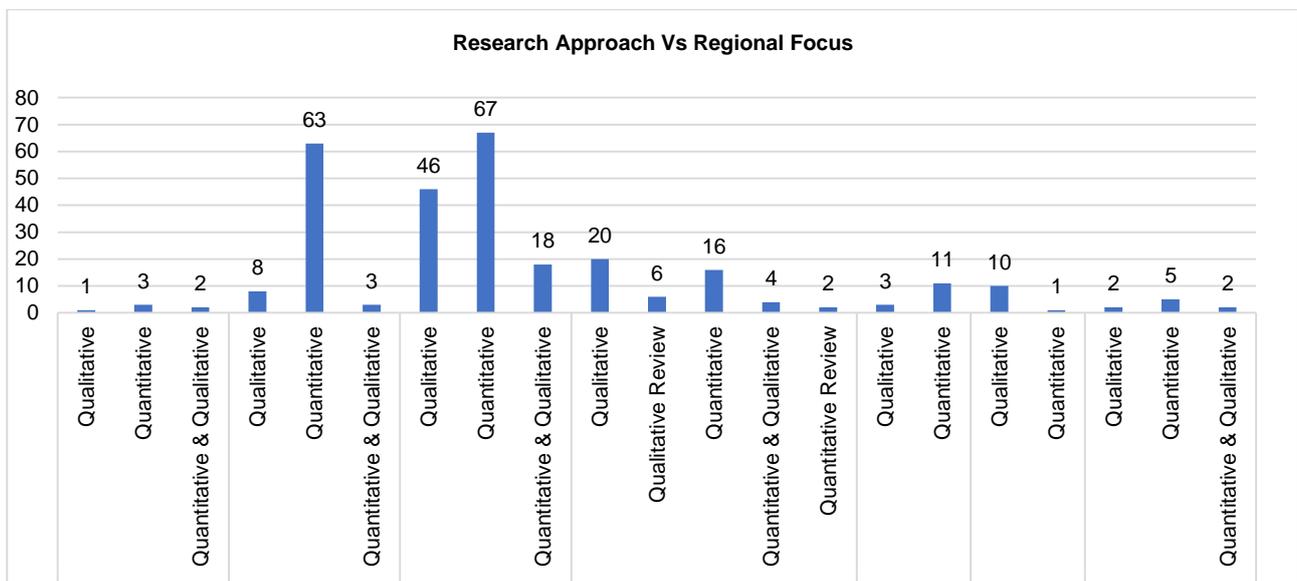
Fig. 2: Research approach over the years



Authors' Analysis Output (2019)

A cross-analysis was performed with the aim of understanding the intersection between research approach and the regional focus of the studies. As depicted in Figure 3, a vast majority of the quantitative studies were conducted in Europe (67) and Australasia (63), while most of the Global studies (studies involving two or more countries from different continents) were qualitative (20).

Fig. 3: Research approach and regional focus



Authors' Analysis Output (2019)

### Themes, theories, and sector/industry focus of Articles

As shown in Table 4, studies focusing on green innovation management and strategy - which include a large variety of themes such as green innovation supply chain management (e.g. Dangelico and Pujari, 2010; Lee and Kim, 2011; Guo-Ciang, 2013; Cosimato and Troisi, 2015), management environmental attitude or behavior (e.g. Liao, 2018; Maçaneiro and Cunha, 2014; Dalvi-Esfahani et al., 2017; Liao and Long, 2018), and management of green innovation integration and adoption strategies (e.g. Wicki, 2015; Verbič et al., 2009; Melander, 2018) - represent the dominant realm of green innovation research, with a total of 103 papers (35.15%). The second theme of most interest is performance assessment (27.30%), with a prevalence of studies including a combination of financial and non-financial performance indicators (15.17%). This is followed by articles focusing on drivers/antecedents of green innovation adoption, which account for 25.59% of the database (75 papers). The least area of investigation is consumer-green behavior, with only 10 articles (3.41%). It is interesting to note that of the five most cited papers, three focus on non-financial performance (Chen et al., 2006; Chen, 2008; Pujari, 2016), one on management and strategy (Dangelico and Pujari, 2010), and one on of drivers/antecedents (Kesidou and Demirel, 2016).

Regarding the theories employed in the papers, the five most popular theories were: Porter's hypothesis (74 articles - 25.25%), resource-based view of the firm (39 - 13.31%), institutional theory (28 - 9.56%), natural resource-based view (21 - 7.17%), and stakeholder theory (11 - 3.75%). It can be observed that although research on the phenomenon is increasing, the adoption of new theories is still scarce.

The assessment of the sectoral focus of the studies shows that the most studied industry is manufacturing (141 articles - 48.12%), followed by service and manufacturing (89 - 30.38%), and service (38 - 12.96%). More in detail, studies in the manufacturing sector focus mainly on automotive, semiconductor, electronics & electricals, IT and pharmaceuticals, while articles in the service sector are largely in telecommunication, hotels, and banks. It is surprising to note that research on green innovation in the agriculture sector is very limited. Another consideration from the analysis is that, despite the manufacturing sector leading out on the list, the five more frequently cited papers mentioned earlier were dual sector-focused, in both manufacturing and service sectors.

Tab. 4: Themes, theories, and industry focus of articles

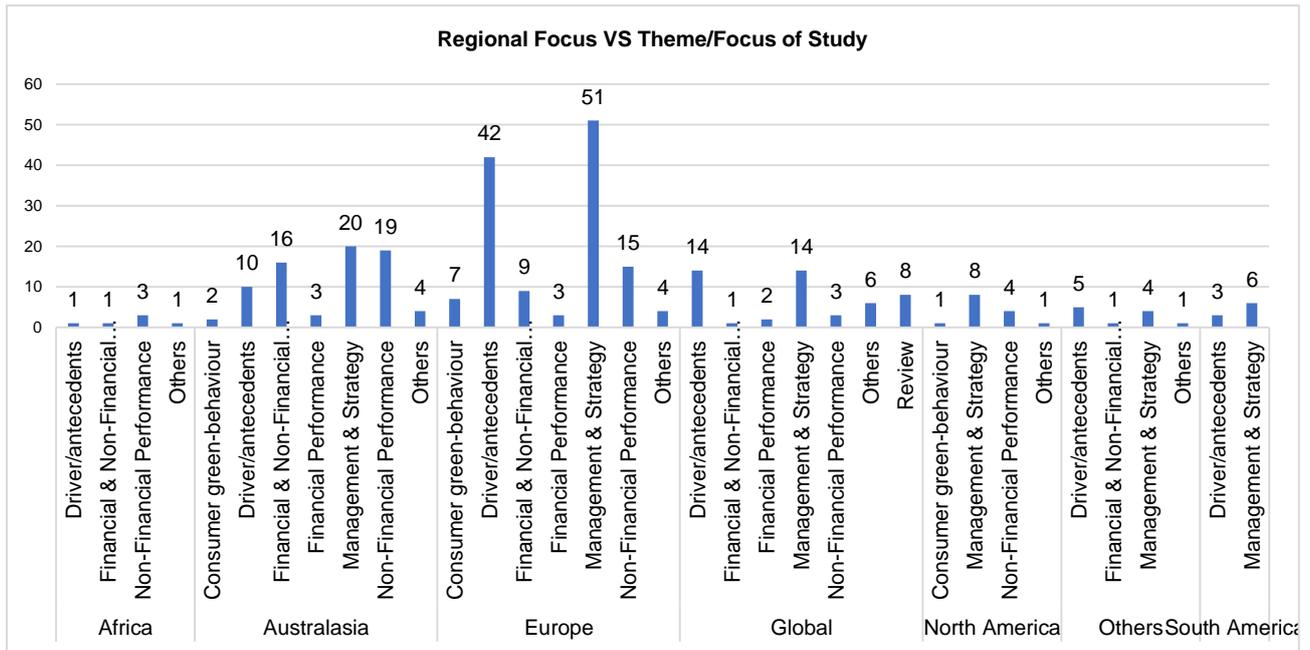
Themes/Content		Theories (Top 9)		Industry	
Consumer-green behaviour	10	Porter's Hypothesis	44	Agriculture	6
Drivers/antecedents	75	Resource-Based View (RBV)	39	Manufacturing	141
Management and Strategy	103	Institutional Theory	28	Service	38
Performance		Natural Resource Based View	21	Manufacturing & Service	89
Financial	8	Stakeholder Theory	11	NA	19
Non-Financial	28	Evolutionary Theory	6		
Financial & Non-Financial	44	Psychometric Theory	6		
Others	17	Value-Belief-Norm Theory	5		
<b>Total</b>	<b>285</b>			<b>Total</b>	<b>293</b>

\*Note: Themes/content total excludes the eight (8) previous reviews

### Authors' Analysis Output (2019)

In order to understand the geographical trends of green innovation research, it was also conducted an assessment of the intersection between the themes of study and regional focus. Figure 3 shows that articles on green innovation conducted in Europe focus principally on management and strategy (51) and drivers/antecedents of green innovation adoption (42), while studies conducted in Australasia - the second most studied region - are mostly performance-centric (35), with a fair balance between non-financial performance (19) and financial & non-financial performance (16). Once again, it was observed that studies on consumer green behavior are surprisingly scant: more in detail, it was found only one (1) article in North America (Chaudhuri et al., 2015), zero (0) in Africa and South America, seven (7) in Europe (e.g. Jansson et al., 2010; Gurtner and Soye, 2016), and two (2) in Australasia (Thøgersen and Zhou, 2012; Khare, 2015).

Fig. 3: Regional focus vs. theme of study



Authors' Analysis Output (2019)

**Research/Practical implications.** Findings from this study indicate that although in recent times research on green innovation has increased in relevance within the innovation management literature, the field is still immature and fragmented in terms of methodology, themes/theories, and regional focus. This state implies that further research is necessary for the advancement of understanding in this area.

Based on the analysis provided by this review, a potential research agenda for the field would include at least five possible directions. First, since the geographical focus of the articles is mostly restricted to Europe and Australasia, it is evident that more research is needed to understand the evolution and potentialities of green innovation practices in the context of emerging continents like Africa and South America.

Second, from a methodological standpoint, our analysis shows that only a few studies adopted an experimental approach to understanding the cause-effect relationships within the green innovation field. Moreover, it is also observed a limited adoption of mixed quali-quantitative research design. This gap provides an avenue for further studies.

Third, in term of theme/focus, a clear indication of our study is the need to devote more space to the analysis of the green-related consumption behavior, given the very limited understanding of green innovation adoption from a consumer behavior perspective. Moreover, future studies conducted in Europe should increase the current knowledge on the relationship between green innovation and firm performance, since most of research have overemphasized the management and strategy aspects of green innovation adoption.

Fourth, research in this field has surprisingly ignored the agriculture sector, where the adoption of green innovation practices represents a fundamental source of competitive advantage. Therefore, new studies focusing on this sector would certainly provide relevant managerial implications.

Finally, as the field is evolving, it will be intriguing to explore new theories, like ecological modernization theory and value-based norm theory. Such theories would provide a strong theoretical rationale for the analysis of consumer green behavior.

**Originality of the study.** This article provides an original contribution to green innovation literature by proposing a systematic literature review of 293 peer-reviewed articles published on business and management journals between 1942 and 2018. Although this is neither the first nor the only literature review conducted in this field, the main contribution of this paper lies in the categorization and classification of the entire amount of articles published in the most relevant academic databases in business and management research (EBSCO, ProQuest, Science Direct, Web of Science, JSTOR, Emerald Insight, and Business Source Complete). Moreover, while the previous literature reviews conducted in this field were subject specific, this is the first one to adopt a comprehensive and holistic approach.

**Research limits.** This study is not without limitations, which are associated with the methodology used in the systematic literature review. First and foremost, in spite of the effort to maximize the coverage of the articles included in the analysis, the restriction of our search for articles to titles, abstracts, and subject terms may have failed to detect some articles. Moreover, the review did not include other significant sources of academic knowledge, like book

chapters and conference proceedings. Finally, despite the criteria for classification were based on previous research, the researchers recognize their subjectivity regarding the classification of papers.

**Key words:** green innovation; systematic literature review; sustainability; eco-innovation; ecological innovation

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## Websites

<https://www.oecd.org/env/consumption-innovation/43960846.pdf>

# Sustainable business model innovation: from a business model to a more sustainable one. Evidence from the Italian Benefit Corporation

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**Objectives.** *Innovation is a relevant topic in the literature on business models. The research has moved its attention from new product/services and resources and capabilities toward a more comprehensive view. Business model innovation allows to re-conceptualize the purpose of the firm and the logic under the value creation, the value capture and the value delivery (Richardson, 2008; Teece, 2010; Bocken et al., 2014).*

*Over the years, academics and practitioners have been discussing the relationship between business model, innovation and triple sustainability.*

*To determine the state of the art about this topic, we look at the intersection of two bodies of literature: stakeholders theory (Freeman, 1984; Haigh and Griffiths, 2009; Romi et al., 2018; Evans et al., 2017) and the literature on sustainable business model innovation (Bocken et al., 2014; Boons and Ludeke Freund, 2013; Lozano, 2018; Breuer et al., 2018).*

*Through stakeholders theory Freeman (1984) said that the managers when make decision must take in account the interests of all individuals who can affect the firm, not only shareholders but also customers, employees, partners, community and environment. A consideration of various interests leads to better firm's performance and encourage the innovation and the firm efficiency (e.g. Kania and Kramer, 2011; Martin, 2007; Grant and Berry, 2011; Miller et al., 2012, Romi et al., 2018).*

*The literature about sustainable innovation claims that through business model rethink it is possible for SME to more readily integrate the three dimensions of sustainability into their business model and for startup to design a sustainable business model (SBM) from the outset. So sustainability innovation not necessarily achieved through the introduction of new technology, products or services alone, but also through the innovation of the entire business model that represent both a vehicle and a subject of this innovation (Evans et al., 2017).*

*This literature offers a wide range of reviews like Boons and Ludeke-Freud (2013), Bocken et al., (2014), Geissdoerfer et al., (2016, 2018), Schaltegger et al., (2016), Yang et al., (2017), in which many definitions of the phenomenon emerge. The lack of a single vision about this topic led to the absence of a unique overview on the sustainable business model. The studies indeed analyzed several types of business models (Bocken et al., 2014) related to:*

- (I) eco-efficiency such as lean manufacturing, cleaner production and zero emissions business model (e.g. Shah and Ward, 2003);*
- (II) new economy concepts such as circular economy, blue economy and natural step (e.g. Urbinati et al., 2017; Hawkin et al., 2005; Pauli, 2010);*
- (III) waste reduction such as closed loop business model and recycling (e.g. Wells and Seitz, 2005; Chertow, 2000).*

*Following this, we define sustainable business model innovation as a change the way of firm operates in order to create positive impacts or to reduce negative consequences for the environment and the society. SBM preserves the environment and it improves the quality of society without neglecting the firm's goal of profit maximization.*

*So, SBM is based on the extension of many concepts: from shareholder's value to stakeholder's value, from economic value to shared value or triple sustainable value and from single firm to network of actors.*

*Most of the sustainable business studies focus on the single type of sustainable business (eg. circular business model; lean manufacturing), losing the logic under all forms of sustainable business model. Moreover, as we pointed out there is an extensive literature about this topic but there is no a view of how firms approach in practice the process to move from a business model to a more sustainable one.*

*To address these gaps, the aim of this paper is to understand the dynamics existing between the sustainable business model innovation as a theory and its realization. The objective is not to focus on specific business model but to create a general knowledge applicable on any type of sustainable business model.*

*We start from some research questions proposed by Geissdoerfer, Vladimirova and Evans (Geissdoerfer et al., 2018 p: 410), at the end of their review:*

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- “How do organizations move from one business models to a more sustainable business model in practice?”
- What are the key activities?
- What are the challenges that an organisation faces when creating new, sustainable business models?”.

In order to answer these research questions, we analyze not a specific type of business model but we conduct a study on Italian firms that have a SBM for definition: the benefit corporations or benefit firms.

In our opinion, this new type of enterprise goes beyond the theoretical concept of hybrid corporation. In the hybrid firms two business co-exist, one who operates to achieve profit and another that uses the result of first business for social and environmental purposes (Bocken et al., 2014). Indeed, in the benefit corporations all stakeholders work together to simultaneously achieve both profits and social and environmental positive impacts (K. Wilburn and R. Wilburn, 2014; Romi et al., 2018).

The main requirements of this new legal form are two: the common benefit purpose and the transparency.

- The firm’s purpose is to create common benefit for all stakeholders, not just for shareholders (Romi et al., 2018). This concept is linked with the value creation topic (e.g. Breuer et al., 2018) that consider the integration of economic, social and environmental goals. The values are reflected on corporate vision and mission and in particular they are included in the value proposition (Schaltegger et al., 2012).
- The transparency and the disclosure of performance at all three levels are other critical elements for any benefit firm. Mandatory report is required in order to guarantee that firm maintains the requisites of the law and that it does not implement unfair greenwashing behavior (Lozano, 2018).

So the three sustainable goals are considered by the benefit firms at the same level of importance and their statute is based on (K. Wilburn and R. Wilburn, 2014):

- (I) The creation of positive impact on society and on environment.
- (II) The consideration of non-financial interests when making decisions.
- (III) The realization of a sustainable report to ensure the transparency of the actions taken.

**Methodology.** This study adopted a qualitative methodology based on multiple case study approach. The aim is to understand how firms apply a sustainable business model in practice and which areas of this business model are considered relevant in the process of business model creation. It also decided to use a structured questionnaire in which each area of new sustainable business model has been taken in account.

In detail, the research process is based on these phases:

- (I) analyze the theory and the object that we want to test
- (II) establish case selection criteria;
- (III) select case studies;
- (IV) choose the method for data collection and collect it;
- (V) proceed to data analysis.

#### - Identifying preliminary theory

To conduct a literature review and to determine the state of the art, SCOPUS academic database has been adopted. To find the papers, the following keywords have been: “sustainability”, “sustainable business model”, “business model innovation” and “sustainability”, “business model sustainability”. These keywords must have been present in the abstract, in the title and in the paper’s keywords. Only English papers published between 2013 and 2019 were been included. After excluding duplicities, we selected only papers that we considered relevant on the base of two criteria: the journal in which they were published and the number of citation. For obvious reasons this last criterion was not considered for the most recently published papers (papers published from 2017 to 2019).

This search generated scientific paper on general literature review (e.g. Boons and Ludeke-Freund, 2013, Geissdoefer et al., 2018), on specific industries (e.g. Bidmon and Knab, 2018 - German energy sector), on value creation and value network (e.g. Bocken et al., 2014; Evans et al., 2017; Breuer et al., 2018) and on the main characteristics of business model (Bocken et al., 2014; Upward and Jones, 2015).

From this literature overview it emerged that the lack of unique vision about sustainable business model innovation is also reflected in the scarce number of empirical analyses about this specific topic.

#### - Case selection criteria and sample.

In this paper we used the multiple case study approach. Case studies are a useful way to look around the world using data from multiple sources: direct observations, interviews, and documents (Yin, 2009; Dawson, 2013). They can be employed to accomplish various goals: to provide description, to test existing assumptions or generate new theory (Eisenhardt, 1989).

The choice of this methodology depended on two advantages. The first benefit of the case study approach is the ability to explore and understand complex issues and phenomena; social sciences recognize this methodology to address societal and behavioural issues, difficult to be analysed through a quantitative approach. The second advantage, therefore, is that there are many factors working simultaneously and consequently, the identification of the overall vision is beneficial for research carried out in a holistic approach.

There is a close parallel between the business model innovation and the case study approach.

We selected firms that have a sustainable business model for definition: Italian benefit firms. We chosen the Italian firms because Italy is the first European Country to have legally formalized the firms for benefits.

We relied on data from AIDA (AIDA Bureau Van Dick, 2019), a database used in literature when examining private firm economic and financial information. We adopted as the search criterion the firm's name where one of the following abbreviations must be present: "sb", "s.b.", "società benefit", "benefit corporation".

Inactive (without income) and distressed firms (firm's liquidation phase) were excluded from the sample. The selected firms were compared with those present in the benefit firm's register (<http://www.societabenefit.net/elenco-delle-societa-benefit/>).

At the end, the sample is composed by around 120 firms. At the moment we are waiting the answer to the questionnaire to understand how many firms will be analysed.

- Data collection and survey design

First of all, we collected firm's data through secondary sources such as the firm's sustainable reports if it was present on corporate Internet web site or institutional web site ([www.corporateregister.com](http://www.corporateregister.com)) for some qualitative information (e.g. the areas of investment, the achievements).

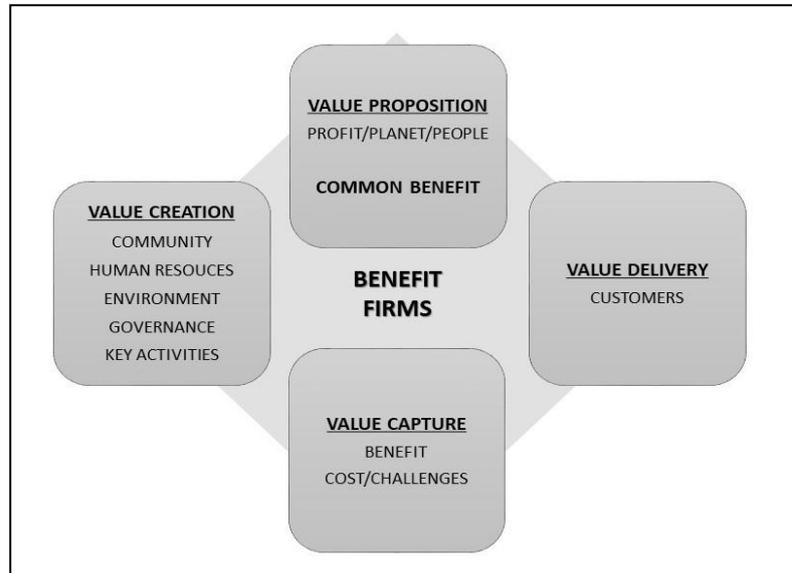
After this research, a questionnaire was sent via email to the benefit firms. In order to structure the questions, we taken in account:

- 1) the elements of the business model proposed by Alex Osterwalder in the business model canvas (Osterwalder and Pigneur, 2010). The business model building blocks (Osterwalder and Pigneur, 2010) are: value proposition, customers, relationship, channels, key resources, key activities, key partners, cost and revenues.
- 2) The framework proposed by Richardson (2008) that reflects the logic of strategic thinking about value. This framework consists of the value proposition, value creation and delivery system and value capture.
- 3) The four areas of impact assessed to obtain the business corporation certification (B Impact Assessment - B Lab): governance, community, environment, human resources (customers/workers).

From the intersection of these three criteria we obtained four macro areas to be analyzed through specific questions (Fig. 1):

- Value Proposition - Common Benefit
- Value Delivery : Customers
- Value Creation : Key activities - Governance - Environment - Community - Human resources
- Value Capture: Benefit and Challenges

Fig. 1 Analysis areas



Source: our elaboration (based on Osterwalder and Pigneur, 2010; Richardson, 2008)

**Findings.** This research wants to provide several data about every type of sustainable business model, from circular business model to PSS, from cleaner production to eco-design business model. Moreover, through the identification of four areas of interest it is possible to obtain complete information on any sustainable business model.

Through the study carried out on the benefit firms we expect to explain:

- how these firms implement their business model and
- how they manage the trade-off between economic results and social environmental performance.

The study should help highlight which priorities the benefit corporations show in practice.

Moreover, we want to prove that despite the achievement of a triple sustainable aims, the firm's growth is possible if every phase is well managed.

**Research limits.** *The main limitation of this research is related to the qualitative methodology used. The case study approach has been often criticized for its extreme subjectivity in interpreting collected data and evaluating the accuracy of the conclusions.*

*Furthermore, each case study has obvious limitations in terms of interpretation of the results. These outcomes can be adapted to explain a phenomenon, but limited to a specific context. Often the comparison between several case studies deriving from different contexts is not considered correct.*

*About the survey conducted, the role covered within the firms by the interviewees is different from one to another and this can influence the answers and therefore the interpretation of the results.*

*Moreover, the analysis does not dwell on the relationship between the firm's size and the actions taken or between the firm's industry and the business model implementation method. Indeed, the creation of a sustainable business model requires skills, abilities and resources. While the medium-large firms may not have problems, micro and small businesses often do not have the resources to implement all the planned actions and to proceed with correct monitoring (Depken and Zeman, 2018).*

*Finally, the focus of the study is on value creation, value capture and value delivery; does not analyse the impact of the process in terms of benefit's indicators cost's measures.*

*These limitations could be a starting point for future research.*

**Practical implications.** *The findings will provide important insight for manager and entrepreneurs about the shifting from traditional paradigms focused on profit maximization toward a sustainable business model. The phases implemented by the benefit firms to realize their sustainable business model can represent success cases to be replicated by every firm that wants to undertake a business model innovation.*

**Originality of the study.** *We acknowledge some research limits but we believe that our research about this emerging legal form, benefit firms, introduces a novelty both in the literature of stakeholder's theory and in the topic of business model innovation.*

*The research objective is interesting because these businesses are growing while the studies on their business model innovation and the understanding of their application remain in an embryonic state.*

*The originality of the research is represented by the choice to conduct empirical studies on benefit firms. These businesses incorporate all the elements of sustainability that the previous literature has analyzed in a fragmented way. Consequently, it was possible to obtain a generalizable knowledge on the implementation of sustainable business models.*

*Another original aspect consists on the three lines of knowledge (two theoretical and one practical) taken into account in order to identify the research areas to be investigated through the questionnaire.*

**Keywords:** *triple bottom line; stakeholders theory; sustainable business model; business model innovation, Italian benefit corporation.*

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# La rilevanza nell'azione di governo: il contributo dell'approccio sistemico vitale alla teoria degli stakeholder tra vitalità e sostenibilità

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**Obiettivi.** *La nozione di “sostenibilità” è stata introdotta negli studi d’impresa a seguito della definizione di sviluppo sostenibile coniata dalla Commissione Brundtland delle Nazioni Unite nel 1987, in base alla quale “lo sviluppo sostenibile è quello sviluppo che consente la soddisfazione dei bisogni economici, ambientali e sociali delle attuali generazioni senza compromettere lo sviluppo delle generazioni future”.*

*L’affermazione dello sviluppo sostenibile, insieme alla sempre crescente importanza della sostenibilità per le organizzazioni, ha introdotto una nuova tematica, emergente dall’evolvere dell’economia reale e del ruolo che le imprese sono andate assumendo nei sistemi economici. Si tratta, in sostanza, della necessità di coniugare funzione e ruolo dell’impresa (Golinelli, 2011), sulla base di un processo decisionale e di un’azione di governo attenti e sensibili a problematiche di rilevanza collettiva.*

*La considerazione delle istanze generalmente riconducibili alla “triple bottom line”, o modello delle tre P, ossia alla relazione esistente tra le tre componenti dell’efficienza economica (Profit), della tutela ecologica (Planet) e dell’equità sociale (People), proposta in dottrina da Elkington (1997), porta con sé la necessità di introdurre, negli studi manageriali e nei comportamenti d’impresa, la consapevolezza di un approccio olistico a carattere ecologico, economico e sociale (Meadows et al., 1993; Ostrom, 2009; Rees, 1990).*

*Ne consegue, pertanto, che è sostenibile quell’organizzazione, qualsiasi sia la sua tipologia, che non solo è stabile sotto il profilo economico, ma che minimizza i propri impatti ambientali negativi e agisce in conformità alle aspettative sociali, nella considerazione che occorre rivolgersi alle generazioni future con un atteggiamento di maggiore responsabilità in merito a quanto si è prodotto in termini non solo economici ma anche etici, ecologici e sociali. L’inclusione delle dimensioni citate, in sostanza, consente di ampliare il ruolo delle organizzazioni imprenditoriali, tradizionalmente legato a prerogative di natura economica, per includere elementi di natura sociale ed ambientale che contribuiscono alla loro legittimazione nei confronti di un ampio e vario numero di soggetti ed agiscono positivamente anche sulla creazione di valore.*

*La funzione dell’impresa, infatti, (consistente nella produzione di beni/servizi destinati allo scambio e sotto vincoli di economicità) è stata definita immutata ed immutabile (Golinelli, 2011) nonché aprioristicamente definita, essa, quindi, è legata alla sua dimensione strutturale ed alle scelte che si compiono relativamente alla definizione della sua struttura. Il ruolo è, invece, precisabile relativamente ad uno specifico contesto, cioè ad una specifica finalità, ciò significa che esso è definito nell’ambito del sistema, ovvero nel momento in cui si avviano i processi e le interazioni dinamiche.*

*Pertanto, se si assegnasse all’impresa una funzione sociale si rischierebbe di snaturarne la natura arrivando, persino, a condizionarne la finalità; in sostanza, si sosterebbe che le scelte relative alla struttura non devono più rispettare le necessarie condizioni di economicità, quanto requisiti ‘sociali’ non meglio definiti o definibili (Lai, 2004). Se, al contrario, si propende per l’attribuzione di un ruolo sociale alle imprese, non ci si pone «in antitesi con le finalità e le condizioni di funzionamento di tale istituto» (Fasiello, 2012). Il ruolo sociale attribuito all’impresa, quindi, che la qualifica come un attore della vita economica la cui attività ha influenze positive non solo in termini di profitto, ma principalmente in termini di valore creato e diffuso, necessita, però, dell’adozione, da parte del soggetto decisore, di un pensiero lungo (Barile et al., 2013, 2014, 2017; Saviano 2014, 2015, 2018; Iandolo e Caputo, 2018; Steurer et al, 2005). Quest’ultimo, in sostanza, consiste nell’utilizzare la sostenibilità, intesa come ampliamento degli elementi considerati dai soli vincoli economici alle dimensioni della socialità e della tutela e preservazione ambientale, come filosofia di governo, ovvero come insieme di istanze composite che orientano i processi decisionali dei soggetti decisori, nel perseguimento della finalità del sistema vitale impresa: la sopravvivenza.*

*Ferma restando, infatti, la finalità ultima dell’impresa sistema vitale di sopravvivere nel contesto di riferimento, laddove si riconosca alla stessa un ruolo anche sociale, la medesima finalità si andrebbe a comporre di una molteplicità di altri obiettivi, ampliati e composti, che includono anche istanze che richiamano i principi della responsabilità e della sostenibilità.*

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Pertanto, se, come detto, la sostenibilità “chiama le imprese a rispondere e di conseguenza riconsiderare il loro ruolo all'interno della società, ciò implica che le aziende devono riallineare tutte le loro istituzioni aziendali (mission, vision, articolazione delle policy, processo decisionale, reporting, relazioni, ecc.) a questo nuovo orientamento” (Van Marrewijk, 2003). Tuttavia, le modalità con le quali ciò potrebbe o dovrebbe avvenire non sono ancora definite in modo condiviso: alcuni autori si focalizzano sull'importanza della sostenibilità per la redditività delle imprese (Pfeffer, 2010), altri teorizzano la possibilità per le aziende di rinunciare alla loro sopravvivenza se non sono allineate con i principi di sostenibilità (Benn et al., 2014).

Resta, in ogni caso, la consapevolezza che la sostenibilità sia un elemento centrale da considerare nella definizione delle linee strategiche e delle prassi operative delle imprese e, di conseguenza, elemento prioritario per la loro sopravvivenza (Baccarani et al., 1993; Carroll e Buchholtz, 2014; Baccarani e Golinelli, 20011; Barile e Saviano, 2011, 2018; Polese et al., 2018).

In particolare, partendo dalla teoria degli stakeholder (Freeman, 1984), questo lavoro ha l'obiettivo di proporre il contributo dell'approccio sistemico vitale (aSv) alla inclusione della sostenibilità all'interno delle dinamiche relazionali, strategiche ed operative delle imprese e all'impatto che tale inclusione può avere sulla loro vitalità e sopravvivenza.

**Metodologia.** Il contributo è sviluppato sulle concettualizzazioni dell'approccio sistemico vitale (asv), inteso sia come metodologia di indagine dei fenomeni sociali, sia come metodologia per il governo delle organizzazioni. Dopo aver avviato una review della letteratura esistente sulla già consolidata teoria degli stakeholder, il lavoro, tramite la lente interpretativa dell'aSv, si è indirizzato verso la rilettura dei concetti di 'stakeholder' e 'sovrasistemi' in termini di rilevanza sistemico-vitale e con riferimento ai concetti di sostenibilità, vitalità e sopravvivenza (Golinelli, 2005, 2011; Barile, 2008, 2009). Il termine stakeholder, utilizzato per la prima volta con riferimento alla strategia d'impresa nel 1963, nell'ambito di una ricerca condotta dallo Stanford Research Institute (SRI), per indicare «quei gruppi senza il cui supporto l'organizzazione non potrebbe esistere», richiama di proposito quello di stockholder (azionista), proponendone un significativo ampliamento, per sottolineare che l'interesse dell'impresa non doveva esclusivamente rivolgersi alla proprietà, ma allargarsi a categorie più ampie di soggetti dagli interessi compositi. Tuttavia, il teorico che formalizzò la collegata teoria fu Freeman, nel 1984, con il suo testo “Strategic Management. A stakeholder approach”, nel quale egli, riprendendo la definizione data dallo SRI, li definisce come «qualsiasi gruppo o individuo che può influire o essere influenzato dal raggiungimento degli obiettivi di una organizzazione».

Il lavoro di Freeman, basato su quello di R. Ackoff, E. L. Trist, I. Mitroff e R. Mason e J. Emshoff, si propone come un nuovo framework concettuale utile ad analizzare i contesti competitivi degli anni '80, particolarmente turbolenti, e per i quali nessuno dei paradigmi teorici allora vigenti sembrava essere applicabile. Il dibattito seguito al lavoro di Freeman ha evidenziato la necessità di distinguere con esattezza quali soggetti possano essere inclusi tra gli stakeholder, distinguendo tra una definizione 'ampia' ed una 'ristretta'. In un precedente lavoro, Freeman e Reed (1983), nell'individuare “chi o cosa veramente conta” adottano una visione ampia, dando una definizione (simile a quella che poi darà Freeman nel citato testo del 1984) come di un individuo o gruppo che «può influire sul raggiungimento degli obiettivi di un'organizzazione oppure è influenzato dal raggiungimento degli obiettivi di un'organizzazione», includendo, quindi, sia coloro che influenzano l'attività dell'impresa che coloro che da essa sono influenzati, in un rapporto bidirezionale che esclude solo quelli che non hanno alcun tipo di potere o aspettativa nei confronti dell'attività dell'impresa. Ronald K. Mitchell, Bradley R. Agle e Donna J. Wood (1997) definiscono i criteri secondo i quali individuare gli stakeholder, identificando i loro interessi secondo i criteri di potere, legittimità e urgenza; tali attributi identificano le relazioni tra stakeholder e management e permettono di stabilire il grado di incidenza dei portatori di interesse sull'attività dell'impresa.

Mentre il potere e la legittimità possono essere considerati variabili indipendenti nelle relazioni fra stakeholder e manager e, pertanto, non sufficienti a comprendere effettivamente le interazioni fra tali due categorie di soggetti, l'urgenza è concetto più decisivo. Quest'ultima, infatti, si riferisce sia alla impellenza temporale (ovvero, il limite di risposta del management all'aspettativa o alla relazione ritenuto accettabile) sia alla criticità (il peso dell'interesse o della relazione); in sostanza, quindi, riguarda la tempestività dell'azione del management nei confronti di una aspettativa ritenuta importante dallo stakeholder. Tali attributi, comunque, non sono universalmente validi; al contrario, essi risentono degli elementi che influenzano il contesto specifico di riferimento (sia dell'impresa che dello stakeholder), pertanto possono variare nel tempo e anche per categorie di stakeholder.

La proposizione della teoria degli stakeholder ha generato un ampio dibattito in teoria, soprattutto relativamente alla natura che ad essa si debba attribuire (Donaldson e Davis, 1991; Donaldson e Preston, 1995); l'orientamento che qui si condivide è quello che guarda alla stessa come ispiratrice di pratiche manageriali che orientano le scelte di fondo del management. Tale approccio si concilia con la necessità, per l'impresa, di adottare comportamenti che siano in grado di contemplare interessi divergenti e conciliarli per garantire la sopravvivenza al sistema impresa.

La citata affermazione, ponendo al centro i soggetti interni all'impresa, richiama alcuni concetti fondamentali dell'approccio sistemico vitale; essa, infatti, evidenzia la necessità che il soggetto decisore debba ricercare la consonanza con tutte le entità presenti nel contesto di riferimento dell'impresa, poiché solo da essa, cioè dal contemporaneo soddisfacimento delle attese di tali gruppi compositi, deriverà la capacità dell'impresa stessa di sopravvivere. La sopravvivenza, pertanto, è la risultante del contemporaneo soddisfacimento delle istanze derivanti non soltanto dai soggetti più immediatamente coinvolti nella sua attività (tipicamente, gli azionisti ed il management), ma anche da quelle dei soggetti che rientrano nella sua struttura specifica (clienti, fornitori, dipendenti, istituzioni

finanziarie di riferimento) nonché di coloro che possono, seppur in maniera minore, ricevere da tale attività benefici o danni (comunità in generale, gruppi di interesse, media, ecc).

Questo approccio agli stakeholder che considera tutti i soggetti effettivamente e potenzialmente interessati da e alla attività dell'impresa si collega a quella di sovra sistema data dall'approccio sistemico vitale che definisce così qualsiasi entità che rientra nella struttura ampliata del sistema che si prende a riferimento e che può definirsi rilevante per il sistema stesso quando è in grado di influire sulla sua sopravvivenza.

Il concetto di sovra sistema rilevante, più ampio di quello di stakeholder, può meglio definirsi sulla base delle due dimensioni che definiscono la rilevanza, criticità ed influenza. La criticità riguarda il rapporto che si instaura con un soggetto e dipende dalla criticità stessa della risorsa in oggetto e dai benefici relazionali netti che dallo scambio deriveranno; l'influenza riguarda l'entità stessa con cui il sistema instaura un rapporto e dipende dal livello di vincoli e regole presenti e dalla capacità di controllo, feedback ed intervento.

**Risultati.** Le considerazioni su esposte permettono di operare un confronto tra i concetti di criticità ed influenza appena citati e quelli di potere, legittimità ed influenza sopra definiti; tale parallelismo permette di definire quali debbano essere i rapporti tra gli stakeholder e i decisori dell'impresa e come i comportamenti di questi ultimi debbano orientarsi, alla luce degli avanzamenti in materia di responsabilità e sostenibilità.

La legittimità, infatti, può essere riportata alla criticità, mentre l'urgenza all'influenza; il potere, invece, può essere considerato un effetto della rilevanza e, poiché è dimensione variabile nel tempo, pare più utile concentrare l'attenzione sulle prime due dimensioni. La legittimità è attributo dalle caratteristiche maggiormente strutturali, come la criticità, e riporta a dimensioni di appartenenza e coerenza; l'urgenza, invece, ha connotazione più marcatamente sistemica, è maggiormente connessa a variabilità temporale e specificità di contesto, pertanto più affine all'influenza. La rilevanza del sovra sistema legata a criticità/legittimità, quindi, sarà maggiormente legata alla consonanza, ossia alla capacità di creare dei legami di tipo strutturale con le entità che comporranno la struttura specifica, laddove, invece, la rilevanza legata all'influenza/urgenza sarà connessa alla risonanza, cioè alla capacità di mantenere relazioni e sviluppare interazioni consonanti con i singoli soggetti.

I sovra sistemi rilevanti nel senso della criticità, quindi, saranno ritenuti dall'impresa componenti rilevanti della struttura specifica, dal momento che essi sono determinanti per il raggiungimento degli obiettivi dell'impresa; i sovra sistemi rilevanti nel senso dell'influenza, invece, sono componenti della struttura ampliata dell'impresa, ma non della sua struttura specifica, cioè non possono influenzarla, tramite la rilevanza, appunto, del loro interesse.

Questi ultimi, pertanto, rimangono nella struttura ampliata come potenzialità relazionale, mentre i primi sono effettività relazionale, in quanto componenti specifiche del contesto dell'impresa. L'impresa, pertanto, nell'estrarre dall'ambiente generico il suo specifico contesto di riferimento, incontra una molteplicità di entità con cui poter entrare in contatto le quali costituiscono la struttura ampliata; l'impresa attiverà con una parte di esse delle relazioni basate sulla compatibilità strutturale, definita consonanza, e che possono evolversi positivamente (risonanza) o negativamente (dissonanza) e che qualificheranno un secondo insieme di soggetti che definiscono la struttura specifica.

Fig. 1: La matrice di rilevanza

		Influenza		
		Alta	Media	Bassa
Criticità	Bassa	Sostenibilità		
	Media		Sopravvivenza	
	Alta			Vitalità

Fonte: ns. elaborazione

Partendo dalle concettualizzazioni sviluppate in ambito aSv che sostanzialmente riconducono la sostenibilità alla ricerca di consonanza con i sovrasistemi di riferimento all'interno dello specifico contesto definito dall'organo di governo, è possibile ampliare ed approfondire il livello di analisi facendo riferimento alla matrice concettuale. In particolare, all'interno di questo framework, ci concentriamo sull'analisi dei due momenti nei quali si esplica l'azione cognitiva volontaria del soggetto decisore: il passaggio dalla struttura ampliata alla struttura specifica.

Se definiamo, infatti, la struttura ampliata come l'insieme delle possibilità relazionali attivabili dall'organo di governo sulla base di relazioni di consonanza e la struttura specifica come l'insieme delle attualità relazionali definite ed attivate dallo stesso organo di governo proprio in relazione alla preesistente consonanza e nell'ottica di sviluppo di risonanza, è possibile ricondurre i concetti di sostenibilità e vitalità ai due precedentemente introdotti. Pertanto, se la vitalità intesa come finalità ultima di qualsiasi sistema è da collocarsi nella struttura specifica, la sostenibilità è da ricondurre alla struttura ampliata. La vitalità, quindi, diventa la traduzione in atto (ovvero nella struttura specifica) di tutte le possibili configurazioni di sostenibilità presenti, in potenza, nella struttura ampliata. Essendo le configurazioni di sostenibilità presenti 'in potenza' nella struttura ampliata, alla sostenibilità si ricollega un atteggiamento proattivo delle organizzazioni, laddove alla vitalità si ricollega un atteggiamento che possiamo definire reattivo.

Da ciò deriva che la vitalità deve essere interpretata come la possibilità che l'Organo di governo ha di scegliere tra una varietà di "vie": alcune tra queste strade sono tese unicamente alla sopravvivenza del sistema e dei suoi sovrasistemi prossimi (consonanza con i sovrasistemi che l'Organo di governo avverte come rilevanti); altre vie, invece, sono dirette al raggiungimento della sostenibilità e tengono conto delle istanze di sopravvivenza dell'intero

contesto (consonanza con l'intero contesto, cioè con i sovrasistemi dei sovrasistemi). L'impresa, pertanto, può definirsi sostenibile in ottica sistemico-vitale se è in grado di far sopravvivere non solo il proprio contesto, ma anche il contesto di riferimento dei sovrasistemi che popolano il contesto stesso, in un'ottica ricorsiva che arriva ad includere tutte le prospettive considerate dalla sostenibilità (è il caso della definizione di sviluppo sostenibile data dal citato Rapporto Brundtland, in cui si afferma che è "sostenibile" lo sviluppo «che garantisce i bisogni delle generazioni attuali senza compromettere la possibilità che le generazioni future riescano a soddisfare i propri».)

**Limiti della ricerca.** Il principale limite della ricerca risiede nella mancanza di una verifica empirica di quanto esposto.

**Implicazioni pratiche.** Lo studio fornisce al management una diversa chiave di lettura delle relazioni ed interazioni che l'impresa sistema vitale deve instaurare con i sovrasistemi rilevanti, sia con riferimento ai due driver proposti di criticità ed influenza sia con riferimento all'effetto che le scelte hanno in termini di sopravvivenza, vitalità e sostenibilità dell'impresa. In questo senso, il contributo dell'aSv alla teoria degli stakeholder potrebbe rappresentare un valido supporto ai decisori d'impresa, orientando le loro azioni e decisioni di governo in relazione alle diverse soggettività di cui tener conto nei processi evolutivi delle imprese intese come sistemi vitali.

**Originalità del lavoro.** Sostenere che la sostenibilità implica un atteggiamento proattivo equivale a dire che il sistema vitale, il suo organo di governo, deve 'trasformare' potenza in atto, deve cioè scegliere ed attivare, tra tutte le relazioni possibili, quelle che generano il maggior livello di consonanza - che da diadica diventa consonanza di contesto, quindi con il maggior numero di sistemi presenti, appunto, nel contesto di riferimento. E, per far ciò, deve agire sulla ridondanza, ovvero sul "sovrabbondante, eccessivo o non necessario", sulla possibilità, cioè, di creare contesti, appunto, sostenibili. La ridondanza, se fisiologica, si ricollega al concetto di antifragilità (Taleb, 2012), ovvero alla capacità delle organizzazioni di 'tornare' nella struttura ampliata e ridefinire nuove strutture specifiche, laddove le precedenti configurazioni non fossero in grado di garantire la sopravvivenza del sistema.

L'originalità del lavoro, pertanto, consiste nel creare un collegamento tra il concetto di sostenibilità e quello di vitalità di una organizzazione intesa come sistema vitale. Un sistema, pertanto, può essere vitale senza essere sostenibile; questo consente al sistema di sopravvivere nel breve periodo. Nel lungo periodo, tuttavia, la sostenibilità arriva sostanzialmente a coincidere con la vitalità e, nella ricerca di consonanza, che diventa, come detto, consonanza di contesto, il sistema vitale deve essere sostenibile. Se, pertanto, sostenibilità intesa come garanzia di vitalità nel lungo periodo è creazione di contesti ed è connessa alla capacità di agire sulla consonanza di contesto, è necessario specificare il concetto stesso di contesto e come esso si relaziona alla performance, ovvero al risultato del comportamento del sistema.

**Parole chiave:** sostenibilità; vitalità; sopravvivenza; approccio sistemico vitale; stakeholder; sovrasistemi

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# Il brand UNESCO e la sostenibilità nella percezione dei turisti: il caso di Urbino

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**Obiettivi.** La letteratura che indaga l'impatto dei siti UNESCO sul turismo sta aumentando, in parallelo con la crescita dei siti in possesso di questo riconoscimento a livello mondiale. Tuttavia, i risultati degli studi sono contraddittori. Alcuni sostengono infatti che i siti del Patrimonio Mondiale rappresentino un "magnete per i visitatori" (Fyall e Rakic, 2006) ed un veicolo per le destinazioni turistiche per conquistare un vantaggio competitivo sui territori concorrenti, favorendo maggiori tassi di occupazione delle camere delle strutture ricettive (ISNART, 2013), oltre che processi di destagionalizzazione della domanda. In più, da tale ricerca è stato notato che nei siti UNESCO<sup>1</sup> il 71% delle strutture ricettive prevede il booking online contro il 64% degli altri siti. Si ha, perciò, una maggiore diffusione delle tecnologie e relazioni avanzate con i clienti che testimoniano che il riconoscimento di Patrimonio dell'Umanità rafforza l'offerta turistica. Altri (Cellini, 2011), al contrario, sostengono che la crescita dei soggiorni turistici nei siti UNESCO potrebbe derivare da altri marchi attrattivi che possono camuffare le relazioni causali, sottolineando anche la moderata consapevolezza e conoscenza (King e Halpenny, 2014) dei visitatori del brand UNESCO e della qualifica del luogo visitato come Patrimonio dell'Umanità, con conseguente bassa influenza del riconoscimento UNESCO sui loro comportamenti di viaggio (Poria et al., 2011). In altri studi (Cuccia, Guccio, Rizzo, 2014) emerge addirittura una relazione negativa tra i siti UNESCO e le performance delle destinazioni turistiche, dovuta ad un eccesso di aspettative positive sia dal lato della domanda che dell'offerta turistica, generando delusioni. Il contrasto di opinioni circa l'impatto del brand UNESCO sulle performance delle destinazioni turistiche può dipendere da vari fattori (Yang et al., 2019), quali il periodo di ricerca (indagini più recenti potrebbero evidenziare relazioni positive per l'aumento della consapevolezza di tale brand), il livello di sviluppo del Paese (nei Paesi in via di sviluppo il riconoscimento UNESCO potrebbe attrarre maggiormente l'attenzione rispetto a quelli sviluppati), l'unità di analisi (gli effetti saranno più evidenti a livello locale del singolo Patrimonio e meno a livello regionale o nazionale), il tipo di turista (i turisti internazionali potrebbero essere più influenzati dal brand UNESCO durante il loro itinerario di viaggio) e il tipo di Patrimonio (i Patrimoni culturali potrebbero influenzare di più rispetto a quelli naturali che spesso sono molto più estesi, anche su più nazioni, e potrebbero risentire meno benefici).

Un ulteriore filone di studi dell'impatto dei siti UNESCO sul turismo prende in esame il tema della sostenibilità, introdotta nel 2015 con gli Obiettivi dell'Agenda 2030, riconoscendo che proteggere Patrimoni eccezionali rappresenta un contributo intrinseco al benessere umano per le generazioni presenti e future. Per questo l'UNESCO ha avviato un programma per la promozione del turismo sostenibile nei siti riconosciuti Patrimonio Mondiale basato sul dialogo e sulla cooperazione degli stakeholder e sulla gestione integrata di turismo e Patrimonio a livello di destinazione. Tuttavia, gli studi sulla percezione dei visitatori riguardo alla sostenibilità (ambientale, sociale, economica) di una città riconosciuta Patrimonio UNESCO sono scarsi.

Il concetto di sostenibilità nel turismo si fonda sul concetto più generale di sviluppo sostenibile inteso come sviluppo che implica un equilibrio tra le dimensioni economica, sociale e ambientale (Report Commissione Brundtland, 1987). Negli anni recenti politici, operatori e studiosi del turismo hanno compreso che il settore turistico deve diventare sostenibile per sopravvivere, specialmente se è fondamentale preservare il patrimonio naturale o culturale della destinazione turistica. Tuttavia, l'implementazione della sostenibilità da parte degli attori dell'offerta turistica è limitata in quanto essi ricercano principalmente i benefici (Butler, 1998). D'altra parte non tutti i turisti sono ambientalisti (Weaver, 2012). Di certo, diventa strategico comprendere i fattori della sostenibilità ritenuti più importanti per i turisti affinché i produttori del settore possano soddisfare i bisogni della domanda (Buhalis e Fletcher, 1995; Weaver, 2012).

Al riguardo, uno studio sulla percezione della sostenibilità di Bologna (una mass tourist destination) da parte di 289 turisti (150 stranieri e 139 italiani) ha messo in luce che per tutti i turisti i fattori più importanti della sostenibilità sociale sono arte e cultura, le vie del vino e l'utilizzo di prodotti locali tipici. Invece, i turisti italiani sono a differenza

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<sup>1</sup> www.unesco.org

degli stranieri molto più attenti alla sostenibilità ambientale, in particolare ai seguenti fattori: la raccolta differenziata, il risparmio energetico e di acqua e l'inquinamento atmosferico. Inoltre, i fattori da migliorare sono la pulizia e la sicurezza della città, l'accesso ai disabili, la tranquillità, aree trekking e piste ciclabili, biciclette per ospiti e l'assenza di barriere architettoniche. Poiché i turisti italiani sono più legati alla città e propensi a ritornare sono anche più attenti alla sostenibilità ambientale mentre gli stranieri sono meno legati alla destinazione e possono cambiare e cercare altrove quando un luogo di vacanza non soddisfa le loro esigenze (Sörensson e Frierichs, 2013).

Tuttavia, vi sono ancora poche ricerche che definiscono le scale per misurare la sostenibilità nel turismo (Zhang et al., 2017).

Focalizzandoci su Urbino, la città d'arte oggetto di questo studio dichiarata nel 1998 Patrimonio dell'Umanità, precedenti ricerche hanno messo in evidenza che il brand UNESCO non rappresenta un elemento fortemente associato alla cittadina feltresca né per i residenti (Conti e Pencarelli, 2017) né per i turisti (Conti et al., 2016). In particolare, la ricerca condotta su 320 residenti (Conti e Pencarelli, 2017) ha messo in luce che (domanda chiusa multiple choice) solo il 10% dei rispondenti è fiero del fatto che Urbino abbia ottenuto il riconoscimento UNESCO, mentre in prevalenza gli urbinati intervistati sono orgogliosi di Palazzo Ducale, la principale attrattiva culturale (46%), dell'arte e della cultura (31%), del paesaggio (28%) e del Rinascimento urbinato (25%) ovvero di elementi per i quali Urbino è riconosciuto sito UNESCO. Similmente, la ricerca condotta su 300 turisti (Conti et al., 2016) ha evidenziato che le principali parole associate ad Urbino (domanda aperta) sono Palazzo Ducale (14%), arte, cultura e storia (24%) e a seguire elementi più specifici legati all'arte, alla cultura e alla storia come Raffaello (7%), il Duca Federico (7%), il Rinascimento (5%), l'architettura (4%). Solo 4 turisti hanno esplicitamente associato la cittadina al brand UNESCO.

Inoltre, sebbene nei questionari delle suddette ricerche non si facesse esplicito riferimento al tema della sostenibilità, sia i turisti che gli urbinati apprezzano le dimensioni della sostenibilità sociale ed ambientale di Urbino. Nello specifico, i turisti apprezzano della propria esperienza di visita oltre alle bellezze storico-artistiche e architettoniche della città d'arte aspetti quali l'armonia, la tranquillità, la pulizia, il paesaggio circostante incontaminato, l'assenza di traffico, l'autenticità (sostenibilità ambientale), e aspetti come la qualità della vita, la buona gastronomia, la vivacità sociale e culturale grazie alla presenza di studenti universitari, i rapporti con i residenti (sostenibilità sociale).

Infatti, da una elaborazione dei dati relativi al suddetto studio sui turisti (Conti, Forlani, Pencarelli, 2018) è emerso che gli elementi che maggiormente impattano, qualificano e rendono memorabile la customer experience dei turisti sono proprio le dimensioni esperienziali connesse, da un lato, alla bellezza storico-artistica, architettonica, ovvero alla dimensione estetica (Pine e Gilmore, 1999) e, dall'altro, agli elementi della sostenibilità sociale e ambientale sopra evidenziati, piuttosto che la qualità dei servizi (ristorazione, accoglienza, ecc.). Questi ultimi vengono percepiti come elementi necessari, ma non in grado di migliorare significativamente l'esperienza di visita. Taluni servizi vengono giudicati scarsi (come il trasporto pubblico e i parcheggi) e ciò può contribuire a peggiorare la tourist experience.

Del resto elementi come, da un lato, la pulizia e la buona conservazione e, dall'altro, la tranquillità e l'atmosfera piacevole che si respira, emergono anche negli studi più specifici sui visitatori di Palazzo Ducale (Fonte: Osservatorio sui visitatori di Palazzo Ducale).

Questi risultati sono coerenti con ciò che ha messo in luce lo studio sugli urbinati (Conti e Pencarelli, 2017) ovvero che essi apprezzano della propria città, anche se in misura inferiore rispetto alle bellezze artistiche, il benessere connesso al cibo, al vino e alla ristorazione, la vita sociale (sostenibilità sociale) e il paesaggio naturale (sostenibilità ambientale).

Obiettivo del presente studio è quello di contribuire a colmare la lacuna nella letteratura sulla percezione del brand UNESCO e della sostenibilità di un sito UNESCO da parte dei turisti. In particolare, gli obiettivi dello studio sono: individuare 1) il grado di conoscenza del brand UNESCO; 2) il suo eventuale impatto sulle scelte di viaggio dei turisti; valutare 3) il livello di attenzione della città di Urbino ai temi della sostenibilità, nella percezione del visitatore.

**Metodologia.** Per perseguire gli obiettivi della ricerca è stato somministrato un questionario a 100 visitatori del centro storico di Urbino nei mesi di gennaio e febbraio 2019, attraverso l'intervista diretta (Molteni e Troilo, 2012). In particolare, le interviste sono state effettuate prevalentemente nei pressi del Palazzo Ducale di Urbino, la principale attrazione culturale della città, e presso le strutture alberghiere. Il questionario è stato somministrato in lingua italiana ed inglese. Il questionario strutturato utilizzato per l'intervista è finalizzato a raccogliere risposte in merito a: le caratteristiche dei turisti, la loro conoscenza dell'UNESCO, il grado di influenza del brand UNESCO nella scelta di una destinazione, la conoscenza del riconoscimento di Urbino quale sito UNESCO, i criteri culturali per l'iscrizione di Urbino nella Lista del Patrimonio Mondiale secondo gli intervistati, il grado di influenza del brand UNESCO su Urbino, il canale informativo attraverso cui i turisti hanno appreso l'associazione Urbino/UNESCO, gli effetti dell'UNESCO su Urbino e la percezione della sostenibilità della città, nelle tre declinazioni sostenibilità ambientale, sociale ed economica.

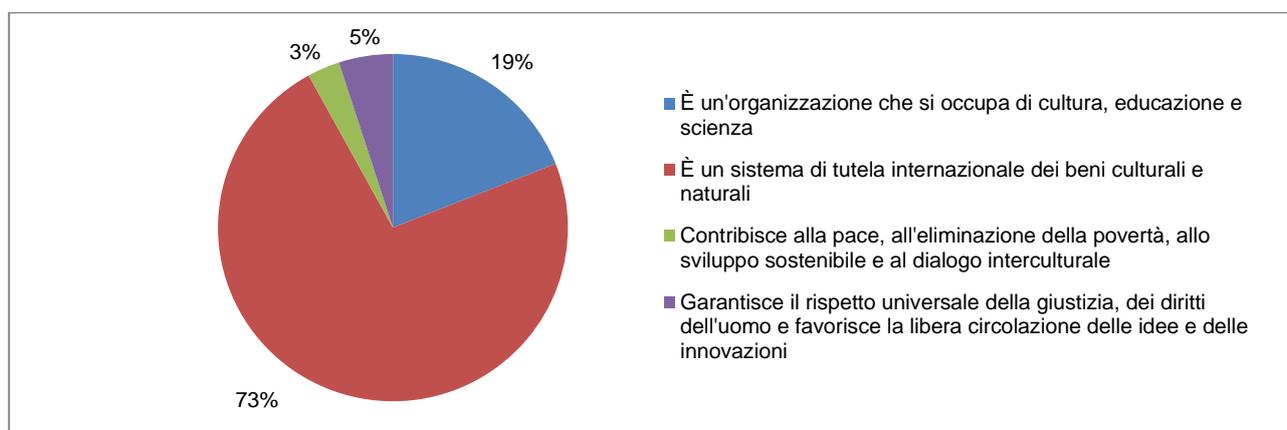
**Risultati.** Il profilo del turista intervistato emerge dalla tabella 1.

Tab. 1: Caratteristiche degli intervistati

Sesso	F (54%) M (46%)
Età	Under 20 (5%) 21-40 (47%) 41-60 (29%) 61-80 (18%) Over 80 (1%)
Provenienza	Italia (93%) Estero (7%)
Titolo di studio	Licenza media (7%) Diploma scuola superiore (35%) Laurea/post laurea (58%)
Professione	Impiegato (23%) Libero professionista (22%) Studente/ricercatore (22%) Pensionato (11%) Insegnante/docente universitario (7%) Operaio (4%) Imprenditore (3%) Casalinga (3%) Commerciante (2%) Artigiano (2%) Disoccupato (1%)

Diversamente da quanto evidenziato da precedenti indagini condotte sui turisti che visitano i siti UNESCO (Poria, Reichel, Cohen, 2011; King, Halpenny, 2014), dal presente studio risulta che i visitatori di Urbino conoscono le finalità prioritarie dell'UNESCO (Organizzazione delle Nazioni Unite per l'Educazione, la Scienza e la Cultura). Infatti, dall'analisi emerge che (fig. 1) il 73% degli intervistati qualifica tale organizzazione come un sistema di tutela internazionale dei beni culturali e naturali e il 19% dei visitatori ne riconosce altresì le sue funzioni legate all'educazione e alla scienza.

Fig. 1: Definizione dell'UNESCO secondo i rispondenti

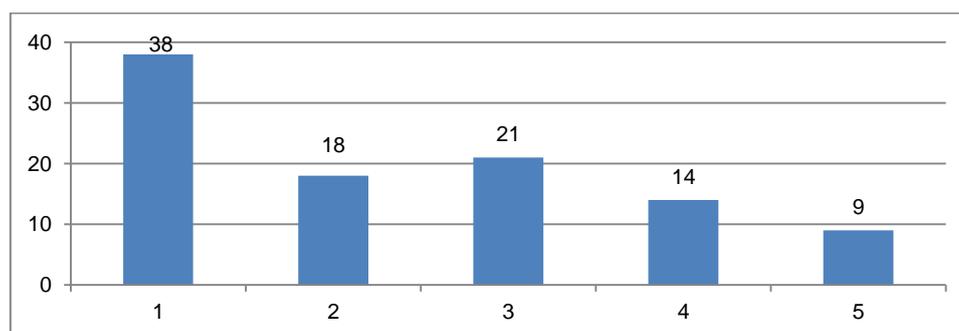


Fonte: elaborazione nostri dati

Inoltre, gran parte dei turisti (il 90%) riconosce il logo dell'UNESCO, mentre solo il 23% lo sa collegare anche a quello del Patrimonio Mondiale, sebbene esso sia sempre affiancato al primo in tutti i siti riconosciuti Patrimoni dell'Umanità. Tuttavia, solo il 55% dei rispondenti sa che l'UNESCO tutela anche alcuni importanti Patrimoni immateriali, oltre a quelli materiali; peraltro, circa la metà degli intervistati non è in grado di indicare un esempio di Patrimonio immateriale tutelato. Tra i Patrimoni materiali, invece, quasi la totalità degli intervistati (92%) ne ha saputo citare almeno uno; va segnalato al riguardo che, dopo Urbino, il sito più nominato è stato Matera, probabilmente a causa del recente riconoscimento di capitale europea della cultura del 2019. Infine lo studio rivela che solo il 36% del campione è consapevole che l'UNESCO contribuisce anche allo sviluppo sostenibile di un sito.

Con riferimento all'influenza del brand UNESCO nella scelta di visitare un luogo, adottando una scala di Likert da 1 a 5 in cui il minimo significa "per niente" e il massimo "molto", l'indagine ha messo in luce come tale influenza sia piuttosto bassa, in quanto ben il 38% degli intervistati ha risposto 1 ed i restanti intervistati hanno indicato valori distribuiti piuttosto equamente su tutta la scala (fig. 2).

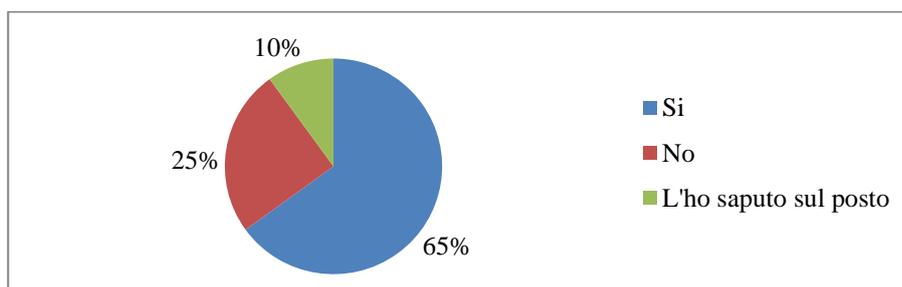
Fig. 2: Grado di influenza del brand UNESCO nella scelta di visitare un luogo



Fonte: elaborazione nostri dati

Riguardo alle domande specifiche su Urbino, lo studio indica che il 65% dei rispondenti (fig. 3) sapeva, prima di visitare la città, che il suo centro storico fosse stato inserito nella Lista del Patrimonio Mondiale.

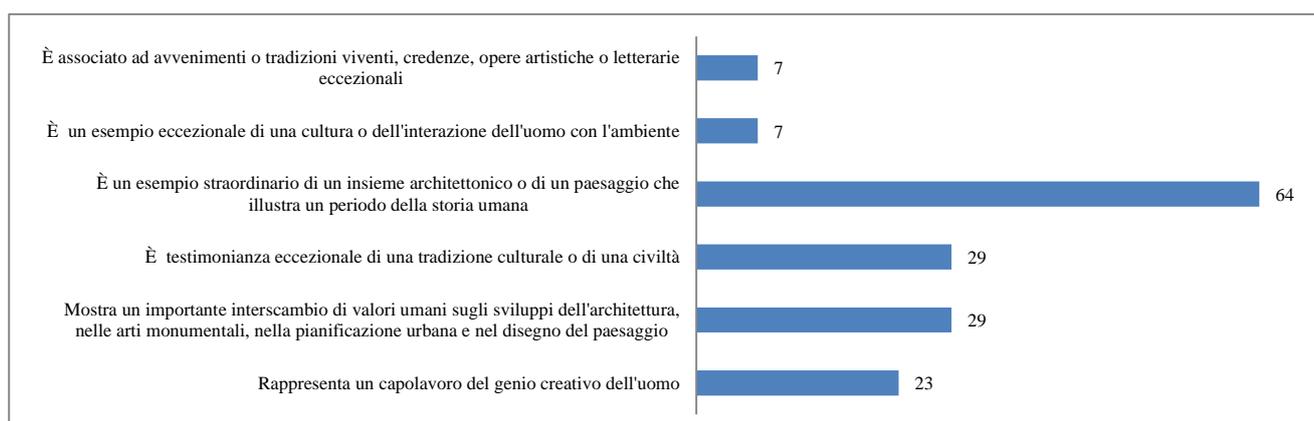
Fig. 3: Conoscenza del riconoscimento di Urbino come sito UNESCO



Fonte: elaborazione nostri dati

Un sito, per poter rientrare tra i Patrimoni dell'Umanità, deve soddisfare almeno uno dei dieci criteri segnalati nelle Linee Guida per l'iscrizione alla Lista del Patrimonio Mondiale e Urbino è stato inserito perché risponde al secondo e al quarto criterio. Per indagare ulteriormente il grado di conoscenza dei turisti del legame Urbino/UNESCO, è stato chiesto loro quali, tra i primi sei criteri culturali (escludendo gli altri quattro di carattere naturale), rappresentassero meglio il centro storico della città. È emerso che la maggior parte degli intervistati (64, per un totale del 40%) ha indicato il quarto criterio, mentre il secondo fattore ha ricevuto solo il 18% delle risposte (fig. 4). Questi risultati potrebbero dipendere dalla mancanza di conoscenza o dalla scarsa semplicità di associazione dei criteri alla città.

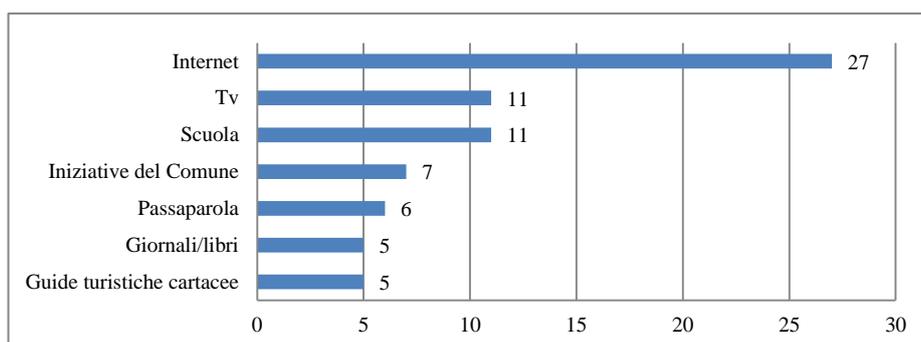
Fig. 4: Criteri culturali per l'iscrizione di Urbino nella Lista del Patrimonio Mondiale secondo gli intervistati (possibili più risposte)



Fonte: elaborazione nostri dati

L'associazione tra Urbino e UNESCO è avvenuta grazie soprattutto alla rete internet (fig. 5), ove i visitatori sono venuti a conoscenza del riconoscimento della città come Patrimonio dell'Umanità e probabilmente ciò potrebbe aver rafforzato l'idea di effettuare la visita alla città.

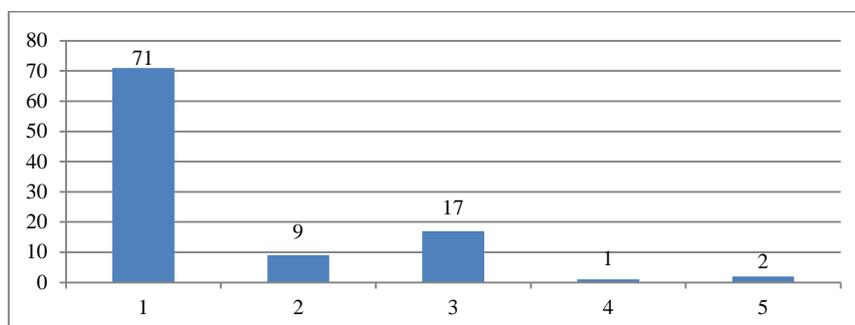
Fig. 5: Canale informativo attraverso cui i turisti hanno appreso l'associazione Urbino/UNESCO (possibili più risposte)



Fonte: elaborazione nostri dati

Tuttavia, di fronte alla domanda posta per comprendere il grado di influenza effettivo del brand UNESCO sulla scelta di Urbino come destinazione di vacanza, il 71% dei rispondenti ha indicato che, nella scelta di visitare la città, la qualifica di Patrimonio dell'Umanità è stata "di nessuna importanza" (fig. 6). Se, quindi, in generale, l'influenza del brand UNESCO sulla scelta di un luogo per il turista è piuttosto bassa e con valori distribuiti in modo più o meno equo sulla scala (fig. 2), nel caso di Urbino prevalgono nettamente i giudizi sul valore minimo.

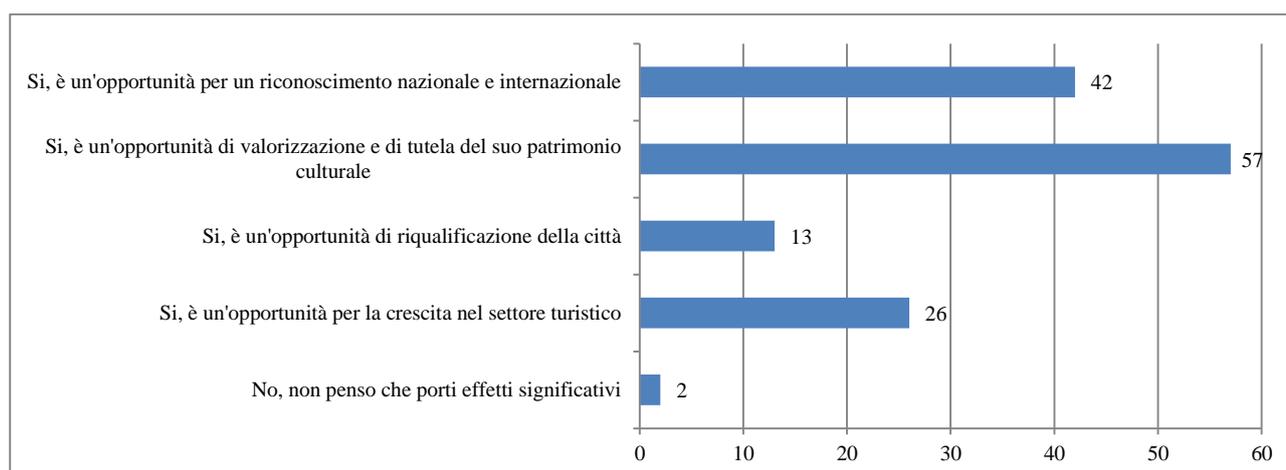
Fig. 6: Grado di influenza del marchio UNESCO su Urbino



Fonte: elaborazione nostri dati

L'indagine mostra, tuttavia, che il 43% dei visitatori ritiene che l'iscrizione di Urbino come sito UNESCO rappresenti un'opportunità per tutelare e valorizzare il patrimonio culturale (62 intervistati), mentre per il 18% essa rappresenta anche un'opportunità per la crescita nel settore turistico (26 intervistati).

Fig. 7: Effetti dell'UNESCO su Urbino (possibili più risposte)



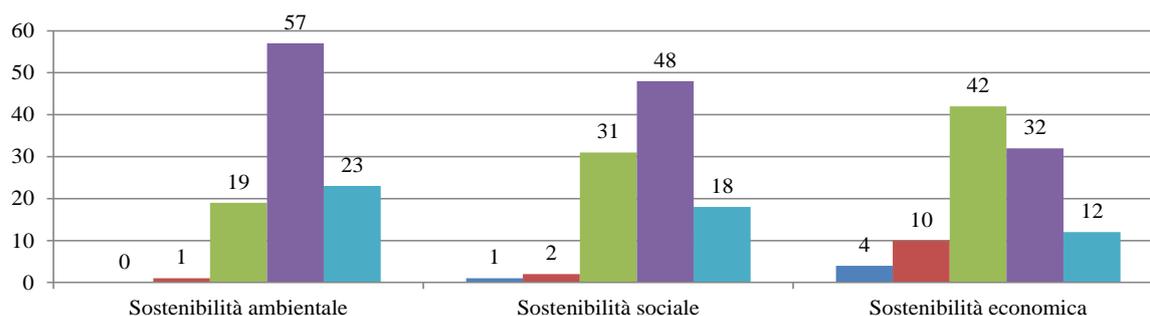
Fonte: elaborazione nostri dati

Passando ad analizzare la percezione della sostenibilità intesa in termini ambientali, sociali ed economici (fig. 8) va precisato che sono state formulate delle definizioni a partire dal lavoro di Morelli, 2003. In particolare, la sostenibilità ambientale è stata declinata tenendo conto di fattori come l'aria, l'acqua, i rifiuti, il rumore, l'odore, l'inquinamento, il clima, il paesaggio e il patrimonio culturale e naturale. In relazione a questi aspetti, su una scala valutativa da 1 a 5, l'80% dei rispondenti ha attribuito punteggi tra quattro e cinque, riconoscendo come il centro storico della città sia immerso in uno splendido ed incontaminato contesto paesaggistico, oggi ancora molto simile a quello che risale all'epoca di realizzazione del Palazzo Ducale da parte dei Montefeltro.

La sostenibilità sociale è stata declinata ricorrendo alle variabili qualità della vita, benessere, rapporti sociali e criminalità. Il 66% dei rispondenti ha attribuito punteggi elevati (4 e 5) a questi fattori, percependo quindi la città come un luogo bello da vivere, ove tranquillità e coesione sociale si fondono armonicamente in un contesto urbano ricco di servizi che non conosce fenomeni di criminalità, in grado di generare benessere territoriale.

Valori più bassi sono stati invece attribuiti dai turisti alla sostenibilità economica, al cui interno sono stati considerati: le attività turistiche, le altre attività economiche commerciali e i prezzi. Questa percezione meno positiva della dimensione economica della sostenibilità deriva probabilmente dalla scarsità di offerta commerciale e di servizi ristorativi, collegata a prezzi ritenuti alti, come si riscontra in molti centri storici e città d'arte.

Fig. 8: Percezione della sostenibilità di Urbino



Fonte: elaborazione nostri dati

**Limiti della ricerca.** L'indagine esplorativa, i cui risultati non sono generalizzabili, è stata svolta su un campione di convenienza di 100 visitatori di una città UNESCO e per un periodo dell'anno circoscritto (gennaio e febbraio). Pertanto, la ricerca andrebbe sviluppata ampliando il campione e allargando il periodo dell'indagine a tutto l'arco dell'anno per ottenere risultati più rilevanti. Inoltre, è stata analizzata solo una città UNESCO anche sede universitaria facendo ridurre in questo modo l'influenza del brand UNESCO sulla scelta di visita di Urbino. Pertanto, andrebbero analizzate diverse città d'arte siti UNESCO.

Infine, taluni rispondenti erano appena arrivati in città per cui la loro valutazione su Urbino è parziale. Per ovviare a questo limite le interviste ai turisti andrebbero effettuate nelle strutture alberghiere in fase di check out.

Nonostante i limiti, lo studio ha fornito indicazioni utili per rispondere alle domande di ricerca e per contribuire a progettare le ricerche future, finalizzate a definire scale per valutare la percezione del brand UNESCO e misurare la sostenibilità declinata nelle tre dimensioni ambientale, sociale ed economica. Ad oggi vi sono poche ricerche che hanno creato scale per misurare la sostenibilità nel turismo (Zhang et al., 2017).

**Implicazioni pratiche.** I risultati dello studio hanno messo in luce che i turisti spesso hanno una visione incompleta del brand UNESCO e dei Patrimoni dell'Umanità e soprattutto, nel caso da noi approfondito, che il brand UNESCO influenza marginalmente la scelta di visitare Urbino.

Se si considera che nelle città UNESCO di norma i flussi della domanda turistica sono positivi e migliori rispetto alle altre destinazioni, come emerso anche dalla ricerca ISNART del 2013, che rilevava nel periodo 2011-2013 un tasso di occupazione mensile delle strutture ricettive localizzate nei luoghi Patrimonio UNESCO quasi sempre maggiore rispetto a quelle di altre località turistiche, occorre chiedersi come mai ciò non si verifichi a Urbino, ove arrivi e presenze turistiche sono aumentate solo subito dopo il riconoscimento del centro storico come Patrimonio Mondiale, in particolare dal 1998 al 2001. Questo potrebbe essere dovuto alla maggiore comunicazione effettuata dagli organi di governo della città nel momento dell'iscrizione del sito di Urbino nella Lista del Patrimonio Mondiale. Comunicazione che probabilmente, come accade dopo qualche anno in molti siti, ha affievolito i suoi effetti sull'attenzione mediatica da parte del pubblico e quindi anche un importante riconoscimento internazionale come UNESCO rischia di passare in secondo piano. Il caso di Matera, capitale europea della cultura del 2019, è emblematico e non a caso è risultato il sito maggiormente citato e associato all'UNESCO dagli intervistati, oltre Urbino. Se si tiene conto di questi aspetti, emergono immediatamente alcune implicazioni manageriali. In primo luogo la necessità di sviluppare adeguate strategie di destination marketing (Pencarelli e Forlani, 2016; Martini, 2015) e una forte coesione tra i vari attori pubblici e privati in modo da rivitalizzare il brand UNESCO e nel contempo adottare politiche di offerta volte ad allestire proposte di valore a forte contenuto culturale ai potenziali turisti, sia italiani, sia soprattutto stranieri. Ad esempio, potrebbe essere utile unire in rete tutte le città UNESCO italiane o quelle con caratteristiche simili, accomunate da obiettivi convergenti, così come ha fatto Urbino con Firenze costituendo nel 2013 un partenariato per attuare il progetto "Firenze per bene" e "Urbino per bene" finalizzato ad accrescere la consapevolezza giovanile, il decoro urbano e la valorizzazione del patrimonio culturale ed ambientale dei siti UNESCO da parte delle comunità locali. In aggiunta a ciò si potrebbe anche ricercare la collaborazione e l'intervento di tour operator incoming per allestire pacchetti turistici integrati grazie ai quali i turisti potrebbero trovare la motivazione del viaggio nello scoprire i diversi siti italiani riconosciuti dall'UNESCO Patrimonio dell'Umanità.

Un'ulteriore sfida per i siti UNESCO può essere quella di accrescere la conoscenza da parte dei turisti mondiali dei Patrimoni UNESCO investendo in comunicazione mediante approcci collaborativi, coinvolgendo stakeholder privati e pubblici, comprese le istituzioni scolastiche ed universitarie, alla base della sensibilizzazione verso il patrimonio culturale del pianeta, anche avvalendosi delle nuove tecnologie digitali (Trunfio, Della Lucia, 2019). Nel caso di Urbino, in particolare, parallelamente a processi di comunicazione digitale (web e social media marketing), possono rivelarsi utili misure anche di tipo più tradizionale, quali il ricorso ad approcci di product placement collegandosi alla Film Commission regionale, ovvero collaborando con emittenti televisive e radiofoniche nazionali ed estere, ovvero agendo sulla carta stampata, sulla segnaletica stradale e su altri canali di comunicazione.

Inoltre, i siti UNESCO sono chiamati ad accrescere l'attenzione alla sostenibilità e quindi le azioni di destination management devono essere maggiormente orientate alla tutela e conservazione del patrimonio materiale ed immateriale, ma anche alla sua valorizzazione (Conti, 2014; Pencarelli et al., 2015; 2017) in ottica sostenibile.

L'indagine ha messo in luce, confermando le ricerche precedenti sulla città (Conti et al., 2016; Conti, Forlani, Pencarelli, 2018), che i turisti attribuiscono una elevata importanza alla sostenibilità ambientale e sociale, suggerendo anche i fattori specifici legati alla sostenibilità ambientale (arte, aria, rumore, paesaggio circostante, ecc.) e sociale (benessere, qualità della vita e delle relazioni sociali, buon cibo e buona ristorazione, ecc.) a cui il management della città dovrebbe porre attenzione.

Ormai numerosi studi indicano come la cultura debba essere gestita in una prospettiva esperienziale (Casarin, 2009; Conti, 2014; Pencarelli et al., 2015; 2017; tra gli altri); pertanto, in tale prospettiva la cittadina feltresca è chiamata da un lato a conservare il patrimonio culturale, incluso il paesaggio circostante, a mantenere la città pulita e a preservare la tranquillità per soddisfare i requisiti dei turisti in termini di sostenibilità ambientale e sociale, e dall'altro a valorizzare il patrimonio culturale e i fattori della sostenibilità ritenuti importanti dai turisti, inglobandoli in un'offerta esperienziale che va continuamente innovata e adeguatamente comunicata (Casarin, 2009; Conti, 2014; Pencarelli et al., 2015; 2017).

Attualmente, se Urbino può considerarsi una buona pratica di conservazione e valorizzazione del patrimonio materiale, come nel caso della Galleria Nazionale delle Marche e del Palazzo Ducale (Pencarelli et al., 2015; 2017), non altrettanto può dirsi circa la sostenibilità economica, messa a dura prova dal calo dei consumi e dalla stagnazione dei flussi turistici. Anche la sostenibilità sociale è a rischio, a causa del progressivo invecchiamento e calo della popolazione residente, specie nel centro storico, circostanza comune a molti piccoli Comuni delle aree interne che rischia di generare fenomeni di desertificazione urbana, con negativi impatti sulla fruizione dell'esperienza turistica da parte dei visitatori.

**Originalità del lavoro.** Lo studio analizza la percezione del brand UNESCO e della sostenibilità ambientale, sociale ed economica di una città sito UNESCO nella prospettiva dei turisti e non da parte dei residenti su cui si è focalizzata gran parte della letteratura. Lo studio esplorativo ha consentito di migliorare la comprensione delle esigenze/dei suggerimenti dei turisti in termini di percezione del ruolo brand UNESCO e della sostenibilità di una città d'arte UNESCO e di formulare suggerimenti utili per la pianificazione e la gestione di una destinazione attrattiva e sostenibile. Unitamente alle indicazioni fornite da studi precedenti l'indagine consente di impostare studi futuri più solidi metodologicamente.

**Parole chiave:** UNESCO; turismo culturale; sostenibilità

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# Euristiche imprenditoriali, interpretazione e reazioni alle performance d'impresa

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PASQUALE MASSIMO PICONE<sup>▲</sup>

**Obiettivi.** *L'obiettivo di questo lavoro è presentare un framework teorico-concettuale sul ruolo delle euristiche imprenditoriali nella definizione e nell'interpretazione delle performance d'impresa e delle scelte scaturenti da suddette interpretazioni.*

**Metodologia.** *Zahra e Newey (2009) rilevano che l'intersezione di conoscenze provenienti da diverse discipline dà luogo a un "forum per la creazione di teorie creative" (trad. nostra, pag. 1059). Con siffatto intento, la presente ricerca prende a prestito taluni concetti della psicologia cognitiva e li interseca con gli studi di imprenditorialità strategica.*

*L'integrazione interdisciplinare avviene con una duplice finalità. In primo luogo, si vogliono estendere le micro-fondazioni dell'imprenditorialità strategica (Felin, Foss e Ployhart, 2015; Minniti e Bygrave, 1999; Randolph-Seng, Mitchell, Vahidnia, Mitchell, Chen e Statzer, 2015; Zahra e Newey, 2009). Infatti, si chiariscono i legami causa-effetto tra l'attitudine al multitasking e le euristiche imprenditoriali e la definizione della performance-obiettivo, da una parte, e tra l'attitudine al multitasking e le euristiche imprenditoriali e l'interpretazione della performance stessa, dall'altra. Si rileva, inoltre, un ruolo di mediazione della scelta della performance-obiettivo nella relazione tra l'attitudine al multitasking e le euristiche imprenditoriali e le successive scelte imprenditoriali. In secondo luogo, come rilevano Zahra e Newey (2009), i costrutti importati da discipline diverse sono frequentemente delle vere e proprie "scintille" che accendono un dibattito all'intersezione tra due confini disciplinari. In tale prospettiva, si potranno identificare alcune domande di ricerca che emergono proprio grazie all'approccio interdisciplinare.*

*I costrutti provenienti dagli studi di psicologia cognitiva che sono utilizzati in questa ricerca sono l'attitudine al multitasking e le euristiche. In particolare, Fischer e Plessow (2015) osservano due estremi dell'attitudine multitasking:*

- (a) *un processo cognitivo seriale sulla base del quale l'imprenditore focalizzerà la propria attenzione su un aspetto della performance alla volta;*
- (b) *un processo cognitivo parallelo sulla base del quale l'imprenditore focalizzerà la propria attenzione simultaneamente su più aspetti della performance (Fischer e Dreisbach, 2015). Ad esempio, un imprenditore potrà considerare simultaneamente sia performance finanziarie interne, sia performance non finanziarie esterne. Chiaramente, il processo cognitivo parallelo potrà aver luogo per molteplici, ma non illimitati, aspetti della performance.*

*Le euristiche sono, invece, delle "scorciatoie" cognitive che l'imprenditore utilizza per prendere decisioni; esse assumono la forma di bias allorquando generano una sistematica deviazione dalle scelte ispirate ai principi di razionalità. In particolare, Barnes (1984) identifica cinque euristiche sottese ai processi decisionali d'impresa:*

- (a) *la tendenza a considerare maggiormente probabili eventi che sono facilmente immaginabili o associabili a un dato fenomeno (come quelli che si verificano frequentemente);*
- (b) *il "senno del poi", la conoscenza del verificarsi di un dato evento aumenta l'inevitabilità percepita dello stesso, pertanto, vi è la tendenza a considerare il verificarsi di un dato risultato/evento come prevedibile, anche prima della sua effettiva realizzazione;*
- (c) *la tendenza a sottovalutare l'importanza dell'ampiezza del set di informazioni considerate per valutare le cause dalle quali origina un dato evento;*
- (d) *la valutazione della correlazione e della causalità tra gli eventi, le aspettative pregresse del decisore circa l'esistenza di una relazione causale tra due variabili spinge tale soggetto a percepire l'esistenza di una correlazione tra le stesse (ovvero, che le sue conoscenze su una variabile rendano possibile predire l'altro);*

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(e) *la rappresentatività, la tendenza a considerare il risultato più evidente come essenzialmente rappresentativo del processo che lo ha generato, senza indagare l'affidabilità di tale rappresentazione e, pertanto, tralasciando la considerazione e l'integrazione di ulteriori elementi ad esso connessi.*

*Complessivamente, l'utilizzo delle euristiche, oltre a semplificare e accelerare i processi decisionali dell'imprenditore, tipicamente rendono tale soggetto "sicuro" delle valutazioni effettuate sulla loro base (Barnes, 1984). A titolo esemplificativo, si nota che tale sicurezza può assumere la forma di overconfidence (Barnes, 1984) e allorquando esplica effetti perniciosi di hubris (Dagnino, Minà e Picone, 2014; Picone, Dagnino e Minà, 2014).*

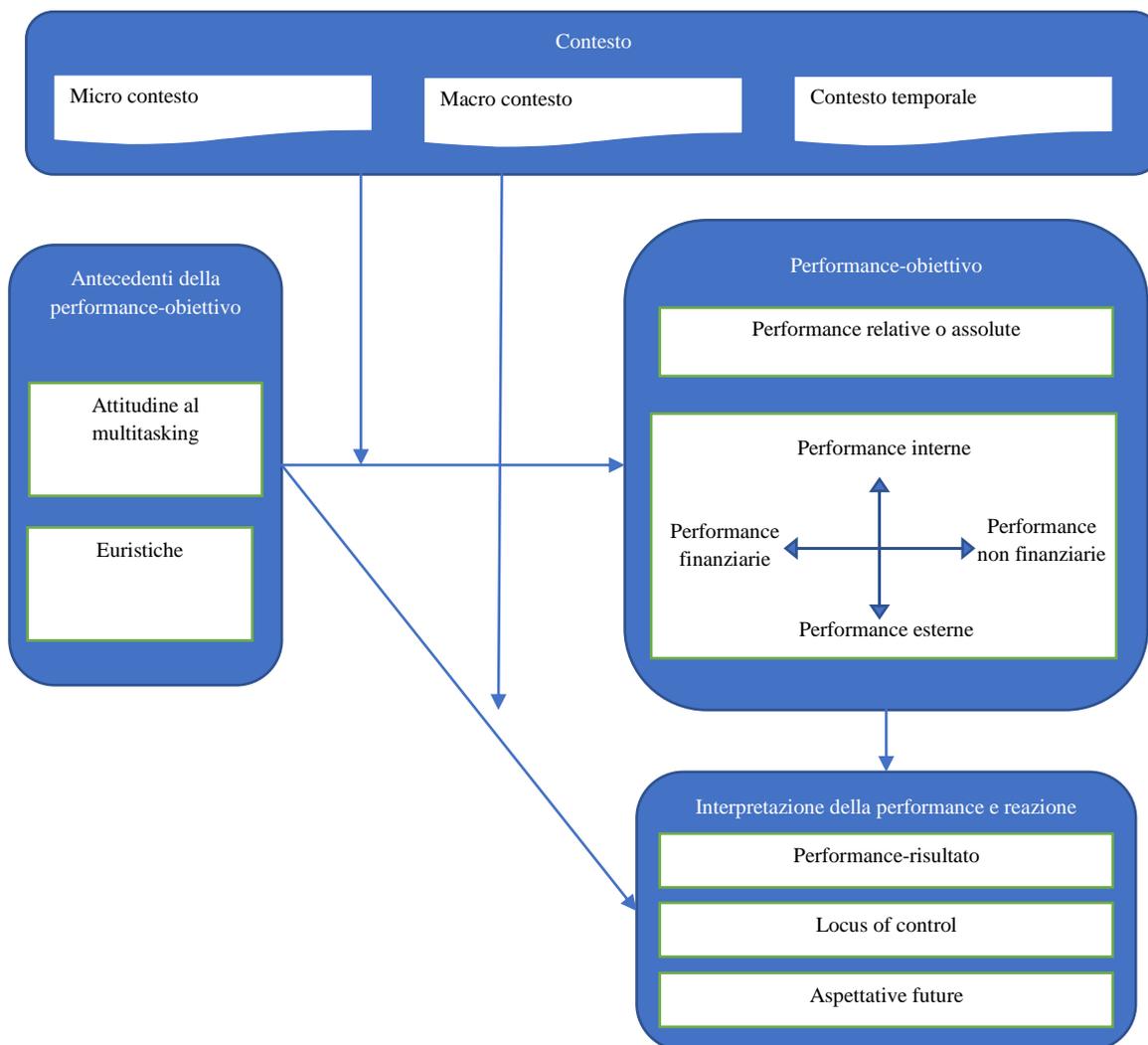
**Risultati.** *Lo scritto si muove dalla considerazione che le performance d'impresa sono un costrutto multidimensionale. Questa considerazione è ampiamente condivisa sia dalla dottrina economico-manageriale italiana (si consideri a titolo esemplificativo: Coda, 1984; Costabile e Cariola, 2011; Zollo, Minoja e Coda, 2018) sia dalla letteratura internazionale (si veda, Kotlar, De Massis, Wright e Frattini, 2018). Infatti, dal punto di vista della natura, la performance dell'impresa può essere finanziaria e non finanziaria (ad esempio, sociale o competitiva).*

*Dal punto di vista dello spettro degli stakeholder considerati, la performance dell'impresa può essere declinata in interna ed esterna (Kotlar et al., 2018).*

*Infine, dal punto di vista della misurazione, la performance può essere assoluta o relativa (rispetto al migliore competitor, alla media del settore, e così via) (Kotlar et al., 2018). Assumendo che la performance sia un costrutto multidimensionale, l'imprenditore sulla base della propria attitudine al multitasking e alle sue euristiche sceglierà su quali performance focalizzare la propria attenzione.*

*La figura 1 sintetizza le principali relazioni causa-effetto sul ruolo delle euristiche e dell'attitudine al multitasking nella definizione, nell'interpretazione e nella conseguente reazione alle performance d'impresa.*

Fig. 1: Un framework teorico-interpretativo sulle relazioni tra antecedenti, performance-obiettivo, interpretazione della performance e reazione



Fonte: Adattamento da Kotlar J., De Massis A., Wright M. Frattini F., (2018), "Organizational Goals: Antecedents, Formation Processes, and Implications for Firm Behavior and Performance", *International Journal of Management Reviews*, vol. 20, p. s5.

In primo luogo, si osserva una relazione causa-effetto tra l'attitudine al multitasking e la performance obiettivo. Verosimilmente, un imprenditore con una bassa propensione al multitasking preferirà concentrare i suoi sforzi su un numero limitato di performance-obiettivo.

In secondo luogo, si osserva una relazione causa-effetto tra le euristiche imprenditoriali e la performance obiettivo. Ad esempio, un imprenditore overconfident tendenzialmente attribuirà molta importanza alla performance non finanziaria esterna in quanto gli consentirà di avere una buona visibilità (Kroll, Toombs e Wright, 2000) e, soprattutto, presterà attenzione ad essere considerato "il migliore" e, quindi, ad una misurazione relativa della performance. Sulla base dell'interazione tra l'attitudine al multitasking e le euristiche imprenditoriali, l'imprenditore definirà le sue performance-obiettivo.

In terzo luogo, si osserva un ruolo di mediazione della scelta della performance-obiettivo nella relazione tra l'attitudine al multitasking e le euristiche imprenditoriali, l'interpretazione della performance e la reazione alla stessa. Tuttavia, non si tratta di una mediazione cd. pura poiché vi è comunque un influsso diretto dell'attitudine al multitasking e delle euristiche sulla interpretazione e reazione alle performance. Ad esempio, un imprenditore overconfident tenderà ad avere aspettative future eccessivamente positive e ad attribuire il successo della sua impresa a sé stesso.

All'interno della relazione tra l'attitudine al multitasking e le euristiche imprenditoriali, la performance obiettivo e l'interpretazione della performance stessa, si riconosce un ruolo di moderazione del contesto nell'ambito del quale l'imprenditore formula le sue scelte. In particolare, muovendosi da Kotlar et al. (2018), è possibile riconoscere tre livelli di analisi: (a) il micro-contesto; (b) il macro-contesto; (c) il contesto temporale. Il micro-contesto è rappresentato da elementi pertinenti all'impresa nella quale opera l'imprenditore quali, ad esempio, il grado di concentrazione proprietaria, la generazione di riferimento laddove si considerino imprese familiari, la quantità e la qualità della dotazione di risorse e di capacità a disposizione dell'impresa. Il macro-contesto, invece, è rappresentato dalle condizioni che caratterizzano l'ambiente ove l'impresa opera e include fattori quali, ad esempio, le dinamiche settoriali (legate anche alle condizioni di rischio o di incertezza che contraddistinguono il settore) e i processi di convergenza inter-settoriali, la partecipazione a network inter-organizzativi, la cultura e il contesto istituzionale. Infine, il contesto temporale racchiude le condizioni che attengono al ciclo di vita dell'impresa e del settore.

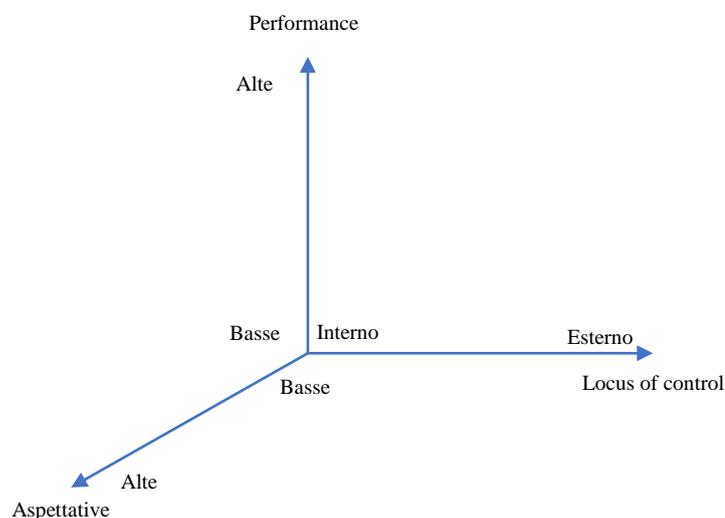
Infine, si mette in luce la relazione tra l'interpretazione della performance e le successive scelte imprenditoriali.

In particolare, si riconoscono tre fattori chiave che possono spiegare suddetta relazione:

- la valutazione positiva o negativa del raggiungimento della performance-obiettivo;
- il locus of control (interno vs esterno) dell'imprenditore nell'attribuire il successo/insuccesso nel raggiungimento della performance-obiettivo (Ajzen, 2002);
- le aspettative interne ed esterne all'impresa circa le performance future (cfr. Mishina, Dykes, Block, e Pollock, 2010).

Due esempi possono chiarire la nostra linea di ragionamento. Se l'imprenditore assume quale obiettivo la performance finanziaria e attribuisce il mancato raggiungimento di tale obiettivo alle condizioni esterne (un nuovo competitor, una situazione macro-economica negativa, e così via), ma riconosce che vi sono all'esterno dell'impresa alte aspettative circa la sua performance futura, potrà essere spinto a un eccesso di investimento nel medesimo business. Invero, sebbene un approccio razionale indurrebbe a considerare anche fattori interni all'insuccesso, l'attribuzione all'esterno del risultato dell'impresa fa sì che l'imprenditore ostinatamente porti avanti la sua formula imprenditoriale e aumenti gli investimenti per recuperare le performance passate negative e soddisfare le attese esterne. Parallelamente, se l'imprenditore assume quale obiettivo la performance finanziaria e attribuisce il mancato raggiungimento di tale obiettivo a condizioni interne alla sua formula imprenditoriale, pur riconoscendo che vi sono all'esterno dell'impresa basse aspettative circa la sua performance futura, potrà essere spinto ad avviare una strategia di exit.

Fig. 2: Una mappa sull'interpretazione della performance e le successive scelte imprenditoriali



Fonte: Elaborazione propria

**Limiti della ricerca.** *Il primo limite della ricerca, ancora in fieri, è rappresentato dalla natura teorico-concettuale dello studio. Tale limite fa emergere l'opportunità di nuovi approfondimenti tesi a corroborare empiricamente, in tutto o in parte, il framework proposto.*

*In secondo luogo, la ricerca si focalizza esclusivamente sul ruolo dell'imprenditore mettendo in luce che il contesto (micro, macro e temporale) impatta sulla relazione tra l'attitudine al multitasking e le euristiche imprenditoriali e la definizione della performance-obiettivo. Alla luce di questa intuizione, il contesto ove l'impresa opera caratterizza, almeno in parte, la performance-obiettivo che l'imprenditore si pone. Tuttavia, è rilevante altresì esplorare le interazioni fra l'attitudine al multitasking e le euristiche imprenditoriali e la formazione del contesto stesso.*

*In terzo luogo, come specifica del punto precedente, si rileva il ruolo cruciale delle imprese familiari nella definizione delle euristiche imprenditoriali. In tal senso, De Massis, Piccolo, Picone e Tang (2018) suggeriscono lo studio delle microfondazioni psicologiche delle imprese familiari evidenziando una sovrapposizione tra la vita familiare e lo sviluppo dell'impresa (Tagiuri e Davis, 1996) e la cosiddetta "ownership identity" (Arregle, Hitt, Sirmon e Very, 2007; Zahra, 2005)*

*Infine, il lavoro implicitamente assume come livello di analisi il singolo imprenditore. Tuttavia, gli studi di strategic entrepreneurship rilevano l'importanza del mind-set imprenditoriale anche nelle grandi imprese. Quindi, un'estensione della ricerca dovrebbe guardare a come si modifica il framework proposto in riferimento alle dinamiche tipiche delle grandi imprese.*

**Implicazioni pratiche.** *Lo scritto mette in luce le relazioni tra euristiche imprenditoriali, interpretazione delle performance e conseguenti reazioni. Pertanto, il lettore-imprenditore potrà acquisire una maggiore consapevolezza dei processi decisionali e verificare, in termini introspettivi, se le euristiche utilizzate rappresentino dei bias che possono, talora, mettere a repentaglio la sostenibilità delle loro scelte. In secondo luogo, i consulenti d'impresa potranno utilizzare il framework proposto per un'analisi preliminare dei processi decisionali e rilevare l'opportunità di proporre nuovi focus su performance-obiettivo, o confermare quelli esistenti, tenuto conto del profilo cognitivo dell'imprenditore.*

**Originalità del lavoro.** *Il lavoro collega due letterature che recentemente si sono confrontate sempre più intensamente nel dibattito internazionale. In effetti, la ricerca si inserisce nel solco degli studi di behavioral entrepreneurship (cfr. Das e Teng, 1997). Inoltre, facendo leva sul potenziale che sussiste nell'intersezione fra le due discipline (gli studi di imprenditorialità e la psicologia cognitiva), lo studio consente di mettere in luce il ruolo fondamentale svolto dall'attitudine imprenditoriale al multitasking e dalle euristiche imprenditoriali nella definizione delle nuove scelte imprenditoriali. In particolare, si rileva come il suddetto legame sia mediato dalla definizione delle performance-obiettivo.*

**Parole chiave:** *euristiche; bias; performance; performance-obiettivo*

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# Sustainability in the luxury industry: an exploratory analysis based on the Global Reporting Initiative (GRI) framework

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**Objectives.** *The following research aims at detecting the most accounted economic, environmental and social indicators in the 100 largest luxury goods companies in the world. The investigation has been carried out through a content analysis of GRI-based public sustainability reports published in 2017. Nowadays, companies have to deal with increasingly demanding stakeholders about how they manage their resources (Kull et al., 2016; Mena et al., 2019). Furthermore, stakeholders are demanding on maximum transparency, willingness to dialogue and sensitivity to principles such as ethics and responsible conduct (Fernandez-Feijoo et al., 2014). All these requests are particularly significant in the luxury segment, because these products possess a social-function attitudes to influence consumers' purchase intention (Bian and Forsythe, 2011). Luxury, in fact, has an "intrinsic sustainability" different from the mass market, carried out by two main characteristics: durability and craftsmanship. The first is the tendency of consumers to perceive luxury goods as an investment to maintain over time. Instead, craftsmanship considers the local handmade production of the products (Karaosman et al., 2018; Kapferer and Michaut Denizeau, 2013; Aiello and Donvito, 2006). Nueno and Quelch (1998) define luxury brands as "those whose ratio of functionality to price is low, while the ratio of intangible and situational utility to price is high" (p.62). Luxury companies have progressively responded to the stakeholder's requirements by producing, on a voluntary basis, different kind of reports (social report, social and environmental report, corporate social responsibility report, environmental report, sustainability report, etc.) and the adoption of these documents has grown over the years (KPMG, 2015). In particular, a 2015 KPMG research presented a radical change over time: in 1999, just 35% from G250 companies worldwide and 24% from 100 of selected organizations presented a Sustainability Report, while in 2015 the number respectively increased to 92% and 73%. Morhardt et al. (2002) have recognized 8 interpretations to explain this increase in adoption of sustainability reporting practices: (i) a more restrictive legislative approach and proactive cost reduction for future; (ii) compliance with environmental programs defined in the industry; (iii) drop of operative costs; (iv) more awareness with stakeholder; (v) increase the environmental perception of the firm; (vi); reporting about these topics can produce a competitive advantage in the market; (vii) need for the company to actively work on environmental management, and (viii) wisdom to adhere to societal norms and social responsibilities.*

*Despite this growing body of literature on the importance of sustainability effort in luxury industry (Li et al., 2019; Kapferer and Michaut-Denizeau, 2013), up to now, far too little attention has been paid to investigate the quality of information reported in these documents. This study aims to contribute to this growing area of research by achieving two main objectives: (i) understanding the commitment to sustainability reports by the 100 largest worldwide luxury companies in 2017; (ii) verifying the main indicators used drawn up in compliance with the GRI guidelines. Most of these researches followed a descriptive and conceptual analysis (Arrigo, 2016; Cavender 2018; D'Anolfo et al., 2017), whereas no such systematic analysis has been undertaken to understand the social reporting practices adopted by major corporations in luxury sector. The main scope of this study is to fill such a gap. The development of social and environmental reporting adoption has been supported by the creation of guidelines and standards for the preparation of sustainability reports over the years. Nevertheless, the GRI framework is considered the most wide-ranging framework to structure a sustainability report (Willis, 2003) and is generally used as an underlying framework for the content analysis of these reports. All GRI guidelines articulate the sustainability indicators according to the three dimensions from a Triple Bottom Line perspective (Elkington, 1997), arriving at the distinction between economic, environmental and social indicators.*

*The GRI (Global Reporting Initiative) framework was created in 1997 by CERES (Coalition for Environmentally Responsible Economies), an American nonprofit organization established by institutional investors, organization and socially responsible investors in partnership with UNEP (United Nation Environment Program). The use of the GRI model, from October 2016 in its Standard version, accords companies to produce consistent, noteworthy and*

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homogenous information about their accomplishments, and being more transparent both within the business and among stakeholders. The adoption of this framework is voluntary for an organization that intends to communicate on the basis of the triple-bottom-line the performance of its activities, products and services. Given that the Standard guidelines have replaced the previous v.4 of the framework, in 2017 there was a transition period in which both frameworks were used. Nowadays, the Standard guidelines are composed of “Universal Standards” and “Topic Specific Standards”. The “Universal standards” provide a general overview on the economic, social, environmental and governance impact of the organization. Instead, the Topic Specific Standards aim to provide additional information on the organization’s strategy, governance, ethics and integrity. Topic Specific Standards are divided into three categories: economic, social and environmental. Social indicators are then split in labor, human rights, society and product responsibility. Economic indicators refer to economic performance, market presence and indirect economic impacts. Environmental indicators relate to the consumption of materials, energy, emissions and waste of a company.

On the above, the adoption of GRI indicators in sustainability reports has been analyzed.

**Methodology.** In accordance with the exploratory aim of the research, a content analysis of the GRI-based sustainability reports was adopted. The analysis is based upon 17 sustainability reports from different types of luxury companies. The sample of this research is represented by the 100 most significant luxury companies in terms of turnover in the fiscal year 2017 (Deloitte, 2018). The sectors included span from clothing and footwear, bags and accessories, cosmetics, watches and jewelry. The turnover generated by the sales of these top100 companies is equal to 217 billion dollars worldwide.

In order to verify which and how many economic, environmental and social indicators are reported in the GRI based sustainability reports, it was necessary to verify how many of the listed companies published the report. After a preliminary research on the corporate websites, the following companies were excluded from the sample:

- 56 companies do not produce voluntary annual reports or do not publish official annual reports on their corporate websites;
- 3 companies publish reports drawn up before 2017;
- 5 companies produce voluntary reports, declaring to be inspired by the GRI guidelines, but without fully complying to them;
- 19 companies do not follow the GRI guidelines when drafting their sustainability reports.

The final sample is therefore composed of only 17 companies that draw up their sustainability report in accordance with the GRI guidelines.

To be able to respond to the second research question, aimed to verify which and how many indicators are present in the selected sustainability reports, it was necessary to analyze the reports drawn up by the companies in the sample. The verification was carried out using a content analysis method (Krippendorff, 2004). A table has been then drawn up in a spreadsheet in which the GRI v4 and Standard indicators were reported, indicating, for each sustainability report, the presence or absence of the indicator. If the indicator was reported in the sustainability report, the value was coded as 1, whereas in the opposite case the value was 0. Each indicator has been assigned the same “weight” (Marston and Shrives, 1991). The comparison between different GRI standards was possible thanks to a conversion table developed by the Global Reporting Institute to facilitate comparison between different sustainability reporting models. In guidelines G4 and Standard frameworks the number of indicators, as specified in figure 1, is different.

Fig. 1: Indicators selected for the comparative analysis

	Universal standards	Topic specific standards					
		Economic	Social				Environmental
			Labour	Human rights	Society	Product responsibility	
GRI Standard Indicators	63	9	16	12	11	9	34
Selected indicators	63	9	12	12	11	9	26

Source: Authors' elaboration

To ensure a full compatibility of the comparison, only the common indicators between Standards and v4 frameworks have been analyzed. Consequently, the following indicators have been excluded: (G4-EN8, G4-EN9, G4-EN10, G4-EN22, G4-EN26, G4-EN27, G4-EN30, G4-EN3, G4-LA5, G4-LA6, G4-LA7, G4-LA8). The 17 companies in the sample have a clear orientation towards G4 guidelines (11 companies out of 17).

**Findings.** *The type and number of GRI indicators presented by the selected companies represent the quantities surveyed in our analysis model. This section presents the results corresponding to the research question relating to the number and type of economic, environmental and social indicators reported in the sustainability reports prepared in accordance with the GRI guidelines. Table 1 provides a descriptive statistic of the entire sample.*

Tab. 1: Number and categories of indicators presented in sustainability reports

	Estimated number of indicators	Average number of indicators	Average	Min	Max	Median	Standard deviation	Most reported indicators	Least reported indicators
GE	0-63	34	54%	0	61	37.5	19.03	G4-10 (94%)	G4-55 (0%)
EC	0-9	4	43%	0	9	3	2.57	G4-EC1 (78%)	G4-EC4 (22%)
EN	0-26	9	33%	0	20	7	6.20	G4-EN15, G4-EN16 (83%)	G4-EN14 (0%)
LA	0-12	7	56%	2	11	7	2.98	G4-LA12 (100%)	G4-LA4, G4-LA13 (33%)
HR	0-12	5	42%	0	10	4.5	3.21	G4-HR11 (67%)	G4-HR7 (6%)
SO	0-11	5	43%	0	10	4.5	3.17	G4-SO1 (67%)	G4-SO6 (28%)
PR	0-9	3	38%	0	9	2.5	3.35	G4-PR6 (50%)	G4-PR9 (0%)
Tot	0-142	67	47%	13	121	66	40.51		

Source: Authors' elaboration

As Table 1 shows, all categories of indicators are, on average, only partially represented in the reports of the selected companies. The disclosure of Labour (LA) social indicators is the most represented indicators in the analyzed sample, with a percentage of 56%, followed by the category of General indicators (with a percentage of 54% of the indicators provided). The EC indicators are distinguished from the others, by the highest level of concentration around the average value (standard deviation 2.57). The total number of indicators reported by the companies varies between a minimum of 13 and a maximum of 121 (on a total of 142 indicators), with a similar value between the average (67) and the median (66). The standard deviation of 40.5 shows a significant differentiation in the companies' behavior in disclosing the total number of standard indicators.

**Research limits.** *In the course of the work it has been possible to specify that only a few studies have investigated in an almost exclusive way the economic, environmental and social indicators present in the sustainability reports. The present work therefore aimed to achieve two main objectives: to verify how many luxury companies with the highest turnover in 2017 adopt the GRI framework in their sustainable reports and to verify which and how many economic, environmental and social indicators are present. In conclusion, this research has some limitations. First, this research only included reporting for one year, which would not reflect changes firms make from year to year. Furthermore, this study only investigates the luxury sector. Future research can select various industries to allow for comparison. This paper is preliminary and needs to be supplemented with other crucial steps, such as studying the content of corporate social disclosure in the reports and establishing relationships between the extent and content of non-financial disclosure and other variables like profitability, size and sector.*

**Practical implications.** *Managerial implications about sustainability issues and/or reporting are not addressed in this study. Further research is thus warranted to recognize perceptions of managers and stakeholder groups in relation to the possible adoption and reporting of the sustainability issues. In any case, this research provides a framework of the state of the art of sustainability actions in luxury industry and allow to deepen the knowledge and understanding of luxury firm's commitment to sustainability as part of their market value proposal.*

**Originality of the study.** *Sustainability in luxury market is a rather recent research stream, and at the best of our knowledge no research has been carried out with specific attention to the adoption of GRI framework in corporate sustainability reports. The paper contributes to this research stream by describing the main approach used by luxury companies in the preparation of these reports and the most widespread actions carried out.*

**Key words:** *sustainability report; luxury industry, gri framework, csr strategy; corporate social responsibility*

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# L'impatto dell'investimento in politiche di sviluppo sostenibile (Environmental management practices-EMPs) sulla performance delle imprese dell'ospitalità

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**Obiettivi.** Il tema della sostenibilità ambientale è particolarmente rilevante per le imprese del settore turistico alberghiero, sia per il successo e la crescita delle imprese impegnate in tali attività, sia per gli effetti che tali pratiche hanno nel loro complesso sulla sostenibilità di una specifica destinazione turistica (Buhalis e Main, 1998; Kozak e Rimmington, 1998; Bohdanowicz, 2005). La sostenibilità ambientale di una destinazione turistica rappresenta oggi una importante leva di competitività, anche in considerazione dell'impatto non trascurabile del tradizionale modello di business alberghiero sull'ambiente (Crouch, 2007; Mazanec et al., 2007).

La tematica si è rivelata di notevole interesse sia in ambito manageriale sia nella comunità accademica e, sebbene ad oggi si contino numerosi contributi di ricerca in quest'area di studio, è fortemente sentita l'esigenza di ulteriore analisi e approfondimento sui temi sempre più critici e rilevanti soprattutto nell'ambito del business alberghiero (Alonso-Almeida, 2018; Garcia-Pozo et al. 2015). In particolare, se gli studi relativi alle imprese alberghiere di grandi dimensioni e alle catene alberghiere sono numerosi (Álvarez-Gil, 2001; Molina- Azorín, 2009) si rileva la necessità di approfondire la ricerca riguardante le piccole-medie imprese che, in specifiche destinazioni come l'Italia, ricoprono un ruolo determinante (Chan e Hawkins, 2010; Alonso-Almeida, 2018; Buffa et al. 2018).

Recenti studi scientifici hanno analizzato come i vincoli legali e regolamentari da un lato e la pressione dei diversi stakeholders aziendali sulle tematiche ambientali (Aboelmegeed, 2018) dall'altro, stiano influenzando i modelli di business e le pratiche aziendali adottati dalle imprese alberghiere indirizzandoli verso best practices orientate a minimizzare l'impatto ambientale delle proprie attività economiche. In considerazione poi del fatto che esiste una clientela disposta a pagare un "premium price" a quelle aziende che dimostrano una elevata sensibilità ecologica e che quindi adottano modelli di gestione "green" eco-sostenibili (Rodriguez-Anton et al., 2012), molti operatori stanno sviluppando specifiche strategie atte a migliorare, da un lato, l'orientamento ecologico del management, dello staff aziendale e dei principali fornitori e, dall'altro, a massimizzare il rendimento degli investimenti in efficienza e sostenibilità ambientale. Secondo i principali risultati di questo filone di ricerca, i costi sostenuti per l'adozione di pratiche di gestione ottimale delle risorse ambientali (EMPs - Environmental Management Practices) non rappresentano soltanto una spesa corrente di esercizio, ma possono dare origine ad un investimento che dispiega ricadute positive sia sull'azienda e sia sulla destinazione turistica nel suo complesso (Bagur-Femenias et al. 2015; Buffa et al., 2018).

A livello della singola azienda, l'orientamento ambientale, se correttamente sviluppato e se innestato in una struttura organizzativa in grado di dividerne la filosofia di fondo e gli obiettivi perseguiti, diviene a tutti gli effetti una risorsa economica aggiuntiva che permette all'azienda di sviluppare specifiche strategie di mercato basate sullo sfruttamento efficiente e sostenibile delle risorse naturali. Le imprese che hanno la possibilità di sviluppare tali strategie e che possiedono la capacità economico-finanziaria ed operativa di attuarle, si dimostrano capaci di consolidare un vantaggio competitivo differenziale e durevole grazie ad un miglioramento della customer satisfaction; a sua volta, la favorevole dinamica indotta nella customer satisfaction aumenta le probabilità di ottenere un miglioramento della performance di mercato e finanziaria dell'azienda (Bagur-Femenias et al., 2015; Bagur-Femenias et al., 2016; Alonso-Almeida et al., 2018).

A livello di distretto produttivo territoriale poi, in conseguenza anche dei comportamenti emulativi degli agenti economici e di imitazione delle best practices ambientali adottate dai competitor, gli investimenti in pratiche eco sostenibili e a basso impatto ecologico possono determinare un incremento del valore complessivo della destinazione turistica in termini di protezione delle risorse naturali e di valorizzazione del territorio (Buffa et al. 2008).

Il quadro teorico di riferimento in cui si innesta il presente studio è quello della Resource-Based View (RBV) (Andrews, 1971; Wernerfelt, 1984; Barney 1991) e della Natural-Resource-Based View (NRBV) (Hart, 1995; Hart e Dowell, 2011): dai primi contributi dedicati allo studio delle pratiche ambientali adottate nelle società manifatturiere, si è progressivamente passati a considerare anche le aziende di servizi, additate di erodere "silenziosamente" le

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risorse naturali con effetti degradanti sull'ambiente in cui operano.

La *Resource-Based View*, sviluppata a partire dai lavori seminali di Penrose (1959), Andrews (1971) e Wernerfelt (1984), rappresenta un framework concettuale che permette di analizzare la relazione causale tra risorse, crescita e performance aziendale. Sviluppando ulteriormente l'assunto che la performance aziendale è influenzata dalle risorse controllate dall'azienda, Barney (1991) enfatizza che solo quelle risorse che risultano essere di valore, rare, non facilmente imitabili e non facilmente sostituibili possono aiutare le società a sviluppare efficaci strategie di business che garantiscono all'impresa un vantaggio competitivo durevole (VCD) che a sua volta si traduce in una performance economica superiore rispetto ai competitor (Amit e Schoemaker, 1993). Nel moderno sistema competitivo le risorse, tipicamente divise in finanziarie, materiali e immateriali, non sono in grado di per sé di generare un vantaggio competitivo durevole, ma devono essere tra loro combinate, integrate e gestite con modalità uniche ed esclusive che garantiscano all'azienda di ottenere un vantaggio competitivo che non sia facilmente imitabile dalle altre imprese. Le abilità specifiche di combinare, ricombinare, organizzare e riconfigurare le differenti risorse specifiche di cui è dotata l'azienda con processi e modalità esclusive e non facilmente replicabili dai competitor, configurano una ulteriore e particolare risorsa a disposizione dell'impresa; questa speciale risorsa aggiuntiva rende l'impiego delle altre risorse molto più produttivo ed efficace, e consente all'impresa di ottenere dei rendimenti al di sopra della media di settore per un periodo di tempo durevole (Smith, 2008).

L'approccio metodologico e l'impostazione teorica proposta dalla *Resource Based View* si è dimostrata essere una lente di osservazione potente e informativa per lo studio del nexus tra risorse, vantaggio competitivo durevole e performance aziendale (Chathoth e Olsen, 2003; Ray et al., 2004), anche quando l'attenzione è rivolta al settore delle imprese di medio - piccole dimensioni (Terziovsky, 2010).

In questo contesto teorico, l'orientamento ambientale, se incardinato in un sistema di valori e condizioni aziendali che ne permettono la traduzione in specifiche strategie di business, rappresenta una ulteriore risorsa specifica ed esclusiva che può essere sfruttata come leva di differenziazione in un settore ad alta intensità competitiva come quello turistico (Hamel e Prahalad, 1989; Hart, 1992), e in cui i comportamenti di acquisto dei consumatori si sono modificati profondamente e sembrano essere significativamente influenzati dalle pratiche di sostenibilità ambientale adottate dagli operatori economici (Leonidou et al., 2013).

Infatti, precedenti contributi di ricerca (Molina-Azorin et al., 2009) hanno mostrato come le imprese alberghiere caratterizzati da un elevato impegno ecologico e dotati dell'abilità di comunicare efficacemente all'esterno le politiche di sostenibilità ambientale adottate, riescano a realizzare livelli di performance superiori rispetto alle aziende concorrenti; parimenti, è stato dimostrato come le pratiche ambientali degli hotel, misurate in termini di indicatori soggettivi della soddisfazione della clientela, siano positivamente e significativamente correlate sia con indicatori non finanziari di performance (Tari et al., 2010), e sia con i tradizionali indicatori di natura finanziaria (Molina-Azorin et al., 2015).

Nell'ambito di questo framework concettuale di base, il presente studio si propone di fornire un contributo allo stato attuale della ricerca sul tema, mediante lo sviluppo di un modello di misurazione dei drivers e degli effetti generati dalle strategie ambientali eco-sostenibili sviluppate dalle imprese alberghiere di piccole-medie dimensioni.

Il modello è poi utilizzato per analizzare:

- il nesso tra gli investimenti in pratiche ambientali e la performance aziendale complessiva;
- gli effetti della disponibilità di specifiche risorse aziendali (fisiche, finanziarie e capacità organizzative) sull'effettiva ed efficace implementazione di pratiche manageriali eco - sostenibili;
- i costrutti logici e causali tra lo sviluppo di strategie ambientali ecosostenibili e l'origine di un vantaggio competitivo durevole (VCD) che a sua volta permette all'azienda di ottenere una performance superiore ai propri competitor.

Lo studio intende dunque testare una serie di ipotesi secondo il modello concettuale illustrato alla figura 1; il modello si propone di catturare gli effetti dei driver e dei risultati scaturenti dall'implementazione di pratiche aziendali finalizzate ad implementare processi, procedure e routines operative finalizzate alla sostenibilità ambientale. Le risorse a disposizione dell'impresa, e le capacità/abilità di cui la stessa è dotata, fungono da drivers da cui può scaturire lo sviluppo e l'implementazione di strategie ambientali (EMPs); le capacità, la localizzazione geografica e il posizionamento del brand fungono da moderatori della relazione tra strategia ambientale e risultati attesi di performance, misurati in ordine a elementi finanziari, quantitativi e non finanziari, qualitativi.

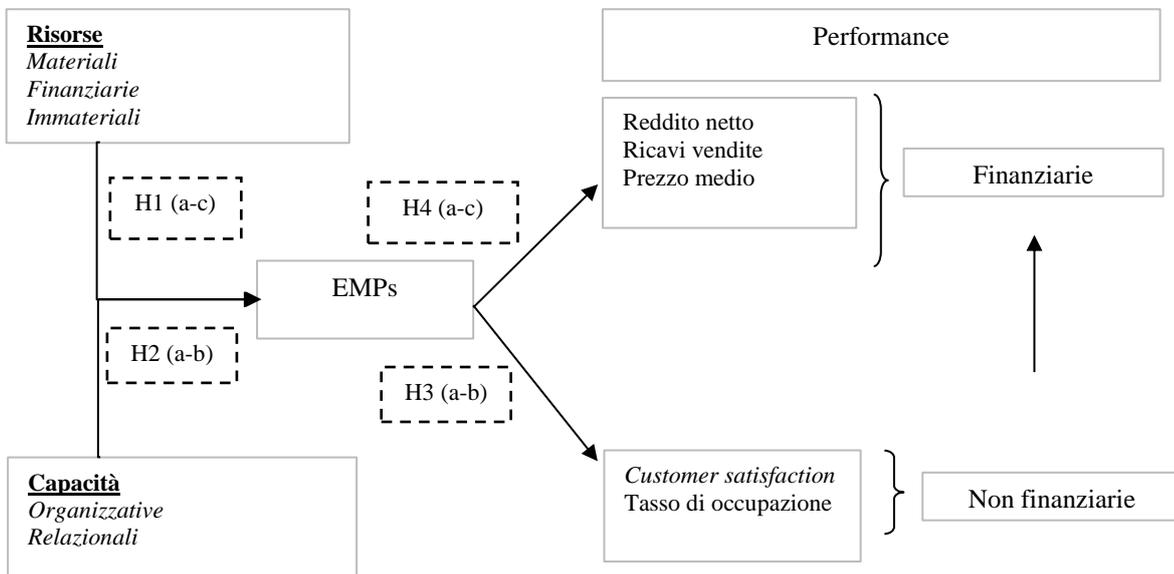
Gli indicatori finanziari considerati sono stati: Reddito Netto, Ricavi delle vendite (e tasso di variazione), Prezzo medio (e sua variazione).

Per quanto riguarda gli indicatori non finanziari lo studio si concentra sull'impatto delle pratiche sostenibili sulla soddisfazione della clientela: gli indicatori non monetari testati sono stati il tasso di occupazione, e la customer satisfaction. Nello specifico è stato scelto come indicatore della soddisfazione della clientela il rating online della struttura alberghiera espresso su booking.com. La scelta è ricaduta su questa Online Travel Agency (OTA) perché si ritiene esprima un punteggio derivante da recensioni pubblicate da clienti che effettivamente hanno soggiornato nella struttura, a differenza di TripAdvisor che, seppur molto popolare, presenta la possibile criticità delle "fake reviews" (Mauri and Minazzi, 2013).

Con riferimento ai drivers, le informazioni relative alle risorse materiali, immateriali e finanziarie sono derivate dall'analisi dei bilanci societari (Valori attività fisse tangibili e intangibili specifici legati all'investimento in eco-sostenibilità, posizione finanziaria netta) mentre le attitudini naturalistiche e l'investimento specifico in tutela dell'ambiente sono misurate dal possesso o meno di certificazioni ambientali (richiesto nel questionario). Per quanto

riguarda le capacità organizzative e relazionali, la prima è misurata mediante la propensione dell'impresa ad attivare flussi di comunicazione interni nei confronti dei dipendenti in merito alle politiche sostenibili attivate mentre la seconda è misurata mediante la propensione dell'impresa ad attivare flussi esterni di comunicazione nei confronti della clientela.

Fig. 1: Modello di analisi proposto



Fonte: Elaborazione degli autori

Le ipotesi da testare sulla base del modello proposto sono le seguenti:

- H1 La disponibilità di risorse contribuisce alla propensione all'investimento in politiche sostenibili (EMPs)
  - a. Materiali
  - b. Finanziarie
  - c. Immateriali
- H2 Le capacità dell'impresa contribuiscono alla propensione all'investimento in politiche di sostenibilità ambientale (EMPs)
  - a. Organizzative
  - b. Relazionali
- H3 L'investimento in politiche sostenibili (EMPs) ha una influenza positiva sugli indicatori di performance non finanziari
  - a. Customer satisfaction
  - b. Tasso di occupazione
- H4 L'investimento in politiche sostenibili (EMPs) ha una influenza positiva sugli indicatori di performance finanziari
  - a. Utile netto
  - b. Ricavo delle vendite
  - c. Prezzo medio

Oltre alle ipotesi sopra citate lo studio si propone di indagare alcune domande di ricerca (RQ):

- RQ1 Quali politiche sostenibili utilizzate dalle piccole-medie imprese alberghiere hanno un maggior impatto sulla performance?
- RQ2 Quale è il profilo caratteristico delle imprese alberghiere di piccole-medie dimensioni che investono maggiormente in pratiche sostenibili?
- RQ3 Quali sono le motivazioni che spingono le imprese alberghiere di piccole-medie dimensioni a investire in sostenibilità?

**Metodologia.** La metodologia di ricerca della presente indagine si è sviluppata secondo i seguenti step:

- step 1 - revisione della letteratura sul tema legato alle politiche sostenibili (EMPs) con particolare riferimento al settore turistico-alberghiero;
- step 2 - sviluppo delle ipotesi e delle domande di ricerca mediante il confronto con un focus group di 7 imprenditori alberghieri che hanno investito fortemente sulle pratiche sostenibili negli ultimi 10 anni;

- *step 3 - elaborazione del questionario di indagine e test della sua completezza mediante la somministrazione ai 7 imprenditori del focus group (tabella 2). Questa fase ha permesso di raccogliere i feedback e di sviluppare la versione definitiva del questionario;*
- *step 4 - Somministrazione del questionario agli albergatori. Il questionario è stato inviato agli associati alle principali associazioni di categoria italiane (es. Camere di Commercio, Federalberghi, ecc.) mediante apposita comunicazione interna nel mese di febbraio 2019;*
- *step 5 - Raccolta dati e integrazione del database mediante l'analisi dei bilanci e del rating online;*
- *step 6 - Analisi dei risultati ed elaborazione del report di ricerca.*

Tab. 2: La struttura del questionario di indagine

Informazioni generali	Contatti Livello qualitativo espresso in stelle Dimensioni (numero di dipendenti, numero di camere) Tipologia di gestione (hotel di proprietà/in gestione, singolo/di catena)
Caratteristiche della clientela	Motivazione prevalente del viaggio Permanenza media Provenienza
Politiche sostenibili	Tipologie adottate e che si intende adottare Possesso di certificazione ambiente con anno di ottenimento Motivazioni di adozione Modifiche effettuate/intenzione di modificare in futuro le pratiche per la sostenibilità adottate Politiche di comunicazione interna ed esterna attivata a supporto
Indicatori finanziari	Per il periodo 2015-2017: - Importo investito in politiche per la sostenibilità - Ricavi delle vendite - Utile netto - Prezzo medio - Tasso di occupazione

Fonte: Elaborazione degli autori

Attualmente sono stati sviluppati gli step da 1 a 4. Il questionario è stato somministrato e le risposte e i dati sono in fase di raccolta (step 5). Al raggiungimento di un congruo numero di questionari compilati, il database prodotto sarà integrato da una analisi dei bilanci delle imprese coinvolte. Questo passaggio è volto a colmare le eventuali lacune legate alle informazioni sugli indicatori finanziari e a raccogliere ulteriori dati relativi ai drivers del modello non richiesti direttamente agli albergatori nel questionario. In questa fase, conoscendo i nominativi dei rispondenti, si procederà ad integrare il database identificando per ogni struttura il valore del rating online (booking.com) per procedere con l'analisi.

Terminata questa fase di raccolta dati inerenti le variabili descrittive delle caratteristiche qualitative e quantitative dell'investimento intangibile in pratiche ambientali, e calcolate le specifiche misure di performance, il modello è applicato per testare l'effetto di tali investimenti sulla performance aziendale, misurata attraverso un sistema bilanciato di indicatori finanziari e non finanziari di performance.

Lo studio adotta un approccio analitico e descrittivo, integrato da un'analisi statistica descrittiva e inferenziale (analisi di correlazione e regressione). Il modello è testato statisticamente avvalendosi dei dati degli alberghi appartenenti allo specifico campione selezionato.

**Risultati.** Lo studio è attualmente in fase di sviluppo. Possono quindi essere descritti in questa sezione i risultati che si prevedono di ottenere mediante l'analisi dei dati raccolti.

Dai risultati dello studio si prevede che la performance aziendale, misurata da metriche finanziarie e non finanziarie, sia in relazione diretta con le pratiche ambientali condotte dalle aziende, e sia correlata positivamente con alcune specifiche caratteristiche dell'impresa e con l'anzianità di adozione di tali pratiche.

In particolare, sul fronte dei drivers, la presenza di specifiche risorse e capacità influisce sulla propensione dell'impresa alberghiera di piccole dimensioni a investire in pratiche sostenibili (EMPs). Sul fronte delle performance, si prevede che un maggiore investimento in EMPs abbia un impatto positivo sia sugli indicatori finanziari sia su quelli non finanziari.

**Limiti della ricerca.** Un primo limite della ricerca è la collocazione territoriale delle aziende del campione (Italia) che permette considerazioni che devono essere interpretate con riferimento allo specifico mercato nazionale e al sistema di valori, al contesto culturale e all'assetto normativo che caratterizza il campione analizzato. Di contro la specificità del campione in ordine alla tipologia di imprese e alla localizzazione territoriale, permette di isolare l'effetto di elementi di contesto ed estranei al costruito della relazione oggetto di indagine che potrebbero rendere più sfumati e labili le relazioni ricercate tra le variabili dipendenti e indipendenti.

Ulteriore fase della ricerca potrebbe quindi riguardare l'ampiamiento del campione, sia in termini di numerosità di imprese che di localizzazione territoriale anche sovra nazionale, per valutare gli effetti indotti dall'appartenenza ad

una specifica regione o ad un territorio, o dall'essere regolati da determinati sistemi normativi vigenti in determinate legislazioni.

Una ulteriore linea di sviluppo potrebbe essere quella di analizzare i legami e gli effetti sulla performance di ulteriori e diverse risorse e competenze, misurate da indicatori diversi. Anche le metriche prese a riferimento di misure di performance possono essere oggetto di ulteriore affinamento, ad esempio per integrare anche gli effetti sulla performance di mercato. Parimenti, anche per quanto riguarda la misurazione della customer satisfaction, potrebbe essere interessante adottare prospettive diverse rispetto al rating offerto dalle agenzie di viaggio online utilizzato nel presente studio, per abbracciare approcci diversi magari ancorati a misurazioni della soddisfazione della clientela generate internamente dagli stessi alberghi.

**Implicazioni pratiche.** I risultati ottenuti possono aiutare i manager nell'individuare quali sono gli investimenti ambientali e le pratiche ecosostenibili che hanno maggiore impatto sulla performance, e quali sono le strategie che permettono di sfruttare nella maniera più efficace le risorse e le abilità su cui poggia il vantaggio competitivo durevole dell'azienda.

Il contributo di questo studio sotto il profilo manageriale è interessante in quanto i risultati concorrono a:

1. migliorare la comprensione del legame tra i processi aziendali orientati alla tutela dell'ambiente e la performance complessiva dell'azienda;
2. evidenziare la rilevanza economica e strategica degli asset immateriali legati all'investimento ambientale, anche se non espressamente rilevati tra le attività del bilancio;
3. ridurre le problematiche relative al finanziamento esterno dell'investimento in intangibili, aumentando il range delle forme di finanziamento possibili.

Anche sotto il profilo teorico e di ricerca le implicazioni sono potenzialmente di rilievo. In linea con i risultati della precedente ricerca scientifica, empirica e teorica, i risultati previsti richiamano l'attenzione sulla necessità di approfondire i legami e i meccanismi di causa ed effetto che interessano gli investimenti in pratiche ambientali, il conseguimento di un vantaggio competitivo sostenibile e la performance aziendale. Oltre che a test empirici volti ad analizzare comportamenti in atto e tendenze evolutive, lo studio sottolinea l'importanza di ulteriori indagini teoriche volte all'individuazione di metriche specifiche e indicatori in grado di rappresentare proxy efficienti per misurare la redditività operativa di tali investimenti. Da ultimo lo studio fornisce lo spunto per approfondire anche tematiche legate alla struttura e alla qualità all'informativa esterna societaria; una rendicontazione bilanciata, finanziaria e non finanziaria, anche nella forma semplificata così come proposta dall'Integrated Reporting, può essere utile e fondamentale per fornire ai diversi stakeholders una visione olistica delle dimensioni della performance aziendale, evidenziare e misurare gli effetti prodotti dalle scelte di sostenibilità ambientale adottate e facilitare quindi le scelte di investimento da un lato e amplificare le opportunità di finanziamento esterno dall'altro.

**Originalità del lavoro.** Lo studio si propone di contribuire alla letteratura sul tema dell'orientamento ambientale sostenibile delle imprese alberghiere secondo l'approccio della Natural-Resource-Based View (NRBV). In particolare, lo studio indaga l'effetto dell'orientamento ambientale e naturalistico delle piccole-medie imprese del settore alberghiero, una categoria meno esplorata dalla letteratura che però impatta fortemente sulla competitività di alcune destinazioni turistiche come l'Italia.

**Parole chiave:** Environmental management practices (EMPs); sostenibilità; imprese alberghiere; hotel; performance.

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# Furniture companies and circular economy: an exploratory study

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**Objectives.** *In today's society growing attention is paid to global environmental risks and related consequences, such as the increasing amount of CO<sub>2</sub> emissions, global warming, deforestation, acid rains, depletion of resources, which are threatening humanity's survival (Meadows et al., 2004; Jackson, 2009; Rockström et al., 2009). In this context, the concept of Circular Economy (CE) has gradually raised and received growing importance on both firms and Governments' agendas (Brennan et al., 2015).*

*The aim of this study is to explore to what extent furniture companies are aware about the CE practices, how they are implemented within them and which factors can motivate, support or hinder their adoption. At an operational level, quality management practises are also investigated in this study, since they can be particularly helpful for managers in implementing environmentally sustainable practises, which, in turn, are critical within a circular business context (Rusinko, 2005).*

**Methodology.** *The research method is based on a qualitative multiple case-study carried out on four companies operating in the Italian furniture sector. As pointed out by several authors, this approach is very useful to understand contemporary phenomena and practices (Yin, 1984; Gummesson, 2002). Notably, it has been used by researchers to render descriptions related to a specific context (Kidder, 1982), as well as to test theories (Anderson, 1983; Pinfield, 1986) and to develop them (Harris and Sutton, 1986; Solberg Sjøilen and Huber 2006; Eisenhardt and Graebner, 2007).*

*In this research, the multiple case study methodology has been adopted (Yin, 1984) as it allows a clearer understanding and characterisation of the investigated phenomenon (Andreu et al., 2010) by providing a stronger and reliable evidence (Baxter and Jack, 2008).*

*A total number of four Italian companies coming from North and Central Italy and operating in the subsector of furniture and furnishing accessories were used for the analysis. All companies operate both at national and international level, specifically in European, American and Asian markets.*

*Primary data were collected using a semi-structured questionnaire directly submitted to the companies. Each interview lasted for on average two hours. More specifically, the questionnaire was structured into three sections. First, information related to the background of the companies and general information related to their communicative strategy were explored. Second, companies' approach towards sustainability and CE (e.g. implemented practises and related enabling/hindering factors) were assessed. Finally, the third part investigated the use of certifications and their role within both the communication strategies of companies and their overall sustainable approach. Additionally, respondents were given the opportunity to provide feedback on initial findings in order to reinforce the overall reliability of information.*

*During the study, different methods for improving the quality of the research were adopted. Even if interviews represented the primary source of data collection, a review of the companies' websites and their profiles on different social networks have been carried out together with a careful analysis of further information provided by managers interviewed or sourced by the authors themselves. This involved a widespread search of documents, such as industry conference proceedings, papers and consultant's reports.*

*Each case was deeply investigated to gain a rich understanding of the main practises developed to move towards CE. The cases were then compared in order to analyse similarities and differences emerged from the empirical analysis.*

**Findings.** *Companies interviewed showed a moderate degree of awareness and knowledge of CE principles and related issues. Notwithstanding the interest towards the topic emerged from the analysis, only one company declared to be actually involved in CE projects promoted by national or international public institutions.*

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*Practices related to the 3R principles, namely Reduce, Reuse and Recycle on which CE lays its foundations (Yuan et al., 2008), are only partially implemented. Reduction activities, especially concerning the reduction of raw materials per product unit and the overall reduction of raw materials and energy, involved three companies. Reuse activities, among which the reuse of equipment cleaning materials and products' packaging materials, are employed very little by two companies. Similarly, recycling activities are also scarcely carried out: two companies are implementing activities related to the recycle of waste products coming from consumers and to the reprocess of waste and garbage to manufacture new products.*

*Economic motivations, such as the increasing efficiency linked to the reduction of total costs and the possibility to achieve growing sales, emerged as critical. Furthermore, the importance of gaining a long-term competitive advantage compared to competitors has been recognized by three companies, while low interest has been devoted to social motivations related to health conditions of the population and the reduction of the unemployment rate. Motivations that push the furniture companies to adopt CE practices, in fact, are mainly of economic and environmental nature. This reveals a partial understanding from the managers of the potential advantages linked to the CE practices. They actually focus on perceived economic advantages, but they still underestimate the potential social impact, which can derive from their adoption in terms of reduction of the unemployment rate or general improvement of social wellbeing.*

*As concerning the enabling factors, two companies recognized fiscal and economic incentives as crucial ones, which can support the implementation of such practices. Despite the emergence of different opinions, an efficient differentiated waste collection system and the use of artificial systems in production/distribution processes have been considered as important by two of four companies analysed.*

*Different factors that hinder the adoption of such practices emerged. Companies interviewed pointed out the difficulties in reusing some special materials used in manufacturing processes, as well as those related to the reconversion of final products into new ones. While the existence of inefficient waste collection systems has not been considered as a significant obstacle by companies, this is not valid for expensive waste disposal processes, thus revealing the importance of economic limitations.*

*Similar findings emerged with respect to the role of product and process certifications. Managers interviewed recognized the economic and social benefits associated with their adoption as well as their communicative role in order to improve companies' ability to enter new markets and to increase the consumers' loyalty and the brand awareness. However, companies declared to use them very slightly. More specifically, two of them declared to adopt the international standard UNI EN ISO 9001, concerning the adoption of a quality system aimed at achieving zero-defect products' objective and providing quality management practises to customers and business counterparts, while only one of them adopts the OHSAS 18001 standard for business safety requirements. On the other hand, product certifications are not used, except for the Forest Stewardship Council (FSC) voluntary certification for sustainable wood that is used by only one company. Surprisingly, no company declared the adoption of the Italian "Made in Italy" labelling that certifies the Italian origin of furniture in a sustainability perspective, despite the fact that all four companies produce high quality products, which are internationally recognized for their high design-content, as well as for the exclusivity of materials and related production processes.*

*Given the low employment of such certifications, companies were asked to provide some reasons for their future adoption. The possibilities to assure compliance with environmental standards, to improve the workers' safety and to develop a socially sustainable strategy are recognized as the most relevant factors towards the adoption of such certifications. Moreover, economic benefits linked to the overall improvement of processes' efficiency emerge as a potential stimulus. Communicative advantages associated with the adoption of such certifications appear interesting too: two companies recognized their importance with regard to the possibility of increasing customers' loyalty, improving corporate image and enter new markets.*

*The interest towards collaborations with Universities and/or Research Centres confirms the companies' willingness to develop CE and related activities by supporting the growth of adequate skills and competencies.*

*Results show that CE applied to this sector is yet a new concept towards which companies are increasingly addressing their attention. Therefore, a potential gap seems to emerge between positive attitude towards such practices and their actual implementation.*

**Research limits.** *This study is subject to some limitations, which can provide suggestions for future research perspectives. The main limit concerns the adoption of the multiple case-study approach that usually reduces the generalisability of the research findings (Hodkinson and Hodkinson, 2001). Additionally, the number of companies analysed is not representative of the whole Italian furniture sector. However, this research is still a work-in-progress, therefore, a greater number of case studies will be considered in future research for allowing a better understanding of the CE concept and practices within this industry.*

*A comparison with other industries could be also useful for revealing peculiarities and differences among various market contexts.*

*Achieving these aims could require the use of different methods and techniques, to test the validity of the results as well as to clarify the contexts in which CE practices could be better applicable.*

**Practical implications.** *Notwithstanding the growing attention emerged towards CE and related issues, the companies analysed are still little involved in such practices, especially regarding reuse and recycle activities. Similarly, as concerning the adoption of product and process certifications, companies revealed a little adoption, even*

if they are highly aware about their opportunities. Hence, practical implications can be derived for both private companies and public institutions aimed at reducing such gaps.

First of all, given the crucial role of designers in the furniture sector - as their creative freedom affects materials and characteristics of final products - it would be desirable that design processes should be based on the use of recyclable materials, which encourages the reuse of products also in their end-of-life. Internal training as well as informal and planned meeting for discussing the circularity issues could be useful for sharing the diffusion of a new business model that requires an overall cultural change and a general involvement of all skills within the company, including designers. Moreover, internal communication becomes critical to inform the personnel about the opportunities of circularity and, above all, about the economic, environmental and social advantages. Periodic reports, along with the use of indicators, can be helpfully for summarizing the CE benefits and operationalizing the CE results.

CE also enhances the introduction of a new consumption model where property is replaced by access (de Carvalho Araújo et al., 2019). In order to promote this new model of consumption and to reinforce reusing practices, companies can offer economic incentives to stimulate consumers to give back the product at its end-of-life.

Concerning the reverse cycles, another basic principle of CE (de Carvalho Araújo et al., 2019), companies should improve their ability to implement a reverse logistic and an efficient system of waste and product leftovers treatment that allow the return of such materials to the market. Furniture companies, as well as others operating within similar contexts, should move to implement such activities which can improve their ability to recover components into new products, thus addressing the specific market needs. However, this requires financial and organizational resources. Technology and investments in R&D play a crucial role in the development of CE as they allow the implementation of new innovative and creative processes by companies. In this regard, Governments and other public institutions should provide economic and financial incentives and measures to support the companies' efforts, in addition to a merely administrative approach (Wang et al., 2008).

As concerning the implementation of international standards and certifications, companies shall see beyond economic limitations linked to their adoption, trying to think of them as a medium-long term investment that will lead to organizational and environmental improvements, as well as to brand image and competitiveness improvements (Murmura et al., 2018). Moreover, the adoption of integrated management systems (IMS) and product certifications requires time and figures dedicated exclusively to their management and this is the most relevant limitation to their implementation for companies (Santos et al., 2016). Thus, a change in companies' culture and in top management involvement seems to be critical, along with training activities towards internal personnel and new skills' recruitments processes.

Finally, relationships with other companies could provide some facilities for product development and information sharing, as well as sectoral standards adoption. This becomes particularly relevant if companies are based in specific areas, such as Italian furniture districts, as in the case of the companies investigated in this study.

**Originality of the study.** Extant literature investigated the role of eco-design (Bovea et al., 2004; Mirabella et al., 2014), the increasing use of recycling raw materials (Addis and Schouten, 2004) and the growing adoption of renewable energies by furniture companies (Daian and Ozarska, 2009; González et al., 2011). Certainly, these topics are strictly related to the concept of CE, but little is known about other practices, such as the recovery/reconversion of waste materials to create new products on which CE lays its foundations (Yuan et al., 2008).

This research contributes to address a gap, still recognized in the literature, concerning the lack of contributions examining the CE concept within the furniture sector.

Notwithstanding its explorative nature, the research adds further knowledge to the scientific debate on CE, by considering the circularity as a whole concept, laying on the 3R principles, while previous literature is still fragmented and focused on specific activities. Moreover, focusing on factors affecting the adoption of CE practices - and product/process certifications -, it suggests practical implications which are particularly useful for those who are moving towards circularity.

**Key words:** circular economy; sustainability; furniture sector; quality management

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# Boosting sustainable development in ‘overtouristified’ cities through smart technologies

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**Objectives.** Sustainable development has been receiving increasing attention by both academics and international organizations becoming one of the most noteworthy field of studies and of policy-makers’ intervention. The Europe 2020 strategy for “smart, sustainable and inclusive growth” stated the EU’s agenda for growth and jobs coordinating policies at European and national level. The entangling of sustainability, smartness and inclusiveness was explicitly proposed in the urban tourism debate during the 3rd UNWTO Global Summit on City Tourism in December 2014, titled “New Paradigms in City Tourism Development”. The summit stressed the need to reduce city imbalances leveraging on smartness to facilitate inclusiveness and sustainability. A change of path in city tourism development was deemed necessary also in light of the rapid tourism growth and the unavoidably emerging imbalances and contradictions of the overtourism (Koens et al., 2018), including urban touristification and museumification (Gravari-Barbas and Guinand, 2017). Anti-tourism movements and reactions emerge in several cities such as tourismphobia and tourism saturation (Koens et al., 2018; Milano, 2018), giving voice to asymmetries that urban tourism creates at the expense of the excluded part of local communities. Overtourism has been often overlooked in the practice, with the consequence of an “explosion of the tourism phenomenon” going out of control in some context with the consequent reduction of urban centres’ multifunctionality (Pasquinelli, 2017).

This paper discusses sustainable development through the analysis of pioneering European cities in which managerial approaches and smart technological tools have been implemented to overcome overtourism conflicts, contradictions and imbalances and to facilitate inclusive development. In particular, focus is on smart technologies and digital platforms as tools supporting the process of downsizing negative impacts, as well as the process of amplifying positive aspects - as emerged from the literature - of visitors’ inflows to urban destinations. The research question concerns how and the extent to which smart technologies and digital platforms can give an answer to ‘sustainable and inclusive’ urban growth by enhancing value co-creation dynamics in the city. To address this research question, the smart city literature provides analytical insight into urban knowledge ecosystems, framing collaborative communities, citizens/users’ engagement to accelerate innovation, user-centric collaborative approaches, coordination of interacting stakeholders through ICTs and the role of physical agglomerations of usage and technology development communities (Paskaleva, 2011; Hielkem and Hongisto, 2013; Angelidou, 2014; Letaiifa, 2015), suggesting the relevance of the open innovation paradigm (Chesbrough, 2003; Chesbrough et al., 2006).

**Methodology.** The paper is built on two research phases. The former adopts a narrative approach (Czarniawska, 2004) to the analysis of online media with the aim to detect the discourse on managerial approaches and tools that can be adopted to face urban overtourism, by focusing on technology-driven innovations. The rationale for this type of study is grounded in the role of media in nurturing and spreading debate on the overtourism phenomenon, thus contributing to shaping perceptions, concerns and even fears against tourism and its dynamics in urban contexts, but also consolidating awareness on the need to adopt solutions and contributing to circulate urban practices. Accordingly, an original online source archive was built, by collecting tourism experts’, practitioners’, specialized reporters’ and policy-makers’ views on viable approaches to manage urban overtourism. The latter phase of this study is focused on those cities that emerge from the online media debate as urban models of sustainability in addressing the overtourism phenomenon. The related underlying managerial approaches will be profiled and discussed.

**Findings.** Smart, sustainable and inclusive growth has been a central topic in European cities calling both academics and policy-makers to redefine the urban development patterns.

Although research on sustainability and tourism pressure on local systems has been developed over the last forty years (Ruhanen et al., 2015; Koens et al., 2018), covering diverse topics and adopting diverse theoretical and methodological approaches, further insights into smart technological tools deployment and application to sustainable city development are needed.

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*This exploratory research proposes a managerial perspective in addressing overtourism issues in urban contexts by introducing smart technologies as management and marketing tools that contribute to boosting sustainable development in overtouristified cities. The research maps smart technology applications discussed in the online media debate and mirrored in current best practices.*

*The output of this paper leads to the shaping of a conceptual framework of smart technological tools and applications from the perspective of the smart sustainable city development, cross-fertilizing diverse theoretical domains such as: sustainable tourism, city overtourism, smart city and smart sustainable city, innovation in knowledge-based destination and smart technological tools for sustainability.*

*Sustainable tourism has emerged as dominant paradigm in both tourism research and public policies aiming to redress the cumulative negative impacts of tourism. It includes “a set of principles, policy prescriptions, and management methods which chart a path for tourism development such that a destination area’s environmental resource base (including natural, built, and cultural features) is protected for future development” (Hunter, 1997:850). Crucial perspectives are the interrelationships amongst the environment, local communities and tourism, as well as the long-term perspective of future generations (Liu, 2003). However, the connection with the broader concept of sustainable development is usually weak (Hunter, 1997; Garrod and Fyall 1998; Liu, 2003).*

*Inclusiveness can be considered a pillar of sustainability and, hence, of sustainable tourism. This is, in fact, reliant on the inclusion of visitors and locals in the production and consumption of the tourism destination. In particular, equality in opportunities and equitable allocation of resources are drivers of inclusion (Ugur, 2017). Accordingly, participation in consumer market, dispersion of income and wealth, as well as access to cultural, environmental and, generally, urban resources lay at the core of sustainability and the tools and practices enabling access should be taken into deep consideration.*

*Overtourism is defined by UNWTO as “the impact of tourism on a destination, or parts thereof, that excessively influences perceived quality of life of citizens and/or quality of visitors experiences in a negative way” (UNWTO, 2018). In the academic debate, overtourism was defined as a complex phenomenon in city contexts, referring to a set of impacts, stakeholders’ perceptions and behaviours (Koens et al., 2018).*

*Smart technologies can support the goals of the Europe 2020 strategy integrating urban sustainability, smartness and inclusiveness. Expressions such as “sustainable city”, “smart city”, “liveable cities” and other related labels have been used interchangeably by policy makers, planners and developers, although they correspond to different - though often overlapping - conceptual perspectives (de Jong et al., 2015). As regards the tourism domain, an effort of conceptual clarification is necessary for the production of managerial implications regarding the central aim of this research paper (i.e. how to address conflicts and contradictions raised by tourism growth and how to rebalance its impacts in practice).*

*In the urban context, the relation between sustainability and smartness has been discussed and problematized. Efforts are necessary to apply this theoretical background to tourism destination management in a deep connection with local development. In literature, while the “sustainable city” is the most frequent and most interconnected expression to a wide variety of research agendas (thus suggesting the broadness of the concept) including “digital city”, “information city” and “smart city”, the “smart city” is rapidly growing in popularity (de Jong et al., 2015). It refers to investments in information and telecommunication infrastructures, but also in social and human capital, aimed to generate sustainable development and high quality of life (Caragliu et al., 2011). That is, ICT endowment, but also local community’s ability, willingness and propension to rely on it, are key determinants of the smart city. Social inclusion of different urban stakeholders and the development of social and relational capital are important aspect of the smart city development (de Jong et al., 2015).*

*Smartness is evidently presented as a modality to pursue sustainability. The instrumental nature of “smart” is confirmed by Hoger and Wangel (2015) in their definition of the Smart Sustainable City. However, tensions between the smart city and the aims of sustainable urban development were found (Martin Martin et al., 2018). These suggest that the smart city mode of development reinforces neoliberal growth in favour of the privileged few, thus strengthening social exclusion, that it neglects environmental protection and makes consumerist culture prevail.*

*Traditionally, the ICT has played a re-engineering role in tourism domain enhancing competitiveness and sustainability by changing the paradigm through which organizations, destinations and tourists communicate, collaborate and interact (Buhalis, 1998). Technological and digital tools represent the drivers of innovation, supporting managerial decision making and enhancing openness and participation through their capacity of finding new intermediation forms and developing their interactive interfaces between organizations and tourists creating new forms of production, organization and consumption (Boes et al., 2015; Buhalis and Law, 2008; Liu et al., 2014; Neuhofer et al., 2012).*

*In the light of the smart tourism (Gretzel et al., 2015), smartness summarizes the multifunctional use of ICT tools such as the internet of things, wearables, mobile devices, virtual and augmented reality, cloud computing, services based on the user’s location, recommendation systems and gamification. Interconnected technological tools enhance opportunities for stakeholder communication, collaboration, mutual support and knowledge sharing (Kuščer et al., 2017; Liberato et al., 2018; Pikkemaat et al., 2018; Racherla et al., 2008).*

*In this scenario, the literature unanimously argues that knowledge management plays a significant role in facilitating innovation and sustainable development. A conceptual framework of drivers and emerging innovations in knowledge destination was proposed, which describes the role of the knowledge management theoretical framework in enhancing the understanding of the destination innovation phenomenon (Trunfio and Campana, 2019). Pervasive smart*

technologies and open innovation can play a significant role in city innovation and the holistic results of the collective knowledge of city stakeholders facilitated by social capital. The complementary role of social capital and ICT infrastructures creates the conditions facilitating innovativeness, stakeholder engagement and bottom-up processes (Trunfio and Campana, 2019), thus opening new scenarios to boost urban sustainable development.

Furthermore, smart tourism creates opportunities for improving the quality of life in tourism destinations and for enhancing sustainable urban development (Stipanovic and Rudan, 2016; Kim and Kim, 2017). Besides, digital platforms create new experience (e.g. virtual and augmented reality) and enable experience co-creation and innovation (Gretzel et al., 2015; Racherla et al., 2008).

Although the exploitation of smart technologies in tourism domain represents a consolidated topic, how ICT tools can support the management of the city's sustainable development remains an underexplored area of research. Ali and Frew (2014) introduces some technological tools to present, in a preliminary research, how smart technologies can achieve sustainable development, thus establishing bases for future research. They identified tools for sustainable development that can be summarized as follows (Ali and Frew, 2014): ICTs communication and stakeholders' engagement; destination management systems; decision support system; and computer simulation; geolocalisation system for tracking tourists' smartphones; experience design including virtual and augmented reality; and gamification.

Findings allow us to identify smart technological tools adopted in European overtouristified cities to boost sustainable development, such as:

- Smart ticketing and dynamic pricing (e.g. Amsterdam, London);
- Mobile travellers tracking systems to analyse behaviours and big data analysis for targeting (e.g. Edinburgh);
- Mobile gaming app to engage with tourists (e.g. London);
- Critical use of social media to create expectations and boost dispersal (e.g. Helsinki);

Findings suggest how smart technology applications, discussed in the online media debate and mirrored in the current best practices, can give significant opportunities to track, monitor and manage overtourism in the city and open opportunities for value co-creation. The concrete usage of technological applications may have effects in terms of both building a valuable relationship between residents and visitors, and reducing the overcrowding in urban hot-spots enhancing the carrying capacity and so the load capacity of urban destinations.

This explorative study draws attention to city tourism as domain for urban value creation and opens routes to further research in the field of smart technologies for supporting cities in the pursuit of sustainable development.

**Research limits.** This study explores practices and smart technology tools to address urban overtourism in the frame of sustainability. The methodological approach defines the limited scope of the carried out exploration. The study suggests pitfalls and limitations in the application and usage that may, in fact, limit the potential of smart technologies. As the paper does not address these aspects in details, it is evident how a number of issues deserve specific attention including the likely asynchrony between processes of technology obsolescence and long-time frames for technology penetration into the destination; user requirements, technology acceptance and intention (Chung et al., 2018), which are still considered to be the main challenges in the deployment of smart technologies; and the balance between authenticity and innovation which is to be pursued not only in the design of the interface and contents, but also in the design of the travel experience.

**Practical implications.** By means of an analysis of online media debate on urban overtourism, the paper have produced some preliminary findings whose practical implications deserve much attention. Preliminary insights unveiled that the online media debate gives evidence of the need to devise managerial approaches and technological tools to overcome the overtourism imbalances and to facilitate urban sustainable development.

Amongst the discussed actions, smart technologies play a significant role in supporting management and marketing decisions and actions in line with sustainability marketing principles aiming at behavioral change (see Font and McCabe, 2017). They are transversal to two typologies of actions, which belong to the management and marketing domains, while more regulative approaches (e.g. licensing commercial activities, taxes, licensing accommodations, etc.) are referred as less integrated with technology solutions.

Considering the smart technologies applications some areas of intervention emerge such as: first, data analysis and forecasting by means of the use of big data that are said to potentially transform tourism, by shaping tourists' behaviors and by improving their satisfaction, loyalty and responsiveness to destination managers' inputs. Secondly, smart ticketing and dynamic pricing represent tools that, utilized to manage access and so to reduce congestion in museums and critical areas, may compensate residents by offering cheaper prices and free entries, thus boosting residents' active participation in local cultural heritage. Thirdly, social media platforms may support integrated destination management and may be an effective tool to create "new" destinations. If critical use is made, social media may create "different" expectations and diversify the destination (use) enabling marketing actions on alternative, less popular sites. De-marketing is also a viable option through the use of social media. Fourthly, gamification may contribute to disperse tourists across a variety of attractions, so reducing congestion in the urban tourism hotspots.

**Originality of the study.** The original contribution this paper is twofold. On the one hand, it frames urban overtourism in the sustainability debate, on the other hand it provides a discussion on smart technological tools and applications to support sustainable development in city tourism destinations.

**Key words:** city tourism; overtourism; smart technology; smart city; ICT

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# Team management and sustainability

NATIA KALADZE\* LELI BIBILASHVILI\*

**Objectives.** Objectives of the research paper was to define team effectiveness in organizations towards the style of team management and converge it with the management of strategic communications within the organization. Namely, to determine team effectiveness regarding to two styles of team management, the so-called manager-led team and self-developing team or self-regulating team.

**Methodology.** Research was based on quantitative research method, namely, questionnaires through scaling methods. Respondents were selected by non-random sampling method. There were selected a number of middle/top managers and staff members within the organizations. Data were processed by the use of descriptive statistics and correlations.

**Findings.** Questionnaires used for the paper are adapted by different research and educational centers. 1. "Team effectiveness questionnaire" examines team effectiveness from the perspective of eight [8] dimensions and must be filled by managers and team members. (Adapted from: "Team Effectiveness Diagnostic" created by London Leadership Academy, National Health Service.)

"Leadership Styles Questionnaire" identifies the style of leadership and examines how manager leadership's style relates to other styles of leadership. Adapted by Peter G. Northouse, PhD, is Professor Emeritus of Communication in the School of Communication at Western Michigan University. In addition to publications in professional journals, he is the author of *Leadership: Theory and Practice* (now in its seventh edition) and *Introduction to Leadership: Concepts and Practice* (now in its third edition). His scholarly and curricular interests include models of leadership, leadership assessment, ethical leadership, and leadership and group dynamics. Several key tendencies were outlined as part of the first questionnaire, based on research data:

**Personnel:** 1. Personnel of the organizations has no valuable understanding of team meaning and effectiveness of teamwork; 2. Personnel of the organization has no valuable understanding and perception of the organization goal; 3. They cannot make decision independently; 4. They have low motivation for attaining the best results and making contribution to the organization success; 5. Team is not oriented on self-development and self-performance.

**Managers:** 1. There is lack of trust towards staff members from the managers of the organizations; 2. There is lack of effort to find out unique potential of the staff; 3. They perceive the team for the everyday routine perspective and not from the strategic view point. As a result, emphasize is made on manual worker rather than on a knowledge worker. 4. There is no support to staff members for full revealing their abilities, initiatives and acquiring knowledge that stipulates personnel formation into a group rather to team.

All above mentioned statements are based on diagnostics of team effectiveness (8 dimensions: 1. Purpose and Goals; 2. Roles; 3. Team Process; 4. Team Relationships; 5. Intergroup Relations; 6. Problem Solving; 7. Passion and Commitment; 8. Skills and Learning) dimensions. In particular, questionnaire fulfilled by managers the lowest score was given to Dimension 6 - Problem Solving.

**Dimension 1: Purpose and Goals** - Questions for this dimension are mainly focused on high-degree involvement of a team in the organization activity, which may be outlined by the following questions. For example, team members take personal responsibility for effectiveness of the team; team members take initiative to resolve issues between themselves without involving the team leader; the team is proud of its accomplishments and optimistic about the future. Research results enable us to conclude that managers share position that team has skills and potential to make independent decisions or decisions made might be effective for the organization as well the responsibility of decision effectiveness.

Questionnaire "Team Effectiveness" fulfilled by the personnel of the organization also, showed the lowest score for Dimension 6 - Problem Solving.

Given results indicate that the team members perceive that they don't have requisite skills and enough qualification, they can't or aren't motivated to take responsibility on organization's effective functioning. Consequently, they cannot or do not make decisions and/or propose initiatives without involvement or instructions from a manager. This factor, to a certain degree, excludes the existence of knowledge workers and points to formation of a group, rather

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than a team. It's worth mentioning that low scores were given both from the manager and personnel to Dimension 1 - Purpose and Goals, Dimension 7 - Passion and Commitment and Dimension 8 - Skills and Learning.

Questions of Dimension 1 enable to identify the ability of a team for devising goals, responding to challenges and be result-oriented. The received results enable to conclude that the staff and managers find it less important to more clearly outline the organization goals and present them to the personnel, while the personnel has low understanding of importance of the organization goals for attaining real results.

The Dimension 7 has also outlined an important direction in relation to team efficiency, which determines the team efforts and obligation. Questions of this dimension enable to determine the level of motivation of staff in relation to the work and the degree of trust and loyalty among the team members. To determine team efficiency, it is important that the team propose initiatives, which, in this specific case, was expressed in a low indicator in both chains of an organization (manager and personnel). The received results enable to conclude that a manager does not consider a group of employees in long-term perspective (supposedly, he/she does not think that his/her employees are irreplaceable and hardly replaceable), therefore, he does not take efforts for their development.

Moreover, the personnel may not be oriented on achievements and be less optimistic in relation to the organization and/or its own performance.

In the process of the Dimension 8 - Skills and Learning analysis, the following tendencies were outlined. Team members, as well as managers show tendency for low self-estimation, because one of the key questions of this component makes focus on efficient fulfillment of the work by a team. The questionnaire also enables to outline the staff aspiration for improving results through analysis of mistakes and constant development, including the issue of acquisition of new skills and knowledge

It should be noted that high middle score was given to the Dimension 2 - Roles and the Dimension 4 - Relationship in a Team. The mentioned dimensions are of the similar meaning, because both of them determine relationship among staff members. For enhancing this consideration, here are cited some of the statement from questionnaire, namely, team members' trust each other, their communication is based on openness and honesty, team members are good listeners and so on.

Clearly differentiated and shared roles between team members are of crucial importance for organizations, as well as relationship based on cooperative interaction among colleagues and professionalism that make significant influence on achievement of goals and success of organization. In this specific case (namely, Georgia), this factor may turn out a negative outcome for organization, considering the current attitudes and traditions in Georgia in terms of relationships, friendship and relatives and these aspects are articulated by a small size of the country, quantity of population and the existing culture.

The questionnaire "Leadership Styles" conducted only with organization managers has enabled to make conclusions. Objective of the questionnaire was to determine the management style in the organizations. The questionnaire is based on identifying 3 key types of leadership - authoritarian, democratic and liberal (laissez-faire). Among inquired managers the highest middle score was given to the democratic type of management and the results were distributed in the following way.

However, it is noteworthy that there are not extreme differences between results. This may signify that managers do not have clearly shaped leadership style in the organizations. But if we discuss democratic type of management with the highest middle indicator, questions arise about results of personnel and manager in the questionnaire of Team Efficiency. Namely, democratic management signifies team's involvement in the decision-making process, high degree of involvement and motivation, taking decision independently and so on.

The lowest score in the Team Efficiency questionnaire in the Dimension 6 - Problem Solution proves that the inquired managers do not use this specific type of management. In case of specific organizations, only tolerant inter-personnel relationships comply with democratic management type (Components 2 and 4).

According to these results, managers of the inquired organizations apply and/or share certain approaches of this management type, due to general indicator of liberal management.

However, liberal management approach is based on the principle that the organization employees are individuals of knowledge and have high competence to take decisions independently on condition of minimal assistance of management and/or without their assistance. This type of management is characteristic for self-developing or self-regulating teams, but this is less possible due to results of the Team Efficiency questionnaire.

As to the authoritarian management type, it received the lowest general indicator. However, in the context of the Team Efficiency questionnaire, it is possible to determine that managers of the inquired organizations use the style of the so-called manager-led team and the low general indicator in the Team Efficiency questionnaire of the Dimension 1 - Purpose and Goals corresponds to elements of authoritarian management, namely, determination of goals and accepting challenges by a team, high motivation for the organization goals and mission support, strategic approach to the organization development and orientation on solid results and so on.

Based on the research it is possible to conclude that organizations in Georgia cannot transfer to the team - led management style and cannot increase performance effectiveness by using the human resources (teams) and thus rigid/hard management is still maintained in Georgia. However, the research results enable to suppose that managers have positive attitude to democratic or liberal management style and they may have desire to transit to similar management style, but fail to change the form of management due to the lack of modern, flexible and knowledgeable people. Self-developing or/and self-regulating teams in the modern management are of crucial importance. Team effectiveness is achieved when a manager employs individual approaches to each member of the team such as motivated

behavior, aspiration for co-participation, personal value, combination of individual and organizational interests and etc. Organizational climate, involvement in working process, satisfaction with job and devotion to the organization make significant influence on effectiveness of working process and the whole organization.

Based on the research results, recommendations were developed according to the key principles of modern management.

Recommendations refer to the managers of the existing organizations and personnel to increase the productivity and effectiveness of performance. Recommendations are divided in two key parts for managers and personnel.

Part 1 - Manager: 1. In order to increase the human resources - knowledge, experience and skills, effectiveness in the organizations, there must be ensured relevant conditions for their permanent professional growth and development; 2. In order to increase the sense of the responsibility and involvement in the decision-making process, it is recommended to delegate assignments among the team members and letting them participate in the decision-making; 3. Shape teams with high professional, skillful, qualified and experienced individuals - knowledge - workers; 4. Support establishment of team principle and trust to your team; 5. Allow them to resolve problems independently in difficult and complex situations; 6. Avoid employment of comparative preference pressure on team members in the decision-making or initiating process.

Part 2 - Personnel: 1. Share the organization's mission and goal and transform them into the team's mission and goal; 2. Aspire for constant improvement and professional growth; 3. Show initiatives, pay less time to discussion around problem and find effective ways of decision; 4. Always work to attain the best result and make contribution to the organization success; 5. Be flexible and get adapted to changes quickly; 6. Ensure fair distribution of work among team members, differentiate roles, make decisions according to mutual consent.

**Research limits:** Research data were obtained through standardized tests and only quantitative research was conducted, results are not supported by qualitative research.

**Practical implications:** Managers are provided with insights that can lead to the improvement of leadership skills and team efficiency.

**Originality of the study:** Comparative analysis of leadership style compared to team effectiveness, recommendations provided for further implementation.

**Key words:** team efficiency; leadership styles; trust; roles and responsibilities; organization

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# When being open is not enough. Exploring the effect of generic versus green open innovation on companies environmental performance

FRANCESCO CALZA\* ADELE PARMENTOLA• ILARIA TUTORE♦

**Objectives.** *Be environmental friendly is an essential issue for modern companies derived not only by the necessity to respect the modern environmental regulation, but also by the need to be more competitive. One of the ways through which companies incorporate environmental issues into their strategies is through innovations that can have positive environmental effects. Indeed, it has been demonstrated that the development of green innovations, both as products or processes, is positively correlated to corporate competitive advantage (Chen et al, 2006).*

*Many definitions of green innovation exist in literature (e.g. Rennings, 2000; Kemp and Pearson, 2007; Kemp, 2010), but the most common is the follow: “Green innovation is the production, assimilation or exploitation of a product, production process, service or management or business methods that is novel to the firm [or organization] and which results, through-out its life cycle, in a reduction of environmental risk, pollution and other negative impacts of resources use (including energy use) compared to relevant alternatives” (Kemp and Pontoglio, 2007, p. 10).*

*Despite many scholars have analysed the macroeconomic and microeconomic drivers of green innovations and the factors that guarantee their success on the market (D’angelico, 2016), the majority of the study have focused the attention on “who” pushed green innovation and “why” they occur, without paying attention on “how” they are developed.*

*Moreover, studies analyzing green innovations development process have focused on firm internal perspective emphasizing the role of the inter-functional coordination (Conway and Steward, 1998; Curwen et al., 2013; Huang and Wu, 2010; Kivimaa, 2008; Pujari, 2006; Pujari et al., 2003; Sandström and Tingström, 2008), the importance of intense communication and knowledge flows, both within the company and with external actors (Curwen et al., 2013; D’angelico and Pujari, 2010; Magnusson and Berggren, 2001) and the adoption of positive HR practices (Kivimaa, 2008; Magnusson and Berggren, 2001; Sandström and Tingström, 2008).*

*Nevertheless, it is widely recognized that green innovations are, on average, more complex than non-green innovations (Andersen, 1999; De Marchi, 2012) because are characterized by higher levels of novelty, uncertainty and variety with respect to the firm’s traditional technological or market domain. The development of green innovations require indeed information and skills that are new for the firm, so it often goes beyond firms’ core competences (Steinmo and Jakobsen, 2013).*

*For this reason, the extensive empirical literature suggests that external resources play a pivotal role in green innovations development (Belin et al., 2011; Cainelli et al., 2012; De Marchi, 2012; Foster and Green, 2000; Foxon and Andersen, 2009, Horbach, 2008; Jakobsen and Clausen, 2016; Rennings and Rammer, 2009).*

*For example De Marchi (2012) analyzing the innovation practices of Spanish manufacturing firms indicates that formal cooperation with external partners is even more important for environmental innovations than for other types of innovations. Horbach (2008) and Del Río et al. (2013) report a similar result for German firms. Cuerva et al (2014) analyzing the Spanish food and beverage sector underline the existence of important differences across industries.*

*Other studies have instead analyzed how the cooperation with specific external partners can have positive effect on green innovations development. In particular, cooperation with suppliers is important to ensure the acquisition of inputs or components with eco-friendly features - which may not be readily available on the market (Seuring and Müller, 2008; Albino et al., 2009). Cooperation with universities may be needed to introduce more complex forms of environmental innovations obtained troughs R&D cooperations (Wagner, 2007; Triguero et al., 2013). Studies on knowledge-intensive business services (KIBS) have highlighted the important role of such service firms in supporting their clients’ green innovations (Klewitz et al., 2012; De Marchi and Grandinetti, 2013). Moreover, green strategies require manufacturers to interact with clients (consumers, retailers or downstream manufacturers) in order to apply a life-cycle approach and ensure the recyclability of their products (Handfield et al., 1997; Darnall et al., 2010; Thun and Müller, 2010). The exploratory analysis by De Marchi and Grandinetti (2013) takes this discussion a step further, suggesting that green innovators cooperate with an higher number of partners comparing to non-green, and that that number increases with the number of environmental concerns the firms address through their innovative efforts. Halila*

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and Rundquist (2011) also observe that networking is useful for all the successful innovators; but whereas green innovators use the network more for solving technological problems, other innovators use the network to a greater extent for financial and marketing issues.

In other words, with respect to green innovations, firms are reliant on an open innovation mode, in which the knowledge boundaries between them and the external environment become permeable (Chesbrough, 2003, 2006).

The idea of openness is that a single organization cannot innovate in isolation and needs to engage with different types of partners to acquire ideas and resources from the external environment to stay abreast of the competition (Chesbrough 2003; Ghisetti et al., 2015; Laursen and Salter, 2006).

In defining openness, Chesbrough (2003, p24) argues that “open innovation is a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as firms look to advance their technology”. Therefore, the open innovation mode can be considered an effective way to foster green innovations, which are characterized by high costs and uncertainty. Indeed, openness to external knowledge source could help firm to attenuate some of the internal constraints, such as the lack of capabilities, and to gain a competitive advantage based on green innovation. On the other side, openness could improve firms’ sustainability in more green-oriented innovation systems. For this reasons, recently some authors have coined the term *Open-Eco Innovation* referring to extensive use of external sources by the firm that want to implement green innovations (Ghisetti et al., 2015).

In particular, in contrast to closed Green Innovation where the firm that invest in R&D is often the only one that can profit from the innovation and support the entire risk of innovation process, Open Green innovation produces a larger number of outputs, since firms, by cooperating with each other, can share the risk related to innovation activities and do not suffer from the externalities produced by the innovation.

In particular, the study of Ghisetti et al. (2015) focus their analysis on the breadth and depth of the firm’s knowledge sourcing, considered respectively as the array of sources of external knowledge and the extent to which firms draw intensively on external knowledge providers (Laursen and Salter, 2006), showing that both have a positive effect on green innovation.

However, focusing just on breadth and depth of external knowledge, authors do not verify if open innovation is effectively related on more green innovation outcomes and do not focus the attention on the mode through which open innovation is conceived and realized.

Despite the importance of external sources to realize green innovations is a phenomenon largely studies by the authors, authors do not analyse in detail if the adoption of an open innovation model have a direct effect on companies environmental performance. Moreover existing studies, using CIS database, link the generic company’s attitude to cooperation to green performance without considering the cooperation’s aim. On the contrary we expect that only cooperation with green aims have a positive influence on companies environmental performance. Consequently we try to answer to the following research question:

*RQ1: Is there a difference in environmental performance among companies that are “green open” and companies that are open but not for green?*

Moreover, the literature documented the use of different organisational modes through which inbound and outbound open innovation can be implemented (Granstrand, 2004; Lichtenthaler, 2004; Lichtenthaler, 2005) such as: in-licensing, minority equity investments, acquisitions, joint ventures, R&D contracts and research funding, purchase of technical and scientific services and non-equity alliances.

These modes require an increasing level of complexity and we image that they can have a different effect on the success of green innovation strategy. Consequently, we try to answer to the following research question:

*RQ2: How the adoption of different external organisational modes affect the companies environmental performance?*

**Methodology.** This study uses a unique data set that was built by integrating two data sources: i) the CSRHub database for data on companies environmental performance and ii) Zephyr database, a source frequently used in the study of alliances and joint ventures (e.g. Anand and Khanna, 2000; Schilling and Phelps, 2007; Rosenkopf and Padula, 2008).

The CSRHub database measure the CSR performance of 17.913 worldwide public and private companies. For each company the CSRhub considers the four aspect of companies’ social performance - Environment, Employees, Community, and Governance - creating four different indices based on a 100-point rating scale (poor-to-excellence scale).

Zephyr database, instead, is a database of global deals and rumours provided by Bureau van Dijk. This database has information on deals and rumours around the world and includes links to company financials, gives pre and post deal multiples and additional features about deals’ rationales.

Raw sample consists on 832 companies and it is obtained considering all the companies that operates in EU countries (except UK) that received a score on CSRHub in 2018. Considering data availability for independent and control variables, final sample consists on 773 companies.

With regard to collaboration dimension, we collected data about around 20.000 equity deals in the last 10 years in which companies in the sample appeared as a target, vendor or acquiror. The non equity deals are excluded because are not registered in the Zephyr database. Moreover we decide to exclude from the analysis the minority stake because they often have financial aims and do not imply knowledge exchange.

Consequently we first classify the deals according to their type distinguishing between Joint Ventures and Merger & Acquisitions, then we manually classify each deal according to its goal - green vs non green, by analyzing the partners of the deals and the information provided by advisors.

In order to provide evidence to our research question, we develop several regression analyses where CSRHub Environment Index is considered our dependent variable, while the explanatory variables consist respectively of the number of general collaborations implemented, number of green collaborations implemented, number of non-green collaborations implemented, number of Green Joint ventures, number of green M&As.

To test the hypotheses, we also include several control variables: the company's total annual revenues, as a proxy for size, because studies on environmental innovation or environmental proactivity in general, have found that size affect companies' eco-attitude; the company's return on equity (ROE), as a proxy for the profitability; the company's R&D expenditures as a proxy of company's innovation propensity; the company sector (IND).

In addition, considering the importance of institutional factors to foster the green of industry, we consider the level of country's Carbon Dioxide emissions (CDE) -the primary greenhouse gas emitted through human activities- per capita derived from World Bank indicators as a proxy of environmental regulatory stringency.

**Findings.** We expect that the total number of green deals positively affects the companies environmental performance. Moreover, we expect that the number of non-green deals does not influence green performance. Finally we suppose that Green Joint Ventures have a stronger effect on green performance than Green M&A.

**Research limits.** The paper is only a preliminary work that would be enhanced by considering longitudinal data analysis and related more appropriated statistical procedures.

**Practical implications.** From a practical point of view, the analysis suggests that even for big companies with internal R&D department, collaboration with other players is a viable way to improve innovation performance, especially in eco-friendly fields. Moreover, the paper suggests to companies' managers that not generic collaborations are useful but only collaboration with green aims, and also that that different collaboration modes are not equally useful to obtain good green performance. Moreover, our results suggest to policymakers to set policy mixes that support not only the firm's internal eco-innovative efforts but also its interactions with external actors and knowledge sources.

**Originality of the study.** Despite the importance of external sources to realize green innovations is a phenomenon largely analysed by the literature, studies do not examine in detail if companies that adopt an open innovation model have better green innovation performance comparing to the companies that relies on internal R&D. Moreover, even if the literature documented the use of different organisational modes through which inbound and outbound open innovation can be implemented, existing studies do not explore how the adoption of different modes can generate difference in environmental performance. Last but not least existing studies, using CIS database, link the generic company's attitude to cooperation to green performance without considering the cooperation's aim. On the contrary we expect that only cooperation with green aims have a positive influence on companies' environmental performance. Our paper fills this literature gap and shows that:

- the adoption of external sources of innovation positively affect green performance;
- the adoption of different external organisational modes affect the green performance in a different way; and, finally
- green performance of companies that are "green open" are better than green performance of companies that are open but not for green

**Key words:** Green Innovations; Open innovations, Joint Ventures; Merger and Acquisitions; Environmental performance

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# Internationalization of Family Business: the Prosecco family firms case

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**Objectives.** *The internationalization of firms is one of the most important topics of the current global economic scenario, because it has deeply changed the dynamics and the strategies adopted by the firms and, in a broad sense, it has influenced also the consumers' behavior and the daily lifestyle of billions of people, giving them access to infinite new possibilities and opportunities. An event with such a magnitude did not involve only the bigger companies, on the contrary it has become a priority for the greatest part of the enterprises, including also the small and medium ones. Of course, it was not an immediate change: at the beginning, only the companies with strong market power had the resources necessary for enlarge their scope, but today the international opportunities are open to all the firms. Between them, also the family firms started to rethink their strategies and positioning for remaining competitive in the global market. The case of the family businesses is particular important both for their fundamental role in the national economies, both for their typical tendency to be close to external realities and opportunities, due to the higher risk-aversion (Ray et al., 2018).*

*The aim of this paper is to understand how family firms react to foreign markets and opportunities. The main issue of the topic is to figure out if the family firms internationalize more or less respect to the other business models, and consequently if the presence of the family represents an added value or a restraint to the firm's growth. An empirical research has been done on the family firms belonging to the Prosecco District and, in particular, to the Consortium of Conegliano Valdobbiadene. The reasons that corroborate this choice are related to the great importance and success of the prosecco in the foreign markets, where it is spreading with a high growth rate, and to the huge number of family firms that are part of the District. The case gives also the opportunity to verify if the presence of the Consortium somehow influences the strategies adopted by the enterprises.*

**Methodology.** *Giving a practical example of family business behavior, the case of the prosecco sector has been studied. In particular, the focus has been on the family firms of the District of Conegliano Valdobbiadene. The choice is justified by the high presence of small family-operated businesses within the district. Moreover, the case results interesting from the theoretical point of view for the presence of the Consortium, that may support the international activities of the firms, influencing their strategies and their choices.*

*The choice of the prosecco is motivated also by the importance of its market, whose value is around 2,5 billion euros and its production reaches more than 500 million bottles, involving more than 13,500 producers<sup>10</sup>. It represents the 50% of the whole market of sparkling wines abroad and in the last years it has been the driving force in the export activities of Italian wines.*

*Once the framework has been developed, it is possible to introduce the research itself. The main purpose of the research is to understand how the family firms belonging to the District of Conegliano Valdobbiadene behave in the international markets, if they follow the general pathway defined by the theories developed about the internationalization of family firms or if some particular features, such as the presence of the Consortium or the specificity of the product, allow them to adopt different approaches and strategies. To sum up, the main questions of the research are:*

- *How do family firms of the Conegliano Valdobbiadene district behave in the international market?*
- *Do they follow the theoretical guidelines designed for the internationalization of family firms?*
- *Does the Consortium influence or not their activities?*

*In order to answer these questions, a qualitative research has been done. The choice of adopting the qualitative method rather than the quantitative one is due to the different purposes of the former respect to the latter. The qualitative approach allows to represent the view and perspective of study's participants, capturing their perspectives. As stated by Yin (2015) "the events and ideas emerging from qualitative research can represent the meanings given to real-world events by the people who live them, not the values, preconceptions, or meanings held by researchers". Moreover, qualitative research explicitly takes into consideration the contextual conditions - that is, the social, institutional, cultural, and environmental conditions - within which people's activities take place.*

*The case study, according to Yin (2009), is the preferable method when the object is to study contemporary events, but in the cases when the relevant behaviors of the actors cannot be manipulated by the researchers. The case is*

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suitable when the aim is to understand a real-life phenomenon in depth, but “such understanding encompassed important contextual conditions, because they were highly pertinent to the phenomenon of study” (Yin, 2009, p. 29). There are different applications of study cases, the most important is to explain the connections in real-life interventions that result to be too complex for the survey.

Multiple-cases are powerful tools to create theory because they permit replication and extension among than individual cases. Replication means that individual cases can be used for independent corroboration of specific proposition. This corroboration helps researchers to perceive patterns in an easier way (Eisenhardt, 1991). The evidence from multiple cases is often considered more compelling, and the overall study is therefore regarded as being more robust (Herriott & Firestone, 1983). The case study method, both single and multiple cases, can be used for testing hypothesis or building theory. In addition to this, there is also another valid argument for preferring such approach: small firms are usually more reluctant to complete questionnaires and publicly share information that can be sensitive, so the direct interview may be the only way of obtaining information from the key figure inside the firm, while the other forms of enquiry might result more problematic (Carson et al., 1995).

This empirical research is based upon the application of the multiple-cases study approach to the investigation of internationalization patterns of family firms in the District of Conegliano Valdobbiadene.

The single firm was taken as unit of analysis; the research requirements have been firstly (i) the identification of firms who consider themselves as “family firms” and secondly, (ii) the identification of firms that have already undertaken international business activities. The units of analysis were chosen among the list of firms belonging to the Conegliano Valdobbiadene District, present in the website. In the first selection, only the firms that define themselves as family firms have been taken into consideration; this first step enabled the collection of 113 contacts. The first criterium of selection was deliberately not-objective and based on the firm’s self-perception because the focus is not on a particular type of family firm (e. g. wholly family owned businesses or only managed by external figures). As it has already been explained in the literature review, there may be different forms of family business, where the members of the family are present in the ownership, in the management or in both. The choice was to consider all the types of family business. After the first step, the units have been contacted by mail and by phone. Between them only 10 were completely available for participating to the enquiry and being included in the theoretical sample.

Case study data were collected through one-to-one interviews. For logistic reasons, the interviews were conducted by phone. The interviews were conducted in Italian. All the interviews were semi-structured, with an interview protocol being used to facilitate some level of standardization and cross-case analysis.

In all the cases the person interviewed held a top-level management position in the company (managing director, general manager, manager of international operations etc.). The interviewees were first asked to talk generally about their firm, thereafter their operations in international markets, focusing on the entry mode adopted and the opportunities recognition and finally their opinion about the role of the Consortium and of the Made in Italy label in the foreign activities. Seventeen items were used for the interview, as following (in Italian):

1. Vi considerate un’azienda familiare?
2. Età dell’impresa?
3. Quali dimensioni ha l’azienda?
4. Numero di dipendenti?
5. Quale generazione sta attualmente lavorando nell’azienda?
6. Sono presenti membri della famiglia che ricoprono ruoli amministrativi?
7. Sono presenti membri della famiglia che sono proprietari dell’azienda?
8. Sono presenti manager o figure esterne?
9. L’impresa ha intrapreso attività commerciali all’estero?
10. Quali paesi sono stati coinvolti nelle attività?
11. Come siete venuti a contatto con queste opportunità?
12. Quale modalità di ingresso nei mercati esteri è stata adottata?
13. La presenza di figure esterne ha influenzato le attività internazionali? Come?
14. Qual è il ruolo del Consorzio nelle attività internazionali?
15. Come considerate il ruolo del Consorzio nelle attività internazionali?
16. C’è collaborazione tra le varie imprese del consorzio?
17. Come considerate il ruolo dell’etichetta Made in Italy nelle attività internazionali?

The 10 cases analyzed in this research regard firms belonging to the Consortium of Conegliano Valdobbiadene. Some general information about the firms were collected at the beginning of the interviews and from the website of the firms. In order to have a general view of the firms interviewed, a table has been created.

**Findings.** The firms that have participated to the research have already undertaken international trades and all of them, to a greater or lesser extent, had to change their inner structure or their strategies in order to be competitive abroad, exploit the growth chances and the new markets available.

What generally emerged from the interviews is that the firms belonging to the Consortium of Conegliano Valdobbiadene are likely to follow the theoretical path line defined for the internationalization of family firms. Like all the family businesses, these firms present some of the characteristics of the genre: the familiness, the importance of the identity and of the status, the identification and the emotional attachment of family members to the firm (Berrone et al.,

2012 in Sciascia et al., 2014). The firms take advantage of some of the typical benefits, such as the longevity of the company, thanks to the long-run orientation, higher level of cohesion and lower need to control behaviors that means also lower costs for internationalizing. There are also some negative aspects: the excess of safeguard or internal orientation that can lead to stagnation, the capital and managerial constraints, which are sources of competitive disadvantage (Carney, 2005) or the uncertainty due to the generational changeover that can undermine the resources of the firm and affect its competitiveness (Claver et al., 2009). The balance between positive and negative aspects changes from case to case and leads to different solutions and realities.

Comparing the results obtained from the research and the findings of the literature review, it is possible to state that generally there is coherence between the two parts. What has shown some discrepancies is the effect of the family within the management and the ownership.

Exhibit I. Short description of the companies

FIRM	FOUNDING YEAR	GENERATION(S)	SIZE (bottles sold)
A	1981	1 <sup>st</sup> and 2 <sup>nd</sup>	Very big
B	1985	2 <sup>nd</sup>	Very big
C	1982	4 <sup>th</sup>	Medium
D	1542	21 <sup>st</sup>	Very big
E	1868	4 <sup>th</sup> and 5 <sup>th</sup>	Very big
F	1960	2 <sup>nd</sup> and 3 <sup>rd</sup>	Medium
G	1947	2 <sup>nd</sup> and 3 <sup>rd</sup>	Big
H	1975	2 <sup>nd</sup> and 3 <sup>rd</sup>	Very big
I	2010	1 <sup>st</sup>	Small
J	1968	3 <sup>rd</sup>	Medium

Very big= >1 million

Big = 500.000-1million

Medium = 150.000-500.000

Small = <150.000

The role of the family. *Most importantly, in all the cases analyzed the family is still covering important roles within the business, carrying out different activities that concern the strategic choices, the management and the communication channels of the firm. The firms stated that at the beginning of the internationalization process the activities were wholly managed by the family members but that then, when the volumes started to grow and the activities got more complexed, they had to introduce external figures with particular experiences and skills. Basing on these statements, it is possible to formulate a proposition:*

Proposition #1: When the internationalization activities grow and the complexity raises, the family members' management is not sufficient any longer and the introduction of external managers with specific skills and experiences is needed.

*The presence of the family members in the firm's management is optimized only at medium level, confirming the inverse U-shaped relationship found between these two elements (Mitter et al., 2014). This equilibrium aims at integrating the benefits given by the presence of the family, such as the reduction of agency costs and the long-term orientation, with the contribute given by the external managers.*

*According to the theories the strong presence of the family members in the ownership should negatively affects the internationalization path of the firm (Fernández and Nieto, 2005; Majocchi and Strange, 2012; Sanchez-Bueno and Usero, 2014; Herrera-Echeverri et al., 2016), but in these cases this presence does not seem to curtail the international opportunities of the enterprises. How can it be explained? As already said before, the family presence within the firm does not present per se a constrain to the international expansion of the business, it mostly depends on the approach adopted. Adopting the SEW perspective family members can also decide to get international to reach their aspiration levels if they perceive that their family wealth is at risk (Pukall and Calabrò, 2014). In the case of a distinctive familiness, it is a source of competence (Habbershon and Williams, 1999) because it can be related to greater level of trusts (Zaefarian et al., 2016), transfer of tacit knowledge and long-term orientation. These resources and skills that cannot be easily imitated by the other players help the firm to outperform competitors (Mitter et al., 2014) but they in themselves cannot guarantee the creation of value, instead they need to be properly managed. This means that family businesses can internationalize without the initial support of external figures because they have specific resources that contribute to create competitive advantage; what might happen is that they reach a suboptimal level of performance that can be enhance with the introduction of external resources. This interpretation is also sustained by the fact that all the firms of the sample have small sizes, basing on the number of workers, and limited size is often recognized as a constraint for international growth (Claver et al., 2008; Majocchi and Strange, 2012). Another plausible answer can be found in the role of the Consortium.*

The role of the Consortium. *The discrepancy between the study research and the theories can be explained by the presence of the Consortium, which could influence the internationalization propensity of family firms. In fact, all the interviewees recognized the importance of the Consortium's role as stepping stone for starting the activities abroad: the entity gives psychological support to the firms and helps them to participate to international fairs and find new*

consumers and new opportunities. In this case the role of the Consortium is mainly coordinative: it does not substitute the firms in carrying out part of the activities and the central power is not strong enough for making decisions and avoiding competitive behaviors between the participating firms (Depperu, 1996). The consortium somehow supports the firms so that they can adopt and develop a wider international entrepreneurial orientation, fostering those attitudes, behaviors and values that can make effective the entry to international markets. In other words, the Consortium substitutes the role of non-family shareholders as external voice that can successfully accelerate the internationalization path. In addition to this, the Consortium can sustain the small firms' growth by letting them access to new resources and overcome the restrictions due to the limited size: this factor, together with the resource constraints have been often recognized as the real causes of the lower international growth of family firms (Carney, 2005; Claver et al., 2008; Majocchi and Strange, 2012; Wach, 2014). Consequently, in the second proposition it is possible to state:

Proposition #2: The presence of the Consortium allows to mitigate the closeness of family firms, reduces their constraints and supports them in the initial steps of the internationalization path.

*A greater cooperation between the firms, with the adoption of a unique strategy and a unique communication channel guaranteed by a new stronger role assumed by the consortium, would boost their returns and their economic development significantly.*

Entry mode. In all the cases studied two main strategies were principally adopted: the participation to international fairs and the use of relationship networks. The adoption of these strategies is in accordance with what has been stated for the internationalization of family firms, namely that networks of the owner-managers can help entry in to foreign markets in the first steps of internationalization (Rutashobya and Jaensson, 2004) and that informal ties can bring several benefits including access to foreign market information, access to information about foreign trade fairs, access to foreign market and access to supplied credit and training opportunities.

The opportunities found through these tools were situated, most of the time, in European countries where the prosecco market was already developed, such as UK, Switzerland and Germany. This trend is in line with the theory developed by the Uppsala school and adopted by several scholars (Zaniewska, 2012; Cesinger et al., 2013; Pukall and Calabrò, 2014), according to which, when it comes to internationalize, firms will first establish agency relations in neighboring and similar countries and that the process of internationalization will be gradual and it will depend on the progressive accumulation of knowledge of foreign markets and it will be also influenced by the size of the foreign market (Johanson and Wiedersheim-Paul, 1975). Of course, there are also cases in which the family firms were "pioneers" and contributed to developed new markets in foreign countries, but also in this case the firm decided to target "psychologically" closer markets (Gallo and Estapé, 1992). This tendency is just a witness of the family firms' aversion to risk, that is softened by choosing countries that can reduce the cultural and social obstacles. As far as the distribution strategies, the firms adopted principally the exportation, both directly and indirectly, through importers and local distributors.

Proposition #3: As far as the entry mode and the distribution strategies, the firms follow the Uppsala school's theory and undertake export activities basing on their personal social networks, following the general path line defined by the theories.

Origin and Denomination. When it has been asked to the interviewees to talk about the role of the Made in Italy label in the international markets, the general opinion was that it plays a fundamental role for the creation of added value and for guaranteeing the quality and the prestige of the product. As argued by the theories, the positive perception of the territory and the country confers positive attributes to the product, strengthening the brand equity. In this particular case, considering that the wine is identified as an "hedonic" product, the COO plays a fundamental role because the consumers can assess the quality only after the purchase, and they base on extrinsic cues, including COO, for judging the products. The Made in Italy label can leverage on different aspects of the COO effects identified by Verlegh and Steekamp (1999): the cognitive one, because of the role of Italy as one of the greatest exporting countries at global level and the quality recognized and guaranteed by the COO, and the affective one, considering that the prosecco is the symbol of simple, refined drinking, intrinsically tied to the unmistakable Made in Italy lifestyle.

Proposition #4: the country of origin effect plays a fundamental role for ensuring the competitiveness of the product abroad.

**Research limits.** This research makes different contributions to the academic debate on the internationalization process of family firms. The main contribution has been to apply the theories and the studies developed for the family firms' behavior abroad in the contest of the Consortium of Conegliano Valdobbiadene. The case studied allowed to verify if the presence of the consortium has concrete effects or consequences on the strategies and decisions made by the firms. The results showed that this presence concretely affects the strategies adopted by the firms, helping them to be more open to external realities and opportunities and supporting them in the first steps of the internationalization process. The research also allowed to know better the characteristics and the peculiarities of the Prosecco District, that represents a specific case in the wider wine markets, which has already been studied in other papers. Differently from the wine, that is generally widespread in all the Italian territory and abroad as well, the prosecco is peculiar of the North-east area, so it has deeper ties with the territory and the Italian origins. Notwithstanding this, the research is not without limitations. In facts, this study represents just a first attempt to study the families' behavior and the dynamics of

internationalization in the Prosecco District. First of all, the sample used is relatively limited, considering the number of the enterprises belonging to the Consortium: further studies might involve a bigger number of firms in order to verify the reliability of the findings abovementioned, adopting also different types of research. The data collected in this research were not sufficient to properly observe the intra-generational dynamics, but it is supposed to be a fundamental aspect for understanding the strategies and the behavior of the firms. Apart from that, also other variables such as the manager's characteristics and the cultural influences were not included in this research, but they might be taken into consideration for studying these realities by adopting different perspectives and valuating different variables.

**Practical implications.** As showed, some scholars found that the presence of family members can give positive contributes to the firm's growth thanks to the know-how, the intrinsic value system or the long-term orientation (Zahra, 2003; Carr and Bateman, 2008). Other stated that the family represents a constraint to firm's development abroad because of its tendency to ignore external opportunities and inputs and because of their high risk-avoidance (Gallo and Estapé, 1992; Carney, 2005; Donckels and Aerts 1998). The difficulties in finding a unique solution led the scholars to identify an inverse U-shaped relationship between the family presence and the firm's performances abroad, meaning that the best way to make the firm efficient is to limit the presence of the family members, without totally dismissing them (Sciascia e al., 2013). Other important elements identified in the literature review regard the presence of subsequent generations, which can help to be less risk-adverse and to open the firm to new opportunities, the entry mode adopted by the family business and the cultural influence (Vescovi 2018); the choices taken regarding these last two aspects reflect the family's tendency to be more cautious, by opting for the owner's relationships network as a means for discovering new opportunities (Kontinen and Ojala, 2010) and by choosing countries that are geographically and culturally closer to the domestic markets (Johanson and Wiedersheim-Paul, 1975). Nevertheless, the absence of "absolute truths", some generic path lines have been identified for defining the family firms' behavior abroad. The cases chosen, related to the family firms belonging to the Consortium of Conegliano Valdobbiadene producing prosecco, allowed to observe and study the role played by the Consortium. It helps to make the family members less risk-adverse and to make the firms more open to external opportunities, substituting *de facto* the external ownerships in their role as mediators. As far as the management, the results were in line with what has been already stated: the presence of external (non-family) managers becomes fundamental for optimizing the international activities because they introduce some specific knowledge and experiences that are necessary for being competing in the global market.

The Consortium is playing an important role for the internationalization of firms, allowing them to participate to international fairs and to find new consumers, but its supportive role can be even bigger. The activities of the Consortium are mainly focused on the protection of the product and its denomination; these activities are fundamental, but a more proactive role of this entity could really make a difference for the district's performances. According to the responses given by the interviewees, the whole prosecco district would need to be re-organized for enhancing the growth of the product; the current situation, with three different consortia, contributes to create confusion and ambiguity in the consumers, especially for the foreigners. A solution might be the institution of a unique consortium, whose role should shift from the mere protection and promotion to a real support to export activities and distribution, with the definition of specific communication and distribution strategies adopted by all the participants. In addition to this, the creation of a real Made in Italy label that could guarantee the quality of the origin of the products would protect them from the international competition with the counterfeiting products, without disorienting the consumers and helping them in the purchasing choices.

**Originality of the study.** The aim of this thesis was to present the state of the studies on the internationalization process of the family firms and to understand how these behave in foreign markets. First, it has been done a deep review of the literature regarding this issue, resuming great part of the papers that have been published in the last 30 years. The literature review allowed to identify and define the main topics discussed and the relative theories developed. What has been found in the review is that still today it is not easy to find a theory that can generalize the approach of family businesses to international trades. This ambiguity is mostly due to the uncountable variables that contribute to determine the firm's behavior and choices for what concerns the internationalization process, such as the local culture, the business culture, the owner/manager's characteristics, the presence of subsequent generations, the peculiarities of the product and the market and so on. Several aspects have been analyzed, both internal and external. One of the topics most discussed and conflicting is related to the role and the influence of family members: this aspect has been studied deeply and it has led to different and opposite findings.

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# Il passaggio generazionale nelle piccole e medie industrie: management over 60 e over 70 a confronto

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**Obiettivi.** Il presente lavoro rappresenta la fase istruttoria di una ricerca più ampia, volta a individuare i modelli manageriali in divenire nelle Piccole e Medie Industrie Italiane. Il tema del rinnovamento delle risorse umane nell'impresa esprime grande rilevanza in ogni ambito aziendale (Caputo et al., 2017), per le ripercussioni che ne derivano sulla gestione stessa dell'impresa. Assume caratteri di criticità quando il ricambio generazionale avviene nelle imprese (familiari) di piccole e medie dimensioni, in cui la centralità della risorsa umana emerge nel suo ruolo essenziale (Masciarelli e Principe, 2010; Caputo et al., 2017). In questo tipo di imprese infatti, il passaggio generazionale configura un'opportunità di crescita, un elemento strategico in grado di condizionare lo sviluppo dell'impresa (Ferrari 2005; Uhlaner et al, 2009; Giarretta 2014; Dana e Ramadani, 2015; Caputo et al., 2017); ma può altresì volgere a situazioni di crisi aziendale quando scarsamente preparato (dell'Atti, 2007), impattando sulla longevità delle stesse (Bonti e Cori, 2011): solo il 30% delle imprese sopravviverebbe al primo passaggio (Caputo et al., 2017). Buona parte della letteratura sul tema del passaggio generazionale nelle imprese di piccole e medie dimensioni, a matrice prevalentemente familiare, è pubblicata tra la fine degli anni 80 e degli anni 90; tuttavia, è tutt'ora avvertito come un tema critico, anche nella letteratura internazionale (per una revisione della letteratura, si rimanda a Bona e Cori, 2011; Dana e Ramadani, 2015; Caputo et al., 2017). Tutt'altro che nuovo, quindi, il tema del ricambio generazionale è stato oggetto di attenzione, sia da parte di operatori del sistema economico (imprese, consulenti, professionisti,...) che dall'Accademia (Bracci e Vagnoni, 2007; ); numerosi Autori si sono concentrati sugli aspetti più prettamente legislativi e giuridici, connessi alle tematiche successorie, ma anche nelle declinazioni settoriali, dall'agricoltura (si citano solo a titolo d'esempio, Barbero e Mantino, 1988; Russo e Sabbatini, 2001; Santarelli, 2001; Corsi et al., 2005; Henke et al, 2013; Carbone e Corsi, 2014), a, più diffusamente, l'impresa familiare e medio piccola (tra gli altri, Allegra 1995; Provasi, 1999; Favretto et al., 2003; Ferrari 2005; Dell'Atti, 2007; Halter et al., 2009; Bonti e Cori, 2011).

Gli aspetti legali e procedurali sono rilevanti, per la criticità che rivestono<sup>1</sup>; innegabili, le ripercussioni sulla profittabilità stessa dell'impresa (Uhlaner et al, 2009; Sciascia et al., 2013; Dana e Ramadani, 2015), il c.d. family effect (Dyer, 2006) anche nella relazione con mercati esteri (Marino e Gallucci, 2011); tuttavia, il cuore strategico del passaggio generazionale - in questo tipo di imprese, è assunto dal capitale umano, che riveste un ruolo definito come 'essenziale' (Masciarelli e Principe, 2010) sotto diversi punti di vista:

- per la formazione di cui necessitano i successori (Handler, Kram, 1998; Lank, 2001; Gambel, 2004; Bonti e Cori, 2011; Caputo et al., 2017), anche grazie all'integrazione e all'adattamento della conoscenza al contesto (Chirico et al., 2011; Chirico e Bau', 2014)
- per gli aspetti psicologici collegati - le relazioni familiari che legano i successori con chi li precede, che possono generare conflitti di diversa natura ('task, process, relationships' - Jehn, 1995, ripreso poi tra gli altri da Caputo et al., 2017) ed influenzare anche pesantemente il successo del processo di ricambio stesso (Favretto et al, 2003; Caputo et al., 2017) ma anche lo stile manageriale (Uhlaner, 2009), in ragione delle diverse competenze del successore, che si fondono col sapere trasmesso da chi precede in ruolo Sciascia et al., 2013).

Non accade di rado, inoltre, che la successione avvenga con operazioni di management buy-in (Bruce e Picard, 2006; Scholes et al., 2008; Halter et al., 2009), qualora internamente non vi siano risorse preparate per (o disposte ad) assumere il ruolo (Scholes et al., 2008; Caputo et al., 2017) ovvero per rafforzare il management e, di conseguenza, dare nuova linfa all'impresa nel suo complesso.

Oltre ai citati, altri aspetti - molto spesso latenti - rivestono una rilevanza decisiva per il successo del ricambio generazionale: indirettamente percepiti, tendono ad essere sottostimati, generando conflitti negli obiettivi, nelle modalità di gestione o semplicemente per incompatibilità personale (Caputo et al, 2017) e, nel tempo, problematiche di complessa soluzione. La duplice natura - lavorativa e familiare - che lega i soggetti coinvolti nel ricambio (Sciascia et al, 2013; Caputo et al., 2017), la non semplice individuazione dei soggetti a sostituzione degli uscenti, la preparazione

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<sup>1</sup> Singer, 2005; Dell'Atti, 2007; Bassilana e Nobili, 2011. Sotto analisi, ad esempio, l'analisi del cambiamento nella natura giuridica dell'impresa (ad esempio, da forma individuale - o societarie semplici - a forme più complesse ed evolute, v. Ferrari, 2005), le ripercussioni della sostituzione delle figure uscenti con un management che non appartiene alla cerchia familiare (Franciosi, 2005 in Ferrari, 2005; Bonti e Cori, 2011). D'altra parte, la successione imprenditoriale come un processo complesso, si sviluppa per gradi ma con una durata variabile nel tempo ed estendendo la competenza ad una pluralità di ruoli organizzativi (Cabrera-Suàrez et al., 2001).

dei medesimi, che tende a modificare ancorché stravolgere lo stile manageriale, generando discontinuità rispetto al passato (Handler, 1992; Gersick et al., 1997; Mazzola et al., 2008; Caputo et al., 2017), la rigidità al cambiamento dell'organico aziendale, talvolta non adeguatamente preparato (o supportato nella gestione del consenso interno) ad accogliere il cambiamento, e la reticenza del soggetto uscente, che tende a ritardare - per diversi motivi (legali, amministrativi, psicologici) il passaggio di consegne alla generazione successiva.

Educate e supportate, le imprese di piccole e medie dimensioni in Italia hanno vissuto il primo ricambio generazionale, dal fondatore agli eredi, attorno agli anni 70. Il tema, oggi, sembra non essere esaurito, tanto in letteratura, che afferma con forza multidimensionalità e criticità della fase di passaggio, quanto nella realtà imprenditoriale. Nei prossimi 10-15 anni, dovrà fisiologicamente avvenire una nuova fase di ricambio in queste realtà imprenditoriali, che presentano una natura prevalente di impresa familiare. La ricerca qui proposta utilizza un approccio descrittivo dello stato attuale di un campione eterogeneo di imprese, rispetto alle quali si sviluppa l'analisi dei dati sui ruoli dirigenziali oggetto di passaggio con un orizzonte temporale di 10-15 anni. In particolare, l'analisi dei ruoli consentirà di distinguere le figure dirigenziali dalle altre, e di descriverne i caratteri qualificanti. I risultati del presente lavoro rappresentano dunque la base informativa, descrittiva della realtà dei ruoli dirigenziali, funzionale alle fasi successive della ricerca, in ragione del forte legame con il passaggio generazionale e dunque con i modelli di business in divenire nelle piccole e medie imprese.

**Metodologia della ricerca.** La ricerca si è focalizzata su un'area specifica, scelta per l'indiscussa vocazione industriale, correlata alla presenza storica di distretti industriali noti a livello italiano, la provincia di Brescia, localizzata nella produttiva regione Lombardia.

In una prima fase interlocutoria, volta a quantificare il passaggio che investirà le imprese di piccole e medie dimensioni della provincia nella sua interessa, sono stati raccolti in forma aggregata i dati provinciali relativi alle società di capitali con meno di 50 dipendenti ed ai ruoli manageriali suddivisi per fasce d'età, forniti da Infocamere (su banca dati Excelsior) con interrogazione diretta. Secondo Camera di Commercio, si tratterebbe di circa 26.000 imprese attive sul territorio - 33.500 c. le registrate (Tab.1).

Tab. 1: la distribuzione del tessuto imprenditoriale 'società di capitali con meno di 50 dipendenti' nel territorio di Brescia

Classe di Addetti	Registrate	Attive		
0 addetti	10.808	7.487	<b>cariche amministrative</b>	<b>44.256</b>
1 addetto	6.997	5.315		
2-5 addetti	7.678	6.347	<b>socio</b>	2.871
6-9 addetti	3.035	2.651		
10-19 addetti	3.064	2.722	<b>amministratore</b>	32.877
20-49 addetti	1.639	1.460		
Totale	33.221	25.982	<b>Altre cariche</b>	8.508

Fonte: elaborazione dell'Autore su dati Infocamere

I dati sugli over 70 nelle società di capitali con meno di 50 dipendenti sono consistenti, toccando le 5.070 persone registrate: poco meno di 4.000 gli amministratori che hanno più di 70 anni, e che rappresentano ben il 12% delle persone che ricoprono questa carica nell'intero territorio di Brescia. Le percentuali si riferiscono all'analisi delle società di capitali bresciane con meno di 50 dipendenti, per le quali si è calcolata l'incidenza delle persone over 70 che rivestono la carica di socio, amministratore o altra carica, rispetto al totale di persone che rivestono il medesimo ruolo.

Tab. 2: gli over 70 sul territorio bresciano nelle società di capitali con meno di 50 dipendenti

Classe di Carica	Classe di Età	Persone Registrate	% su over 70	CARICHE	%
<b>Socio</b>	<b>&gt;= 70 anni</b>	234	5%	675	6%
<b>Amministratore</b>	<b>&gt;= 70 anni</b>	3.872	76%	8.755	81%
<b>Altre cariche</b>	<b>&gt;= 70 anni</b>	964	19%	1.321	12%
<b>totale cariche over 70</b>		5070		10.751	

Fonte: elaborazione dell'Autore su dati Infocamere

In particolare, gli amministratori over 70 rappresentano il 76% (3.872 persone) delle persone over 70 impiegate. I soci over 70 rappresenterebbero solo il 5% del totale teste in passaggio imminente (tab. 2). Il conteggio degli over 70 risulta ancora più rilevante se si considerano tutti i ruoli assunti dalle persone in esame: incrociando quindi i dati sulle persone con i numeri relativi alle cariche, risulta che ogni persona in passaggio (5070) assume in media poco più di 2 ruoli (precisamente, 2,12), per un totale di 10.751 cariche rispetto alle quali si prevede un passaggio generazionale nell'arco di 5-10 anni. Più in particolare, si evidenziano in tabella 3 i dati riassuntivi: la categoria over 70 evidenzia 8.755 ruoli da amministratore che saranno oggetto di naturale passaggio generazionale, ovvero l'81% delle cariche over 70 per le quali avverrà ricambio. Per la categoria socio, le cariche assunte da over 70 sono poco meno di 700

(675, il 6% del totale). Complessivamente, quindi, più dell'80% dei ruoli rivestiti da over 70 nelle società di capitali con meno di 50 dipendenti del territorio bresciano, si concentra nella categoria amministratore.

Per individuare un campione di imprese, rappresentative del territorio e rispetto alle quali accedere ad informazioni approfondite, si è individuata l'associazione del territorio legata ai servizi per le Piccole e Medie Industrie, Apindustria Brescia. Apindustria, l'Associazione delle Piccole e Medie Industrie di Brescia, si rende disponibile ad una collaborazione sul tema, condividendo i dati anagrafici delle imprese associate che rispondono ai criteri di ricerca "società di capitali con meno di 50 dipendenti". Restringere l'analisi alle società di capitali rappresenta una scelta obbligata dalla possibilità di accedere alle informazioni di dettaglio nella banca dati di appoggio, AIDA. Complessivamente, il database che emerge è costituito da 524 profili di piccole e medie industrie, che rispondono ai criteri di selezione "società di capitali con meno di 50 dipendenti". A verifica e completamento dei dati del CRM associativo, il database è incrociato e integrato con le informazioni della banca dati AIDA. Le posizioni dirigenziali indagate sono classificate da AIDA in 12 ruoli. I dati anagrafici di dettaglio sono aggregati per fascia d'età. Si evidenziano due macro fasce di riferimento: over 70 (per coerenza con i dati forniti sull'intero territorio bresciano dalla banca dati Infocamere); 60 a 69 anni, a completamento della precedente. Le fasce in esame sono scelte in funzione degli obiettivi conoscitivi della presente ricerca esplorativa, ovvero dare una precisa quantificazione del fenomeno del passaggio generazionale per i prossimi 10-15 anni, nel territorio oggetto di esame.

Il campione di riferimento è composto prevalentemente da imprese piccole, con un numero di dipendenti contenuto. Il dettaglio puntuale della rappresentanza per dimensione si trova nella tabella 3. La frequenza relativa della categoria 21-50 è pari al 34% del campione. Un residuale 2% è rappresentato da imprese con un numero di dipendenti tra 50 e 100. Il 36% delle imprese in esame si trova nella categoria 0-10, si tratta le realtà più piccole e meno strutturate dal punto di vista organizzativo. Complessivamente, il 55% delle imprese esaminate si trova nella fascia 0-15 dipendenti. Nelle 524 imprese, trovano occupazione nei ruoli in esame circa 1.400 persone, (più precisamente, 1.367 persone esaminate), di cui 449 è rappresentato da donne - 32% delle persone impegnate in ruoli dirigenziali.

Tab. 3: Struttura dimensionale del campione, per numero di addetti

n. ADDETTI	0 - 5	6 - 10	11 - 15	16 - 20	21 - 50
%	16%	20%	19%	9%	34%

Fonte: elaborazione dell'Autore su dati Aida

Selezionate le cariche di interesse (si vedano in tabella 3 i ruoli e le corrispondenze), emerge come le 1367 persone in ruoli dirigenziali assumano un complessivo di 2.640 posizioni (tabella 4). Si tratta di poco meno di due ruoli pro capite (1,93). Suddividendo il database per fascia d'età anagrafica del soggetto, la ricerca esamina in primis gli over 70, per coerenza con l'analisi condotta sui dati aggregati relativi all'intera provincia di Brescia; quindi, la fascia 60-69, temporalmente prossima alla prima e mantenuta distinta nell'analisi. In entrambe le fasce d'età, i ruoli indagati corrispondono ai diversi livelli di responsabilità e sono esaminati nel dettaglio per dimensione aziendale, rapportata al numero di addetti. Le società con manager over 70 (ovvero imprese che presentano nelle proprie alte cariche, soggetti operativi che hanno un'età superiore a 70 anni) sono 182, il 35% del totale società di capitali con meno di 50 dipendenti, associate ad Apindustria Brescia. Vi si collocano 217 persone (16% delle persone analizzate), spalmate su 386 ruoli dirigenziali.

Tab. 4: Il campione utilizzato - ruoli e persone

	TOTALE	OVER 70		60-69	
<b>AZIENDE</b>	524	182	35%	196	37%
<b>TESTE</b>	1367	217	16%	262	19%
<b>RUOLI ESAMINATI</b>	2640	386	15%	470	18%

Fonte: elaborazione dell'Autore su dati Aida

Similmente, le imprese coinvolte sull'analisi della fascia d'età 60-69 sono 196 e rappresentano il 37% del totale delle società di capitali associate, con meno di 50 dipendenti. In questa fascia si individuano 262 persone, spalmate su 470 diversi ruoli dirigenziali. Complessivamente, gli over 60 sono 479, ed assumono 856 diversi ruoli.

La fascia over 70 coinvolge il 35% delle imprese, in cui trovano collocazione 217 dirigenti (over 70), impegnati in 386 diversi ruoli. Si tratta in media di 1,78 ruoli pro capite. Nella tabella 5 si propone il dettaglio dei ruoli di Amministratore così come descritti dalla banca dati AIDA.

Tab. 5: over 70 - dettaglio frequenze relative

RUOLI/DIMENSIONE AZIENDALE	1 - 5	6 - 10	11 - 15	16 - 20	21 - 50	TOTALE
President/Chairman	2%	3%	5%	4%	8%	22%
President/Chairman; Auditor	0%	1%	0%	0%	3%	4%
Vice President/Vice Chairman	0%	0%	0%	0%	1%	1%
Proxyholders; Representative	0%	0%	0%	0%	1%	2%
R&D/Engineering manager	0%	0%	1%	0%	1%	2%
Senior management employee	3%	5%	6%	5%	16%	35%
Highest executive	0%	1%	0%	0%	1%	2%
Member	2%	2%	2%	1%	4%	11%
Member; Unspecified executive	0%	0%	1%	0%	0%	2%
Unspecified executive	1%	3%	2%	3%	10%	20%
<b>TOTALE</b>	<b>9%</b>	<b>16%</b>	<b>17%</b>	<b>13%</b>	<b>45%</b>	<b>386</b>

Fonte: elaborazione dell'Autore su dati Aida

La categoria più rappresentata - senior management employee - conta il 35% del totale ruoli over 70; i ruoli da Presidente (che nella nostra sintesi raggruppano le due categorie di Presidente elencate e la categoria Vice Presidente) contano per il 25%, per un complessivo di 103 posizioni in passaggio nel prossimo futuro. Nel dettaglio della tabella 6, i ruoli si distribuiscono prevalentemente in realtà con '21-50 dipendenti', ma le imprese con meno di 20 dipendenti pesano complessivamente per il 50% dei 386 ruoli.

Tab. 6a: over 70 - frequenze relative distribuzione dei ruoli in passaggio per dettaglio di età e dimensione aziendale

	ETA'																				TOT	
	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	91		92
01-5	0,78%	1,30%	0,78%	0,52%	0,52%		0,52%	1,30%	0,26%	1,04%	0,52%	0,78%				0,78%						9,07%
6 - 10	1,55%	0,78%	1,30%	0,52%	2,33%	0,52%	0,78%	0,52%	2,07%	2,59%	0,78%		0,78%			0,26%				0,52%	0,52%	15,80%
nov-15	0,78%	5,70%	1,81%	0,78%	1,04%	0,52%	1,30%	1,81%	0,26%	0,78%	0,52%			0,78%	0,52%	0,52%						17,10%
16 - 20	1,81%	0,52%	3,63%	0,52%	1,04%	0,78%	0,78%	0,52%	0,52%	2,07%					0,26%		0,26%					12,69%
21 - 50	5,70%	5,19%	2,59%	4,92%	2,85%	3,37%	4,15%	3,11%	3,11%	3,63%	1,81%	0,78%		0,26%	1,04%		1,55%	0,26%	0,26%		0,52%	39,6%
<b>TOT</b>	<b>10,6%</b>	<b>13,5%</b>	<b>10,1%</b>	<b>7,25%</b>	<b>8,03%</b>	<b>5,18%</b>	<b>7,51%</b>	<b>7,25%</b>	<b>6,22%</b>	<b>10,1%</b>	<b>3,63%</b>	<b>1,55%</b>	<b>0,78%</b>	<b>1,04%</b>	<b>1,81%</b>	<b>1,55%</b>	<b>1,81%</b>	<b>0,26%</b>	<b>0,78%</b>	<b>0,52%</b>	<b>0,52%</b>	<b>100%</b>

Fonte: elaborazione dell'Autore su dati Aida

Tab. 6b: over 70 - frequenza relativa ruoli in passaggio distinti per dimensione aziendale

RUOLI/DIMENSIONE AZIENDALE	1 - 5	6 - 10	11 - 15	16 - 20	21 - 50	TOTALE
Amministratore	8%	14%	15%	13%	41%	90%
Altre cariche manageriali	0%	1%	2%	0%	7%	10%

Fonte: elaborazione dell'Autore su dati Aida

L'analisi per la fascia d'età 60-69 anni compiuti viene condotta similmente: 196 le imprese analizzate; 262 le persone in posizioni amministrative e dirigenziali. In media, 1,34 soggetti per azienda. Nel complesso, 470 posizioni manageriali coinvolte: 1,74 ruoli pro capite. L'89% dei ruoli, ovvero 420 posizioni, è da Amministratore (Tabella 7). I ruoli da Presidente (che raggruppano le categorie di Presidente e Vice Presidente) contano per il 25% del totale ruoli in esame, mentre la categoria più rappresentativa nella classificazione AIDA è la senior management employee (37% del totale ruoli).

Tab. 7a: fascia 60-69 - ruoli assunti - distinti per dimensione aziendale

PERSONE E RUOLI/		1 - 5	6 - 10	11 - 15	16 - 20	21 - 50	TOTALE	
DIMENSIONE AZIENDALE							%	#
PERSONE	Frequenza assoluta	23	39	39	21	104	226	
	Frequenza relativa	10%	17%	17%	9%	47%	100%	
RUOLI	<b>Amministratore</b>	8%	13%	16%	10%	43%	89%	420
	<b>Altre cariche manageriali</b>	0%	2%	2%	0%	6%	11%	50
	Frequenza assoluta	41	68	83	43	235	470	
	Frequenza relativa	8%	15%	18%	10%	49%	100%	

Fonte: elaborazione dell'Autore su dati Aida

Si sono quindi indagati i tre ruoli più rappresentativi, per evidenziare la probabilità di assunzione di più ruoli. Considerato il ruolo in analisi, si è valutato quanto sia probabile che lo stesso soggetto assuma anche uno dei tre

principali ruoli esaminati. I senior manager employee sono anche presidente nel 47% dei casi, mentre tendenzialmente 7,4 presidenti su 10 sono anche senior manager employee. Il livello di responsabilità unspecified executive, fa riferimento a figure di senior management employee in 7 casi su 10, mentre nel 86% dei casi è anche presidente.

Tab. 7b: over 70 - dettaglio probabilità assunzione incrociata tra i ruoli più rappresentati

RUOLI ASSUNTI	Popolazione over 70	probabilità relativa di assunzione del seguente ruolo			tutti i ruoli
		Senior management employee	President/Chairman	Unspecified executives	
Senior management employee	134	100%	47%	37%	16%
President/Chairman	84	74%	100%	48%	31%
Unspecified executives	75	71%	86%	100%	29%

Fonte: elaborazione dell'Autore su dati Aida

Tab. 8: 60-69 - frequenze relative distribuzione dei ruoli in passaggio per dettaglio di età e dimensione aziendale

		ETA'										
		60	61	62	63	64	65	66	67	68	69	totale
FASCE DI DIPENDENTI	1-5	1%	2%	0%	1%	0%	1%	1%	0%	1%	1%	9%
	6-10	1%	3%	1%	1%	1%	1%	2%	1%	1%	2%	14%
	11-15	3%	1%	3%	2%	2%	2%	1%	1%	1%	1%	18%
	16 - 20	3%	0%	1%	1%	0%	2%	0%	0%	1%	2%	9%
	21 - 50	7%	3%	7%	5%	6%	5%	3%	4%	6%	2%	46%
	Totale	15%	10%	12%	10%	10%	10%	7%	7%	10%	10%	470 (100%)

Fonte: elaborazione dell'Autore su dati Aida

Tab. 9: 60-69 - dettaglio probabilità assunzione incrociata tra i ruoli più rappresentati

RUOLI ASSUNTI	Popolazione 60-69	probabilità relativa di assunzione del seguente ruolo			tutti i ruoli
		Senior management employee	President/Chairman	Unspecified executives	
Senior management employee	176	100%	38%	39%	24%
President/Chairman	90	74%	100%	49%	38%
Unspecified executives	95	73%	46%	100%	43%

Fonte: elaborazione dell'Autore su dati Aida

Le figure amministrative per la fascia 60-69, presenti in aziende più piccole (con meno di 50 dipendenti), si commisurano in 470, il 46% dei quali si concentra nella categoria 21-50 dipendenti.

**Risultati.** Dai dati emerge come il passaggio generazionale interesserà nel prossimo futuro, un numero molto elevato di imprese - ma ancora di più di persone, molte delle quali spalmate su più incarichi lavorativi. L'indagine ha confermato come le imprese più piccole siano le più destrutturate dal punto di vista del management, che assume forme complesse nella dimensione più ampia qui analizzata (21-50 dipendenti). Si rileva una fluida contiguità delle risultanze emergenti dalle due fasce d'età analizzate: si tratta di 1,19 persone over 70 per impresa; 1,34 soggetti tra 60 e 69 anni per impresa. Tra i ruoli esaminati, le figure over 70 più rappresentate nel campione sono le figure di presidente (22%); senior manager (35%) e unspecified executive (22%), che complessivamente contano per il 77% del campione. Le medesime figure rilevano molto similmente nella successiva fascia 60-69, in cui pesano per il 19%, 37% e 20%. L'analisi delle relazioni tra i ruoli più rappresentati fa emergere posizioni multitasking, in cui il singolo assume più ruoli dirigenziali nelle PMI. In particolare, in entrambe le fasce d'età analizzate, 7 Presidenti su 10 tendono a coprire la carica di senior manager (74%), mentre solo il 48-49% copre la carica di unspecified executive. In entrambe le fasce, le donne sono scarsamente rappresentate: meno del 20% (18% c. dei ruoli over 70 in passaggio, il 19% dei 60-69). Alcune differenze si riscontrano tra le due fasce d'età analizzate, e sembrano legate all'età anagrafica dei soggetti in esame: i dati infatti confermano il rilievo delle figure di executive per i senior manager, mentre entra in discussione la posizione di Presidente, che viene assunta molto meno di quanto rilevato nella fascia over 70. Similmente, gli unspecified manager tendono ad assumere il ruolo di presidente in 46 imprese su 100: nella fascia over 70, si trattava del doppio - 86% degli unspecified manager che erano anche Presidenti. Di forte interesse, per le ripercussioni che determina nella successione (in primis, nella valutazione del numero dei successori ai ruoli assunti), il nucleo di persone che assumono contemporaneamente i tre ruoli amministrativi più rappresentati in impresa. Inaspettatamente, le percentuali relative rimangono pressoché costanti, con variazioni al di sotto del 3%.

**Limiti della ricerca.** Il presente lavoro costituisce la fase istruttoria di una ricerca focalizzata sul cambiamento negli stili manageriali, legato alle nuove generazioni che subentrano a 'vecchie' figure dirigenziali in uscita. La

prospettiva del ricambio è 10-15 anni. Non si giunge, in questa fase descrittiva della ricerca, ad una disamina dei modelli manageriali in essere né si formulano ipotesi sulle implicazioni organizzative e gestionali che deriveranno dal passaggio stesso. Per le imprese del campione, sarà oggetto della fase successiva del lavoro, che si concentra sulla profilazione del successore (età, formazione, esperienze accumulate in Italia e all'estero, affiancamento, etc.), tramite questionario qualitativo compilato in forma anonima digitalmente..

**Implicazioni pratiche.** La ricerca è supportata dall'Associazione delle Piccole e Medie Industrie di Brescia che, sollecitata ad una riflessione sul tema del ricambio generazionale, ha rilevato esigenze di supporto sul tema, da parte delle imprese più piccole e destrutturate: tendono a ritardare la fase di ricambio generazionale, non conoscono gli strumenti legati più idonei, molto spesso mancano di consapevolezza. La ricerca, nella sua fase istruttoria, ha consentito quindi all'Associazione di dimensionare correttamente la rilevanza del tema, e di strutturare una fase di indagine diretta delle esigenze di supporto delle imprese nel processo di successione.

**Originalità del lavoro.** Il presente lavoro segue la letteratura italiana ed internazionale sul tema, individuando le criticità da approfondire nella ricerca; in questa fase, pur introduttiva, fornisce i dati quantitativi dello stato di anzianità degli assetti dirigenziali per le piccole e medie industrie, fornendo la fotografia di dettaglio di un territorio particolarmente sviluppato dal punto di vista industriale, che si presenta in mutevole divenire nei modelli di business, per i prossimi 10-15 anni. Si evidenziano inoltre similarità e differenze tra due generazioni di imprenditori, nel confronto tra i dati relativi agli over 70 ed alla fascia d'età 60-69, immediatamente precedente.

**Parole chiave:** Piccole e Medie Industrie, ricambio generazionale, management

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# Continuity and growth in the family business: an empirical analysis within the wine sector

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**Objectives.** *This paper investigates the governance of family businesses operating in the wine sector of the Etna region, with the aim of analysing their influence on internationalisation strategies.*

**Methodology.** *Case study of the Etna area characterised by a large number of family businesses with a high degree of longevity which, as such, lend themselves to a dynamic study of the impact that the overlap between the logic of family, property and management has on the management and governance of the firm and on its strategic choices.*

**Findings.** *From the analysis of the sample data, it emerges that 56% of them, on a scale from 1 to 5 (in which the value 1 assumes the minimum value and 5 the maximum value) places the degree of attention to internationalisation at the maximum level: this means that companies tend to want to exploit the advantages that derive from an opening towards foreign markets, a choice that is, however, influenced by their needs.*

**Research limits.** *There are three limits, at least: first this is a qualitative research that deals with the limitation with this kind of research; second, it is focused on a singular sector; third, it is conducted on a singular geographic area. It is an exploratory case. Future research aims to solve part of this limitation.*

**Practical implications.** *Improve our understanding on the relationship between governance and strategic choice in order to support family business both in their continuity and growth.*

**Originality of the study.** *To the best of our knowledge this is the first empirical analysis on the wine sector in Sicily with the aim to investigate how governance influence the internationalization strategies of family business located in this area.*

**Key words:** *family firms; governance; strategic choices; growth; internationalization; wine sector.*

## Aim of the paper

*Family business governance is defined as the rather heterogeneous set of organisational, financial and regulatory tools, systems and assets that influence business decision-making processes (Carney, 2005). Its combinations vary according to the way in which the family operates within the ownership, supervision and management of the business (Brenes, Madrigal and Requena, 2011; Miller and Le Breton-Miller, 2006; Suess, 2014). The family's aim is to ensure the governance of the company, as this is the way to guarantee that its goals will be achieved over time (Chua, Chrisman and Sharma, 1999). This paper investigates the governance of family businesses operating in the wine sector of the Etna region, with the aim of analysing their influence on internationalisation strategies. The choice of the case study is based on three types of factors: it is an area characterised by a large number of family businesses with a high degree of longevity which, as such, lend themselves to a dynamic study of the impact that the overlap between the logic of family, property and management has on the management and governance of the company and on its strategic choices. Sicily is experiencing a period of strong expansion in this sector, which inevitably arouses great scholarly interest for ongoing scenario changes; finally, the Etna area is different, both for its unique pedo-climatic environment, which combines the nature of the soil, altitude and exposure, and, consequently, for the peculiarity of the wines produced.*

*In conclusion, this case study will allow an assessment of the influence that family governance has had on the international growth trajectories of the companies being surveyed.*

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## Theoretical framework

### Governance of family businesses

The distinctive element of family business governance is the presence of the family in the property and/or management. However, that is not sufficient to identify a homogeneous family business category, as the presence of the family may be of varying degrees and significance in terms of combined ownership, control and management. Among classifications in the literature, this work refers to the recent proposition by D'Allura and Faraci (2018) that distinguishes governance models:

- a) "family-centred" - in these models only the family is present in the property, in the government and in the management. Therefore, the family governs the processes by subjecting them to its own logic and selects resources and skills, preferring those of the family.
- b) "market-oriented" - These are models in which only the family is present in the property, but at the same time management provides for an outside contribution. The role of the family in the decision-making processes remains decisive, however, it is possible to imagine a degree of openness to the input of external managers, certainly more geared towards a market culture. Family ownership therefore shows a process of openness that may also be of a different type than that of the family itself.
- c) "investor-centred" - In this category the family also opens the property to external subjects. Among the reasons for opening up the property to third parties, the following can certainly be included: 1) the family is experiencing relational difficulties and some members decide to sell their shares to third parties; 2) the 'market-oriented' model evolves and requires the contribution of new capital that is acquired outside the family. The most important aspect that needs to be reported in this case is the process of professionalisation of the family business, which concerns both the governing bodies (i.e. formalisation of the board of directors with the participation of members from outside the family, formalised reporting activities) and the input of resources and skills, including the choice of new owners.

It is believed that investigating the internationalisation trajectories of family businesses in the light of the above classification can help to understand the possible differences in strategic behaviour within the heterogeneous context of family businesses.

#### *The internationalisation trajectories of family businesses: an interpretative model*

Adopting an upper echelons perspective (Hambrick and Mason, 1984) for the interpretation of strategic choices, being a family business has many implications for international behaviour, since internationalisation means altering its objectives, culture and organisational structure. Many family businesses are, in fact, confronted with the contrast between the drive to pursue opportunities that arise across national borders and the desire to maintain centralised control, and therefore presenting an aversion to risk, preferring strategies focused on the domestic market.

The literature on the subject suggests that the internationalisation of a company is initiated by the occurrence of particular events that can lead to rapid international expansion, such as a generational shift and the subsequent involvement of the new generation in the business (Fernández and Nieto, 2005; Gallo and Pont, 1996). Resistance to change, rigidity in leadership styles, limited financial capacity, diverging objectives, and conflicting relationships between different family members are just some of the factors that can inhibit growth in international markets, sometimes dramatically (Gallo and Sveen, 1991). However, family businesses are very often able to undertake entrepreneurial activities with openness to international markets characterised by a high degree of risk in order to preserve wealth for subsequent generations (Alayo, Maseda, Iturralde and Arzubiaga, 2019).

This paper's choice of interpretation considers the crucial role of governance in predicting expansion trajectories on foreign markets. Therefore, given the classification presented, it is deemed that:

1. In a "family-centred" governance model, the need to preserve the internal entrepreneurial and managerial skills believed to be fundamental to compete prevails over the choice to undertake growth paths in foreign markets. If the family-centred company chooses to undertake a growth process on foreign markets, the method used will be export in order to limit the risks.
2. In the "market-oriented" governance model, since managerial skills appear to be more marked and market-oriented, the owner family is more favourable to growth in foreign markets and to enrich and share skills that integrate with those of the family, in order to be more competitive, with more aggressive methods of entering foreign markets. Internationalisation takes place through acquisitions or by own direct investments, if the company has adequate financial resources and wishes to maintain direct control over the new acquired skills. On the other hand, where the prevailing need is the company one, the company will use a partnership with foreign parties.
3. In the "investor-centred" governance model, the presence of a partner outside the family is decisive in the choice of whether to internationalise or not. In addition, in these cases, family businesses may pursue more aggressive methods of internationalisation, also considering the entrepreneurial network of owners outside the family. The investor who joins the family may have the objective of accelerating the growth of the company; in these cases, the international growth trajectory could be among those that the company has identified and pursued.

## Empirical Analysis

### *Research outline and case selection*

*The choice of method is that of the case study through administration of a questionnaire, both face to face and online. This approach is based on the fact that qualitative empirical research allows an exploratory but, at the same time, in-depth analysis of current phenomena within their real context (Yin, 2003). Therefore, the use of cases in managerial studies allows the understanding of the dynamics in a given context (Eisenhardt, 1989) using, from time to time, interpretative lenses that can capture the investigated phenomena efficiently. There are several reasons why the wine sector was chosen for analysis.*

*The Italian wine sector, and in particular the Sicilian one, is characterised by a large number of family businesses with a high degree of longevity which, as such, are suitable for a dynamic study of the impact that the overlap between family, property and management approaches have on the management and governance of the business, as well as on international growth choices. With each generation, family businesses face many challenges, such as balancing family tradition and values with the need for change imposed by the evolution of competitive, cultural and social contexts. That was the first reason why we selected the wine sector. Another aspect that has been taken into account is the current state of development in the sector. In 2016 Sicily was one of the ten best regions for wine export value in Europe. Sicily, along with Puglia, is the region that has grown the most. In percentage terms, the markets where Sicilian wine is exported are: USA (18.6%), Germany (16.7%), United Kingdom (9.4%), Switzerland, Sweden, Canada, France, Japan, China, and Russia. In particular, the United States and China are the countries where exports are growing. In addition, Sicily produces more than 10% of Italian wine and is the fourth region for production, after Veneto, Puglia and Emilia-Romagna. Sicily is the first Italian region in terms of organic vine area, with 38,935 hectares (37.6% of national land area), followed by Puglia and Tuscany, with a growth of 21% on an annual basis (Il Sole 24 ore). PDO and PGI wines account for 80% of regional production.*

*Because of this reasoning, the study of the wine sector in Sicily is interesting both from a theoretical point of view (for the dynamics it shows with reference to property and government) and from a practical one (since it is a phase in which scenarios are changing rapidly, also because of the entry of new generations). Finally, the choice fell on the Etna area because Etna's viticulture compared to the Sicilian one in general is different, both because of the uniqueness of the pedo-climatic environment, where the nature of the soil, altitude and exposure interact, and, consequently, because of the peculiarity of the wines produced. It is a vast territory that extends from the extreme slopes of the Etna volcano to its summit, which is partly covered by crops and spontaneous vegetation. Among the cultivated species, the vine has always played a leading role. Its cultivation began several centuries ago, but has progressively expanded over the last two centuries, with the advancing of extensive deforestation projects.*

### *The survey tool: a semi-structured questionnaire*

*The survey questionnaire is made up of 50 questions and is divided into 7 sections: the first concerns general information on the company, the second concerns the ownership structure, the third governance and management, the fourth the generational shift, the fifth internationalisation, the sixth process and product innovation, the seventh distribution and communication channels. The information obtained was accompanied by other information collected indirectly through the Register of Companies, the Chamber of Commerce of Catania and the visit to the websites of the sample companies, with the aim of integrating and improving its consistency, as well as to triangulate the information found. The questionnaire was presented both online using Google Forms and in paper format. In the latter case, the questionnaire was filled in directly during visits to the company by a junior analyst. The data obtained were processed anonymously.*

### *Sample selection*

*73 companies with a turnover of less than 5 million euro were taken into consideration, with production coming mainly from vines planted on their own vineyards, characterised by family management and finished bottled products with a predominantly DOC brand. The study started in December 2017 and was completed in May 2018. The selection of companies to contact - made through the AIDA Bureau Van Dijk database - was divided into two phases.*

*Phase 1 - Selection of the companies present in the territory under survey based on the activities with ATECO 2007 code 01.21.00, i.e. cultivation of wine and table grapes in vineyards and production of wine from grapes mainly produced by the company. This first phase resulted in 94 businesses.*

*Phase 2 - On the basis of the research criteria established in the design phase of the case research and selection, we have selected those that meet our criteria, which are: a) historicity of the company in the production of wines; b) visibility on the market considered an indicator of the presence of an adequate level of professionalism in carrying out the wine business, c) family business at the level of ownership and business structure. In addition, cooperatives, consortia, cooperative wineries and companies belonging to groups have not been taken into account. This second phase then selected 73 of the first 94 companies that were subsequently contacted.*

### *Data Collection and Analysis*

*The collection and analysis of the data on which our survey is based was carried out in four stages.*

*Phase 1 - On-desk activities. Collection of information through secondary sources (i.e. AIDA Bureau Van Dijk and iCribis) that have allowed the creation of a database of companies with the following information: company master*

data, main activity, details of charges, balance sheet data.

*Phase 2 - Preliminary contact first by telephone and then by sending an e-mail to each of the companies in the sample in order to obtain the agreement, in the following weeks, to provide additional information relevant to our survey, through the provision of a structured questionnaire. At this second stage, of the 73 companies contacted, only 54 expressed a willingness to cooperate, 10 explicitly stated that they were not interested, and 9 of them could not be contacted.*

*Phase 3 - Delivery of the questionnaire. A questionnaire was used to verify the information collected during the on-desk phase and to collect the information concerning the purpose of our survey.*

*Phase 4 - The data collection phase was followed by the data processing activity, the results of which are presented in the next section of the work.*

**Results.** *The study of internationalisation trajectories basically concerns two choices: whether to internationalise and how (i.e. entrance methods and ownership structure) taking into account the combinations between ownership and management by the parent company from which the three models of corporate governance derive and the influence exercised in the context of these choices. From the analysis of the sample data, it emerges that 56% of them, on a scale from 1 to 5 (in which the value 1 assumes the minimum value and 5 the maximum value) places the degree of attention to internationalisation at the maximum level: this means that companies tend to want to exploit the advantages that derive from an opening towards foreign markets, a choice that is, however, influenced by their needs, as will be explained below. Compared to the identified governance models, most of the enterprises surveyed are family-centred, and only a small part market-oriented. None of the companies in the sample is investor centred. Following the description of the governance models, the internalisation trajectories should mainly follow paths aimed at ensuring the control of the family. In fact, the data confirm this assumption. In 88% of cases, proposals for internationalisation are managed by family subjects and to a lesser extent by subjects outside the family (12%), confirming the fact that the latter is present in both ownership and management in the majority of companies in the sample in which the prevailing model of corporate governance is that of “family centred”.*

*In the “family centred” business, emotional needs prevail over business needs, and therefore the preservation of internal entrepreneurial and managerial skills prevails, limiting expansion to foreign markets so as not to jeopardise the control of certain skills considered critical for the survival of the family business. This is confirmed by the fact that the internationalisation process is limited to direct exports (58% or 29 companies in the sample) and sometimes even indirect exports (42% or 21 companies) through an intermediary.*

*In a smaller number, the sample companies falling within the “market oriented” model, characterised by the presence of managers from outside the family with specific entrepreneurial and managerial skills, see the business necessity to enrich their own skills prevail over the emotional one. In this case, the propensity for growth in foreign markets is greater, pursuing more aggressive methods such as trade agreements with foreign subjects (6%) and foreign direct investment (6%) in 6 companies in the sample.*

*Of the companies in the chosen sample, in addition to distribution in the province of Catania and at regional level, almost all of them also market their wines on the national market, mainly in Northern Italy, and on the European and non-European markets. 70% of the total, or 35 companies, exports to the United States (Virginia and California in particular) and Canada. 64%, or 32 companies, export to Europe (France, Belgium, Denmark, Holland, Germany, United Kingdom, Switzerland, Luxembourg), 58%, or 29 companies, export to Asia, particularly Japan, China, Singapore and the Philippines. To a much lesser extent, 18%, or 9 companies, export to Oceania mainly to Australia and 6%, or 3 companies, export to Central and South America.*

**Conclusions.** *This paper presents the results of a first empirical exploration of the relationship between governance and international growth trajectories. By choosing a qualitative-comparative survey, it was possible to collect data from a large sample of companies that could be classified as family businesses. It should be pointed out that the study is essentially of a qualitative nature and therefore a certain degree of uncertainty must be taken into account. The first is that when analysing the characteristics of the ownership and entrepreneurial structure of a company, it is not always easy to bring specific situations into a certain category: there are many possible nuances and this inevitably leaves room for personal appreciation and some simplification. The second reason is that as these are sensitive issues for stakeholders from a strategic point of view, it is often necessary to address a certain reticence on the part of those involved.*

*Even with these limitations, and taking into account the fact that it was possible to collect in-depth information on a significant sample of companies, we believe that the results of the survey can provide reliable indications for understanding the phenomena under analysis. However, future lines of research aim to explore other geographical areas at a national level, in order to be able to compare family governance models and growth trajectories in different geographical contexts.*

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# SMEs financial life-cycle and sustainability

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**Objectives.** *This paper aims to investigate the role of the life cycle in SMEs' financing behavior and the differences in the determinants of capital structure throughout the firms' life cycles.*

*Several empirical studies (Sánchez-Vidal and Martín-Ugedo, 2012; La Rocca et al., 2011; Hirsch and Walz, 2011) suggest that financing choices evolve over time with the firm's changing characteristics, according to their life cycle. According to the financial life-cycle theory (Berger and Udell, 1998), the phase of a business's life cycle determines the nature of firm's financial needs, the availability of financial resources, and the related cost of capital. From birth, firms rely on initial insider and angel financing, then venture capital and trade credit, and at the end, they resort to long term bank loans prior to the IPO (Initial Public Offering).*

*This approach supports financial behaviors that are life-cycle-specific. Main theoretical models concerning capital structure can be (re)interpreted according to the life cycle (La Rocca et al., 2011; Serrasqueiro and Nunes, 2012). Capital structure decisions can be considered dynamic in the sense that they change over time. There could be a pro-tempore optimal capital structure or a pro-tempore order of preferences in the financial choices.*

*Although trade-off theory and pecking order theory can be suggested as mutually exclusive in explaining debt/equity choice, it can be also possible that both theories can be jointly at work, having different magnitude between young and mature SME.*

*Moreover, it is highlighted recently that age is more relevant and strictly related to SMEs information opacity than size, suggesting that that younger SMEs are indeed more opaque than established SMEs (Hyytinen and Pajarinen, 2008). Sánchez-Vidal and Martín-Ugedo (2012) also pointed out the relevance of age, even more than size, in determining a life cycle shaping capital structure, where equity increases with age determining a decrease of debt.*

*Despite these important issues (Bulan and Yan, 2009), and the controversy results on the financing decisions during the course of life cycles (Gregory et al., 2005), surprisingly little empirical effort has been devoted to investigating SMEs' financing decisions.*

*In this research, we determine whether life-cycle in SMEs capital structure may be affected by global financial crisis after 2008. Large parts of the empirical studies suggest that financing constraints of SMEs are exacerbated during financial crisis. Previous studies surveyed the managers from U.S., Europe and Asia, suggested that financial constrained firms experienced credit rationing and higher costs of credit lines during the period of credit crisis of 2008 implying that financial constrained firms have more propensity to draw down their credit lines than unconstrained firms for fear of future credit rationing (Campello et al., 2010).*

*The life cycle paradigm doesn't fit all firms (Berger and Udell, 1998), and differences might exist not only for management determination but also regarding different institutional features concerning where firms operate (Beck et al., 2002; Rajan and Zingales, 2004; Hall et al., 2004; Utrero-González, 2007; La Rocca et al., 2011). The institutional context can have a potential noteworthy effect in shaping capital structure decisions (Petersen and Rajan, 1994 and 1995; Berger and Udell, 1998; Gaud et al., 2005). It's fundamental the degree of development of the financial system in shaping the financial growth of firms affecting capital structure decisions (Rajan and Zingales, 1995; Wald, 1999; Booth et al., 2001). The lack of external finance may reflect an entrepreneurial choice, but it can also be due to differences in the financial institutions. The way country-specific factors, related to different institutional features with specific regards to financial system features, affect the relevance of benefits and costs related to debt and so the capital structure decision is a relatively recent issue (Titman et al., 2003; Lopez-Iturriaga and Rodriguez-Sanz, 2008). The firm's debt/equity choice depends on the different features and abilities of financial institutions in dealing with informational opaqueness and potential opportunism, e.g., by engaging in screening, contracting, and monitoring activities (Beck et al., 2002).*

*The influence of external financial factors on capital structure decisions is particularly relevant for SMEs. These firms face different menus of choices, opportunities and constraints according to the geographic context where they are based (Pollard, 2003).*

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We conduct two sets of test. First, we verify if the life cycle is a relevant factor in a SMEs' financing behavior. Empirical analysis is used to evaluate the role of the life cycle and the differences in the determinants of the debt/equity ratio throughout the life cycles of European SMEs. Second, we test for the magnitude of this main relationship conditioned by financial crisis. According to the stage in the life cycle of SMEs, financial crisis have different way to shape debt/equity choice.

The notion that firms evolve through a financial life cycle is well-established in the literature, although there is disagreement concerning sequential financing choices in the use of debt or equity.

The main perspective is related to the Financial Life Cycle Theory of Berger and Udell (1998). Banks may not be able to serve young informationally opaque SMEs. Debt is costly for young SMEs because banks apply higher interest rate to hedge against the default probability (Berger and Udell, 1998).

In the early stages access to debt financing is also limited by the uncertainty on the realization of cash flows in need to cover debt (Weinberg, 1994). The low debt capacity of young firms is justified by the lack of past experience, repayment history and a track record upon which typically banks can rely on (Diamond, 1989; Hirshleifer and Thankor, 1992). SMEs have low debt level at their start-up and earlier stage. These firms can count on entrepreneurial and/or venture capital money, being financially constrained in the credit market.

Empirical results suggest that young SMEs use before equity as a source of funds (insiders fund, business angels, and venture capital) especially in imperfect markets (Kaplan and Stromberg, 2003).

SMEs are better access to the debt market only in the maturity stage of their business because bank could support SMEs lending against fixed asset collateral (Berger and Udell, 1998; Carey et al., 1993; Helwege and Liang, 1996; Chittenden et al., 1996).

As the firm matures, consolidating its business, it's possible to examine the firm's track record and behaviors over time. The acquired reputation of the firm reduces asymmetric information and debt becomes available under convenient economic terms. Thus, leverage increases with age, as young firms are financially constrained while old firms have convenient access to external finance. Fluck et al. (1998) find a higher use of equity (insiders) funds in young firms compared to debt, while this relationship is reverting considering old firms.

Therefore, this life cycle pattern of firm financing, assuming that firms will use first outside equity (such as venture capital) and retained earnings, issuing debt at last to satisfy their subsequent financing needs, suggest the following hypothesis:

*H.1: Leverage has a non-linear relationship with age: a negative effect for low levels of age (young firms) and a positive one for high levels of age (mature firms).*

According to the financial life cycle theory, early-stage firms start by using equity sources of finance and then rebalance their capital structure in later years using debt.

Overall, the results are a few and contradictories. According to Berger and Udell (1998), as firms become larger, older and less informationally opaque their financing choices become more attractive and firms mainly run for equity. By contrast, Fluck (1998) argue that firms will issue outside equity or convertible debt during the early stage of life cycle. Gregory et al. (2005), empirically tested the Berger and Udell's model, only partially support it, suggest the need of further analysis. Financial life cycle could be dependent on the institutional context as better detailed in the next session.

Traditionally, information asymmetry is an important issue in SME studies (Berger and Udell, 1998; Petersen and Rajan, 1994; Diamond, 1989), a financial life cycle approach can provide a key interpreting framework to improve our knowledge. The external factors, affecting the intensity of asymmetric information problems, can shape a different role of life cycle. Financial behaviors along a firm's life cycle can be heterogeneous according to different features of the institutional environment a firm is based on. Thus, considering this factor can provide insights in SME financial decisions analysis.

From the fall of 2008, the financial crisis has exacerbated the financing constraints of firms postponing investment plans of many companies. Campello et al. (2010) find that more than 80% of firm has experienced less access to credit during the crisis. Pagano et al. (2015) note that SMEs, more than large firms, have suffered from financial constraints after the first part of the crisis. The limited access to bank debt appears to be one of the concerns of business growth during the crisis period in Europe.

Hölmstrom and Tirole (1997) propose a model in which firms with different levels of initial capital ask for funding from the financing sector. Taking into account different types of macroeconomic shock, such as credit crunches, firms with lower levels of initial capital are hit more seriously by such global financial restrictions. Psillaki and Eleftheriou (2014) find that for smaller firms access to bank finance was hindered during financial crisis period.

This implies that we expect a reduction in the level of indebtedness during and after the financial crisis of 2008. SMEs, having less capital, are predicted to be more weakened by such shocks. Especially young SMEs tend to exacerbate debt costs during crisis periods; younger firms are growing and looking for debt which is expensive for them and presents greater disadvantages than benefits.

In contrast, older firms have greater benefits in the use of debt. These firms tend to face lower asymmetric information costs than their more opaque young counterparts because of better quality, accuracy, and transparency of financial information (Carpenter and Petersen, 2002).

Most previous research on debt financing during financial crisis has concentrated on the first part of the crisis that is the three years following Lehman Brother's failure in US.

Some studies on the crisis of sovereign debt started in Greece following the 2008-2010 financial crisis, defined as the period where the euro-area members face sovereign debt tension. Albertazzi et al. (2014) find that the increased sovereign risk has relevant consequences on the financing policies. The spread between the yield on the 10-year Italian government bond and the corresponding BTP-Bund spread in Germany in the 2011 has increased the cost of credit for firms reducing access to credit.

Our second hypothesis is:

H.2: The non-linear relationship between leverage and age is higher during financial crisis.

**Methodology.** The research hypotheses are tested empirically on large European samples of SMEs. We gather data for firms included in Amadeus, using information on SMEs from 25 countries of the EU from 2004 to 2013.

*Sample.*

We adopted the European Commission's definition of SMEs, so we selected only firms with less than 250 employees and less than 50 million euros in total annual revenues (Serrasqueiro and Macas Nunes, 2012).

We exclude from our sample several European countries where the coverage is incomplete or the data quality is poor. We exclude Switzerland, since small firms are not required to file, or some countries of the former Republic of Yugoslavia (Bosnia-Herzegovina, Former Yugoslav Republic of Macedonia, and Federal Republic of Yugoslavia) where data coverage is limited. We focus on 17 Euro zone countries (Austria, Belgium, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia and Spain) and 8 no Euro Zone countries (Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania, Sweden and United Kingdom).

We impose some restrictions on the data. First, we require reporting firms to have some basic accounting information in their accounts over the years (i.e., data on total assets, sales, profit before tax, ecc). The reason for dropping those that do not report is that there may be country differences in the criteria for including firms with no information on their accounts. In addition, this criterion excludes any "phantom" firms established for tax or other purposes. We exclude financial industries, because financial ratios for financial companies are not comparable to those of non-financial companies. In addition, financial institutions tend to be subject to specific entry restrictions that do not apply to nonfinancial firms. We are left with 83 NACE Rev.2 non-financial industries. To reduce the impact of outliers across all analyses, accounting variables are winsorized at the top and bottom 1% of the distribution.

The final sample amounts to 516,954 firms for a total of 3,882,757 observations.

*Econometric specification*

To understand capital structure along the life cycle, the following baseline model is estimated:

Capital structure =  $f$ [Age, Age<sup>2</sup>, Profitability, Tangibility, Size, Growth opportunity, Z-score, Year dummies]

To measure the influence of financial crisis, we re-run our model splitting the full sample into three subsamples:

- (1) pre-crisis period of 2004-2007;
- (2) "Lehman crisis period" period of 2008-2010;
- (3) the "sovereign debt crisis" period of 2011-2013.

*Variables*

Seeking to study financial life-cycle of European SMEs, we use as dependent variable Leverage, used as a proxy of capital structure, calculated as the ratio of financial (or interest-bearing) long-term and short-term debt (excluding trade debt) divided by total assets (Giannetti, 2003; Rajan and Zingales, 1995; La Rocca et al., 2011).

In order to analyse capital structure decisions along the life cycle, the variable Age is used. The latter is calculated as the number of years since the date of firm foundation. Testing H1 requires that we include the squared term of the variable Age, named Age<sup>2</sup>. We consider the effect of the financial crisis on leverage-age relationship.

It's important controlling for several variables that likely affect firm capital structure. We consider: Profitability, Tangibility, Size, Growth opportunities and Z-score. These variables and their corresponding measures are in agreement with various empirical studies on SMEs' capital structure.

Profitability is the ratio between earnings before interests, taxes, depreciation and total assets. Empirical evidences (Chittenden et al., 1996; Michaelas et al., 1999) show that in SMEs leverage is negatively related to profitability.

We consider Tangibility, measured as the ratio of property, plant, and equipment (PPE) to total assets. Banks can be able to finance SMEs with fixed asset collateral because their value is relatively easy to assess (Ang, 1992; Van der Wijst and Thurik, 1993).

We also include the variable Size. Previous studies suggest that firm's size is inversely related to the probability of default, allowing to increase the use of debt (Michaelas et al., 1999; Sogorb-Mira, 2005) and that size is positively related to debt, due a positive reputational effect (Diamond, 1991).

We consider the effect of Growth opportunities, measured as the percentage variation of turnover. Michaelas et al. (1999), for British SMEs, find a positive relationship between debt and growth opportunities. Firms with high growth opportunities could have a financial need that is more likely to exhaust internal resources and require additional capital, pushing the firm relying on external sources.

Finally, we consider the effect of credit quality on debt level. In our specification, Altman Z-score (Z-score) is supposed to capture the financial quality (or credit quality) of the firms, independently of its age. It provides a measure of likelihood of bankruptcy, consequently a negative relation between Z-score and debt is expected. Z-score is defined as in Altman (2013):  $Z = 0.717 (\text{working capital}/\text{total assets}) + 0.847 (\text{retained earnings}/\text{total assets}) + 3.107 (\text{earnings before interest and taxes}/\text{total assets}) + 0.420 (\text{book value of equity}/\text{book value of liabilities}) + 0.998 (\text{net sales}/\text{total assets})$ .

**Findings.** We find that leverage keep a non-linear relationship with age: a negative relation for young firms and a positive one for mature firms.

Our results show the relevance of the financial life cycle theory for SMEs in European countries, and financial crisis is significant in moderating this main relationship.

We developed the main descriptive statistics and correlations. In addition, we found statistically significant correlation between some explanation variables; nevertheless, multicollinearity problems are negligible given that VIFs never exceed the “rule of thumb” of 10 (Kutner et al., 2004).

We investigate the country-level differences that exist for the average debt level. The results highlight a high level of heterogeneity in the level of debt. The lowest level of debt is that of Luxembourg (6.1%) and for firms in Slovakia (7.1%). The highest level of debt is that of firms located in Slovenia (40.68), Netherlands (30.6%) and of Irish firms (25.9%). We also find a higher heterogeneity at country level in the leverage difference between pre-crisis period and crisis period.

From descriptive we move to econometric results to test our hypotheses about the trend of the financial life cycle in European SMEs and the role played by financial crisis in influencing this trend. Since we have an unbalanced panel data, as selected estimation method, we use fixed effects regression that can control for unobserved individual firm heterogeneity.

Concerning the baseline estimation results for the analysis of financial life-cycle, we find that firm’s age is significantly related to Leverage variable. Considering the continuous variable Age and the square term, in general, we find a curvilinear relationship between firm age and debt level as the coefficient on Age variable is negative and that of the square term is significantly positive.

Specifically, we run a firm fixed effect model but we perform analysis to ensure that our results are robust to sample exclusion criteria. We exclude firm-year observation of countries most present in the sample.

We run OLS model with several techniques for adjusting standard errors for correlation along a single or double dimension (Petersen, 2009; Thompson, 2011).

Finally, we also run a piecewise regression model allows for changes in slope. In this case we suppose that firm age have a different linear effect at a different range.

Interestingly we find a negative effect especially if the firm was founded fewer than 6 years ago and a positive effect especially if the firm is older than 30 years.

In the next step, plotting the relationship between firm age and leverage we have a U-shaped curve. In the early stages of the life cycle, leverage tends to decrease, reaching a minimum point around the middle of the life cycle; subsequently, there is a growth of the debt level how firm age tends to increase.

All these results support the U-shaped relationship between firm age and leverage proposed in Hypothesis 1.

Concerning the relationship between firm age and firm performance conditioned by macroeconomic shocks, such as the recent financial crisis, some regression results have been developed.

To test how the relationship between cash holdings and firm performance is affected by the financial crisis, we split our sample of firm-year observations into three subsamples previously defined.

The results confirm Hypothesis 2, showing that the recent financial crisis strengthens the U-shaped impact of firm age on corporate debt level.

We find that the variable age is not significant for the subsample of firm-year observation in the pre-crisis period. We perform a sensitivity analysis by using a piecewise regression. The results are in line with previous models.

Last, we also check whether the coefficients on the firm age variables found in a subsample differs from those of others subsample.

The test shows that the difference in the age coefficients across subsamples is always significant to the conventional significance levels.

Hence, this confirms that the variable age not only have a significant effect on firm debt level, but also that this effect is different for each period considered.

Plotting the relationship between firm age and debt for the three subsample periods, we find that an U-shaped relationship exists especially in the crisis periods.

**Research limits.** The analysis is developed with reference to European companies for a period of 10 years. Expanding the study period would allow to capture the importance of the relationship and the importance of trends.

**Practical implications.** Capital structure decisions and life cycle have to account for the institutional setting the firms are based on. The influence of external financial factors on capital structure decisions is particularly relevant for SMEs.

**Originality of the study.** *This paper contributes to the financial life cycle literature by testing hypotheses about the moderating role of financial crisis on SMEs life cycle in capital structure decisions.*

*Recent literature suggests that firm's life cycle is an important factor in the study of SMEs' financing decisions. However, the literature has not to date spend much effort testing other predictions of the main relationship regarding the impact of financial crisis and the possible moderating role of institutional environment.*

*We test some of these predictions using data from European SMEs in pre-crisis and crisis periods. First, we test some predictions on the current debate on SMEs life-cycle and after we examine the relationship between SMEs' age and leverage but conditionally to financial crisis. We find that financial crisis is significant in moderating this main relationship.*

**Key words:** *SMEs; capital structure; firms' financial life cycle; financial crisis; sustainability*

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# We exist because we resist.

## Family and nonfamily firms at the proof of financial crisis

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**Objectives.** A decade has passed since the beginning of the global economic and financial crisis and studies on family firms have contributed to understand the advantages and disadvantages of family involvement in ownership and management in face of turmoil. In particular, research has focused on the characteristics that might increase firm resilience, defined as “a unique blend of cognitive, behavioural, and contextual properties that increase a firm’s ability to understand its current situation and to develop customized responses that reflect that understanding” (Lengnick-Hall and Beck, 2005, p. 750).

Resilience is important for any organization and especially for family firms (Chrisman et al., 2011), as long as it translates into longevity and guarantee to pass the ownership and management of the firm from one generation of family members to another, which is a priority for many family business owner (Steier, 2005). Sharma and Salvato (2011) argue that family firms’ intentions for transgenerational control and long-term orientation can, on the one side, facilitate long-term investments that lead to the identification of new growth opportunities but, on the other side, can also constrain their resilience if their multi-temporal perspectives prevent them from diminishing their involvement in declining product markets.

Resilience appears to be a convenient concept for describing the peculiar behaviour of family firms compared to nonfamily firms especially during economic crisis, when firms struggle to manage their resources in the most efficient way. Despite its potential contribution, though, and up to our knowledge, the literature on family firms has offered no empirical evidence that identifies an association between resilience and firm governance.

This paper addresses this topic and provides empirical evidence on the relative performance of family and nonfamily businesses in the context of Italian economy during the period 2001-2011, before and during the financial crisis that has affected the United States first and the rest of the world afterwards. In this paper, in line with Palia and Lichtenberg (1999) and Barth et al. (2005), corporate performance is measured by total factor productivity (TFP), which is a performance measure less exposed to manipulation errors than financial indicators such as accounting profit rates. In addition, productivity provides a reliable performance measure for non-listed firms, for which valuations based on market prices are not available. Since the paper aims at assessing firm performance in a mutable economic environment and at understanding firm reactions to changes in the external context, productivity is computed in terms of variations over time and measured by the Malmquist index.

The choice of the Malmquist index as a performance measure is also motivated by its convenient decomposition into two factors, one reflecting technical change and the other changes in technical efficiency, which can be interpreted as “catch-up”. We argue that the “catching up” term, which captures the productivity improvements attained by using the economic inputs more efficiently, signals the firm ability to recover in adverse circumstances and thus resilience, and we operationalize the resilience construct as the efficiency change implemented by each firm over time. The technical change component of the Malmquist index represents the efficiency frontier shift, or the productivity improvements realized in the economic system thanks to technological progress. As such, the technical change index signals the innovation introduced in an industry over time.

This paper contributes to several streams of literature. First, the paper provides an exploration of the sources of productivity growth that can play a crucial role for the economic survival and recovery of firms during and after the financial crisis. To this regard, the paper contributes to the growing number of empirical papers in the productivity literature (Liu et al., 2013). From a methodological point of view, the paper measures firm performance through Total Factor Productivity (TFP), analogously to Barth et al. (2005) but in reference to a different population of firms, namely privately held instead of listed companies. As such, the paper gives a contribution to the business management literature in the direction suggested by Herrero (2011), who measures firm efficiency of small family firms by applying the stochastic frontier analysis protocol. This study also complements an earlier study on efficiency in which Data

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Envelopment Analysis is used to analyze firm performance of a different sample of family and nonfamily non-listed Italian firms observed from 2001 to 2004 (Erbetta et al., 2013).

The paper contributes to the literature on family businesses by investigating, in particular, how family firms invest in efficiency during stringent economic conditions and compared to nonfamily firms. By disentangling the sources of productivity related to efficiency improvements from those derived from technical progress, the analysis show where inefficiency are located. In particular, the emerging differences in family and nonfamily firms' efficiency change helps understanding the characteristics that differentiate the two types of organization in their capacity to be resilient in difficult times.

Moreover, the analysis of the productivity changes induced by technical progress or regress allows evaluating the innovative behaviour of family and nonfamily firms and, since innovation is a relevant driver for economic growth (Aghion and Howitt, 1998; Grossman and Helpman, 1991), allows appreciating their contribution to economic system's recovery after the financial crisis.

Finally, this paper contributes to the growing line of research that examines the effects of the recent financial crisis on corporate performance and, in particular, on family businesses compared to nonfamily ones (Lins et al., 2013; for Italy, Minichilli et al., 2016). To this regard, the paper provides fresh evidence on the consequences of the financial crisis in Italy, the Eurozone's third-largest economy that has lagged behind its major European peers for much of the last few years.

**Methodology** In this work, we evaluate how the performance dynamics of family and nonfamily business differ, in a context of economic recession and in different industries. We will express such performance dynamics in terms of Total Factor Productivity (TFP) change, measured by means of Malmquist indexes, as introduced by Caves et al. (1982a, b) and following the Data Envelopment Analysis approach described in Coelli et al. (2005), whose notation is maintained.

Let us assume having a technology that uses  $N$  inputs to produce  $M$  outputs, and a set of  $I$  units observed over two periods,  $s$  and  $t$  (with  $s < t$ ); each unit employs a vector of inputs,  $x$ , to produce a vector of output,  $q$ . In each of the two periods, the firm can operate efficiently (i.e. on the frontier of the production technology defined for that period) or not (i.e. it can lie in the interior part of the production technology). In this context, efficiency is measured as distance from the frontier, in an output-oriented perspective, i.e. in terms of feasible output expansion given the observed level of input consumption and will be indicated in terms of output distance functions, using the symbol  $d_o^*(*)$ . Given these premises, the Malmquist index  $m_o$  for the Total Factor Productivity (TFP) change can be defined as:

$$m_o(q_s, x_s, q_t, x_t) = \left[ \frac{d_o^s(q_t, x_t)}{d_o^s(q_s, x_s)} \times \frac{d_o^t(q_t, x_t)}{d_o^t(q_s, x_s)} \right]^{1/2} \quad (1)$$

According to the definition expressed in (1), the Malmquist index  $m_o$  is obtained as the geometric mean of the TFP changes computed with respect to the technologies of period  $t$  and of period  $s$ .

The above formula can also be rearranged to evidence a useful decomposition of the Malmquist index into two components,  $EFF^{s,t}$  and  $TECH^{s,t}$ , that reflect, respectively, the technical efficiency change and the technical change, as follows:

$$m_o(q_s, x_s, q_t, x_t) = EFF^{s,t} \times TECH^{s,t} = \frac{d_o^t(q_t, x_t)}{d_o^s(q_s, x_s)} \times \left[ \frac{d_o^s(q_t, x_t)}{d_o^t(q_t, x_t)} \times \frac{d_o^s(q_s, x_s)}{d_o^t(q_s, x_s)} \right]^{1/2} \quad (2)$$

The factor  $\frac{d_o^t(q_t, x_t)}{d_o^s(q_s, x_s)}$  expresses the technical efficiency change ( $EFF^{s,t}$ ), that is, for each unit, the ratio of its efficiency measures computed in period  $t$  and in period  $s$ , respectively. The technical efficiency change ( $EFF^{s,t}$ ) represents the "catching up effect", and tells how much the firm reduces or increases its distance from the best practice frontier over time. The factor in brackets,  $\left[ \frac{d_o^s(q_t, x_t)}{d_o^t(q_t, x_t)} \times \frac{d_o^s(q_s, x_s)}{d_o^t(q_s, x_s)} \right]^{1/2}$ , is the technical change index ( $TECH^{s,t}$ ), and represents the frontier shift. Therefore, it captures the productivity improvement due to the technological progress that generates movements of the frontier. In principle, also technological regress can be detected, although this is not a common situation (Coelli et al., 2005), but can happen, especially during economic downturns (Manello et al., 2015).

A value of the Malmquist index larger than one indicates an improvement in TFP (growth), while a value smaller than one indicates deterioration in TFP. The same applies to the index components (the efficiency and the technical change indexes). According to the theoretical development of the paper, the efficiency change component ( $EFF$ ) captures the resilience of companies, that is the capability of a firm to approach the relative best practice, while the technological change ( $TECH$ ) represents their capacity to innovate.

The computation of the index and its decomposition relies on output distance functions, which, in this work, are computed using Data Envelopment Analysis (DEA). DEA is a non-parametric method based on linear programming that allows efficiency evaluation of units operating under homogeneous technology. It was introduced by Charnes et al. (1978), following Farrell's (1957) seminal work. A major advantage of DEA is its flexibility, since it does not require imposing a functional form for estimating the frontier, which is simply defined on the basis of the observed data. The main drawback of DEA is related to its deterministic nature, meaning that no stochastic noise is considered in the

model.

With respect to the elements necessary for computing the Malmquist index, the distance function of a generic firm  $i$ , for period  $t$ , with respect to the frontier of period  $t$ , can be calculated using DEA, following this definition:

$$\begin{aligned}
 [d_o^t(q_t, x_t)]^{-1} &= \max_{\phi, \lambda} \phi \\
 \text{s.t. } -\phi q_{it} + Q_t \lambda &\geq 0; \\
 x_{it} - X_t \lambda &\geq 0; \\
 \lambda &\geq 0
 \end{aligned}
 \tag{3}$$

where  $Q_t$  is a  $M \times I$  matrix of outputs (relative to period  $t$ ), while  $X_t$  is the  $N \times I$  matrix of inputs.  $\phi$  is the output-oriented Farrell efficiency measure that lies in the interval  $[1, +\infty)$  and express the maximum feasible output expansion for firm  $i$ , given its level of input consumption. Therefore, the measure of distance belongs to the interval  $(0, 1]$ .

The measure  $d_o^s(q_s, x_s)$  is defined analogously, but with reference to period  $s$ , while the other two distance values require projecting the observations of each period ( $t$  or  $s$ ) on the frontier of the other period ( $s$  or  $t$ , respectively), therefore they are not constrained to lie in the interval  $(0, 1]$ , as standard distance measure are.

The variables used in this paper are turnover, as output measure, and the number of employees, the costs for consumption of materials and services and the usage of net fixed capital, proxied by annual depreciation, as input measures. The approach followed is of the output-oriented type: it draws an underlying behaviour aimed at maximizing the industrial activity's market value (turnover) given the available resources (inputs). The sample firms belong to different sectors, namely food (FOOD), electrical appliances (ELECTR), chemical (CHEM), pharmaceutical (PHARM), mechanical (MEC) and non-metallic mineral products (NONMET) industries. The total number of firms included in the dataset is 246, of which 135 are family firms and 111 are nonfamily firms.

**Findings.** The analysis of the productivity change for each industry is shown in Table 1. The value of productivity change is calculated in a cumulative way, normalizing the initial value of each sub-period to 1. The comparison between different sub-periods' productivity indexes, for each ownership class (family or nonfamily), is conducted using the Wilcoxon signed rank test, while the comparison between family and nonfamily firms within each sub-period is conducted using the Mann-Whitney test. With respect to the cumulative TFP change, significant differences between the two groups of firms rarely emerge. A similar pattern, however, characterizes family companies belonging to capital-intensive industries such as the chemical and the mechanical industries. In these cases, the total TFP change shows a downturn in the initial phase of the crisis (REC-fin, 2007-2009) while it shows a rather evident recovery afterwards (REC-real, 2010-2011). This result, however, is a combined effect of the efficiency and of the technical change components, and can hardly be directly linked to either the resilience of the involved firms or the innovation capacity. It is in the less capital-intensive industries (food and pharmaceutical) that a greater resilience of family firms is more evident but this holds only in relation to the first phase of the recession, as signalled by values of EFF equal to 1.014 and 1.066 in FOOD and PHARM, respectively, during REC-fin. Subsequently, when the recession hits the real economy, a noticeable drop in performance appears, and EFF takes values significantly lower with respect to the previous period, and equal to 0.908 in FOOD and 0.983 in PHARM.

Tab. 1: Malmquist index and components

Industry	Governance	Cumulative TFP change			Cumulative efficiency change (EFF)			Cumulative technical change (TECH)		
		Pre-REC	REC-fin	REC-real	Pre-REC	REC-fin	REC-real	Pre-REC	REC-fin	REC-real
FOOD	Family	0.988	1.004	0.984	1.016	1.014	0.908 ***	0.973	0.990 **	1.083 ***
	Nonfamily	1.045	0.966	1.047	1.049	0.982 *	0.903	0.996	0.983 **	1.165 ***
	Fam vs nonfam.									
ELECTR	Family	0.935	0.962	0.990	1.005	0.990	0.987	0.930	0.972 ***	1.003
	Nonfamily	0.995	1.007	0.989	1.020	0.995 *	0.984	0.976	1.012 *	1.005 *
	Fam vs nonfam.								**	
CHEM	Family	0.985	0.989	1.118 ***	1.004	0.878 **	0.914	0.981	1.126 **	1.223 **
	Nonfamily	0.963	1.230	1.033	0.955	1.012 *	0.889	1.008	1.215 ***	1.161
	Fam vs nonfam.		***	*						
PHARM	Family	1.196	1.085	0.967	0.915	1.066 **	0.983 *	1.308	1.017 **	0.983
	Nonfamily	1.113	1.101	1.003	0.935	1.045	1.043	1.190	1.054	0.961
	Fam vs nonfam.						***			**
MEC	Family	1.030	0.845 ***	1.138 ***	0.937	0.959	1.070 **	1.099	0.881 ***	1.064 ***
	Nonfamily	1.158	0.814 **	1.069 **	0.978	0.950	1.064	1.184	0.857 **	1.004 **
	Fam vs nonfam.									
NONMET	Family	1.007	0.897 **	0.949	0.995	0.933 *	1.038	1.012	0.962	0.913
	Nonfamily	0.928	0.787	1.150	0.987	0.830	1.177 *	0.938	0.949	0.977
	Fam vs nonfam.									

Source: our elaboration

The dynamics of technological change (TECH) evidence a progress during the real economy recession (REC-real). In fact, while in the initial phase of the recession (REC-fin), in four out of six sectors, both family and nonfamily firms show cumulative rates of technological decline (between 14.3% and 1%), in the phase of recession of the real economy (REC-real), again in four out of six sectors, cumulative rates of technological progress (between 0.3% and 22.3%) can be observed. Moreover, in the last phase of the crisis, values of technological change are not statistically significant in the two sectors where technological regress seems to occur (pharmaceutical and non-metallic mineral products). These measures of technological progress or regress (TECH), however, cannot be directly connected to the innovation capacity of the group of firms (family or nonfamily) they refer to. Indeed, on the one hand, the “drag effect” linked to the frontier shift indicates the contribution to the progress or regress of the technology registered in correspondence of each observation, but, on the other hand, it does not tell by which unit the frontier is, in turn, dragged.

Tab. 2: Composition of the best practice frontier

Industry		Pre-REC	Rec-fin	Rec-real
FOOD	% family firms on efficient frontier	0.13	0.18	0.06
	% nonfamily firms on the efficient frontier	0.10	0.20	0.19
	% family firms on the eff. frontier in case of techn. progress	0.06	0.06	0.04
	% nonfamily firms on the eff. frontier in case of techn. progress	0.08	0.11	0.14
ELECTR	% family firms on efficient frontier	0.26	0.15	0.27
	% nonfamily firms on the efficient frontier	0.00	0.00	0.00
	% family firms on the eff. frontier in case of techn. progress	0.12	0.05	0.19
	% nonfamily firms on the eff. frontier in case of techn. progress	0.00	0.00	0.00
CHEM	% family firms on efficient frontier	0.15	0.07	0.14
	% nonfamily firms on the efficient frontier	0.29	0.18	0.27
	% family firms on the eff. frontier in case of techn. progress	0.04	0.00	0.07
	% nonfamily firms on the eff. frontier in case of techn. progress	0.23	0.10	0.19
PHARM	% family firms on efficient frontier	0.27	0.33	0.38
	% nonfamily firms on the efficient frontier	0.32	0.20	0.35
	% family firms on the eff. frontier in case of techn. progress	0.23	0.17	0.33
	% nonfamily firms on the eff. frontier in case of techn. progress	0.22	0.20	0.15
MEC	% family firms on efficient frontier	0.13	0.12	0.13
	% nonfamily firms on the efficient frontier	0.34	0.33	0.36
	% family firms on the eff. frontier in case of techn. progress	0.05	0.05	0.11
	% nonfamily firms on the eff. frontier in case of techn. progress	0.20	0.10	0.14
NONMET	% family firms on efficient frontier	0.47	0.33	0.28
	% nonfamily firms on the efficient frontier	0.17	0.17	0.42
	% family firms on the eff. frontier in case of techn. progress	0.27	0.04	0.06
	% nonfamily firms on the eff. frontier in case of techn. progress	0.00	0.11	0.25

Source: our elaboration

Table 2 shows the composition of the efficiency frontier in terms of family and nonfamily firms. In other words, Table 2 shows, separately for the two groups of family and nonfamily firms, the percentages of firms that are on the best practice frontier in each financial crisis sub-period. Moreover, the analysis isolates these percentages in the presence of technological progress only (i.e., by excluding firms whose technological change index is lower than 1). Therefore, the percentage values in Table 2 reflect the propensity of family or nonfamily firms to position themselves on the efficient frontier, in the general case or in the event of a positive frontier shift. While in the pre-recession period there is a similar tendency of family and nonfamily firms to lie on the frontier (with the exclusion of the electrical appliances sector from the analysis), in both periods of recession (REC-fin and REC-real), nonfamily firms tend to be more present on the efficiency frontier. This is even more evident when the analysis is limited to the cases of technological progress. This means that nonfamily firms tend to “drive” the efficient frontier (in a progress direction) more than family firms do. Rather, the latter are more likely to act as followers in downturn periods. This seems to be consistent with the stream of literature that highlights the loss aversion of family firms, as well as their lower willingness to take risks and to invest in R&D activities. More precisely, in “physiological” conditions, i.e. during the pre-crisis period, there is not clear evidence of which group of firms push the technological frontier forward; rather, results are mixed across the considered sectors. However, since the beginning of the crisis, when the economic environment becomes increasingly instable and uncertain, the stronger loss aversion of family firms tend to emerge, making it much more unlikely that these units engage in innovation activities able to drive the frontier shift.

**Research limits.** According to previous studies, in this paper, a firm is called “family” if at least 20% of the voting rights are concentrated in the hands of a group of members belonging to the same family. This definition takes into consideration the ownership structure only and not the composition of boards of directors and that of management. The unequal number of family (135) and nonfamily (111) sample firms reflects the prevalence of family businesses in the Italian context and worldwide. Nevertheless, future research may be based on a bigger sample including a balanced

representation of both kinds of organization. In addition, alternative, parametric methods of productivity analysis may be employed to support the empirical findings of this paper.

**Practical implications.** This work provides an evaluation of the different performance of family and nonfamily firms, before and during the recent economic recession. The literature suggests that family firms can react to crisis periods in a different way with respect to nonfamily firms and this paper offers fresh evidence on that presumption. Differences can involve firms' resilience and their capability (or their propensity) to innovate. The proposed method to evaluate performance, defined as productivity change and measured by means of Malmquist indexes decomposed into efficiency change and technical change, provides valuable information and objective evaluation with respect to both the concepts of resilience and innovation. In particular, the resilience construct is operationalized in terms of efficiency change. In a context of generalized efficiency deterioration across the crisis, results do not provide strong evidence of differences between the two groups of firms, with family firms over-performing their counterparts, i.e. showing better resilience capacity, in two, less capital-intensive, sectors out of six and with reference to the first phase of the economic downturn only. This results point to the relevance of organizational and strategies that, especially for family firms, reinforce firms' ability to resist and react to unexpected, adverse economic conditions. With respect to the technical change component, the average tendency shows a progress, especially during the second phase of the recession, when the real economy was deeply involved. This suggests that innovation is indeed a response strategy that firms may adopt to sustain their productivity, especially in case of a long-lasting crisis.

The frontier shift, however, is more likely to be driven by nonfamily firms during the crisis period: in most of the analyzed sectors, their propensity to lie on the efficient frontier is much higher than for their counterparts in both the crisis phases, especially when the analysis is restricted to the cases of positive frontier shifts. Conversely, family firms are more likely to act as followers during a downturn, rather than engaging in active innovation. This result seems to support the thesis of higher loss aversion and lower willingness to invest in R&D activities of family firms, at least when the economic conditions are characterized by relevant uncertainty.

**Originality of the study.** The paper introduces a novel measure of resilience, thus operationalizing a paradigm largely employed in management studies. In addition, while previous literature mainly focuses on family firms' capability to face challenging situations, this study also considers nonfamily firms. Data are extracted from the AIDA database for the period 2001-2011 and comprise a unique and manually compiled dataset. The very broad period allows a subdivision into three sub-periods: pre-recession (pre-REC) period (from 2001 to 2006), period of financial crisis (REC-fin) (from 2007 to 2009) and period of recession of the real economy (REC-real) (in the years 2010 and 2011). The Malmquist indicators (indicative of the effect of catching-up and frontier shift) are analyzed in all three sub-periods in order to identify specific dynamics, with regard to the sectors observed, and with reference to the distinct groups of family and nonfamily firms.

**Key words:** family firms; financial crisis; productivity; Malmquist index; non-family firms; DEA

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# Innovation adoption in Small and Medium-sized Enterprises (SMEs) as a driver to sustainability: a meta-analysis

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**Objectives.** *The research program here summarized, after assuming that innovation adoption is a relevant, if not crucial, perspective for investigating SMEs orientation to sustainability, aims to detect the mostly relevant and cross-situationally consistent antecedents of innovation adoption decisions from SMEs.*

*This document shortly reports a research project on the factors affecting the innovation adoption decisions from SMEs, giving particular attention to their search for sustainability. The research program was 2-years long (from October 2016 to September 2018) and was executed without grants or other external funds. The research, which is now completely done, combined a huge effort into theoretical investigation and analysis with empirical research, since a longitudinal meta-analysis was adopted and applied. As a consequence, theoretical knowledge and conceptual frameworks inquiry were followed by significant computational work, as requested by the meta-analysis procedure recalled below.*

*Scholars commonly conceive innovation as a process comprising various stages, namely awareness of innovation, attitude formation, evaluation, decision to adopt, trial, implementation and sustained implementation (Rogers, 1983; Zaltman, Duncan, Holbek, 1973). Under this process view, the organizational decision to adopt innovations comes earlier than the post-adoption or implementation stage (Damanpour, Gopalakrishnan, 1998; Zaltman et al., 1973) and entails innovations which are not developed in the adopting organization but created elsewhere (Angle, Van de Ven, 2000; Damanpour, Gopalakrishnan, 1998). Note that both “innovation-making” behaviors (self-developed or generated innovations) and “innovation-taking” approaches (or adopted innovations) are relevant in innovation diffusion and/or organizational change (OECD, 2005: 58; Angle, Van de Ven, 2000; Damanpour, Wischnevsky, 2006; Gopalakrishnan, Damanpour, 1994; Rogers, 1983; Zaltman et al., 1973).*

*In SMEs, the decision to adopt innovations exhibits a number of distinctive traits as compared to large firms. Firstly, such a decision is particularly a complicated as well as a critical one (e.g., Jeon, Han, Lee, 2006; Julien, 1995; Lee, Cheung, 2004; Thong, Yap, 1995). Secondly, SMEs are usually affected by resource poverty, which impacts on highly unstructured decisional processes, the decisional key-role of the owner-manager, and the salience of external forces on decisions to be assumed (Premkumar, 2003; Unsworth et al., 2009; Welsh, White, 1981). Resource scarcity is also related to higher risk of innovation, given the inferior firm size (Nooteboom, 1994: pp. 343-44) issues in allocating resources among alternative activities, not to mention the superior difficulty in switching to alternative solutions, once that an innovation is adopted. On the flip side, SMEs can achieve several unique benefits in deciding to adopt innovations (Damanpour, 1991). Embracing innovation implies organizational change (Daft, Becker, 1978) and, at the same time, it fosters firm effectiveness, competitiveness, change and survival. Avoiding or overcoming innovation resistance or inertia in SMEs may be easier than in larger companies.*

*Within the field of the adoption of innovations in SMEs, the search for technologies that are sustainable both for business activities and for people usually implies discontinuity and changes. A sustainable innovation comprises methods, practices, routines, techniques that are potentially able to transform an input into an output in harmony with the environment and by enhancing both current and future potential to meet human needs and aspirations (Noppers et al. 2014). Even though the public discourse often highlights the need for sustainability and firms are credited to play a central role on sustainable development, sustainable practices in organizations and consumption lifestyles cannot be taken for granted. Nevertheless, SMEs are still reputed to be sometimes affected by gaps or constraints which keep them from reaching sustainable business models (e.g. Lee, 2009). Therefore, the study of the adoption of sustainable innovations in SMEs is important.*

*Research on the adoption of innovations in organizations, specifically empirical studies, is heterogenous. It has been initially focused on large players, while SMEs and new companies have been later acknowledged as central contributors to sustainable development. At the same time, concerning the adoption of sustainable innovations in SMEs, extant empirical studies combine works that built on a theoretical framework and introduced constructs and variables*

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tailored to understand sustainable innovations adoption decisions with others that, instead, focused on theoretical studies developed for the adoption of new technologies in general. Because of this heterogeneity of studies on the innovation adoption decisions, empirical results, even if based on the same theoretical framework, often vary in signs and magnitudes of estimates as well as offer evidences of inconsistent findings (Keupp et al, 2012).

As a consequence, this study tries to address two related questions: (i) what are the determinants of the adoption of innovations in SMEs? (ii) As regards SMEs, are the determinants of the sustainable innovation adoption likely to differ from the determinants of the adoption of other innovations?

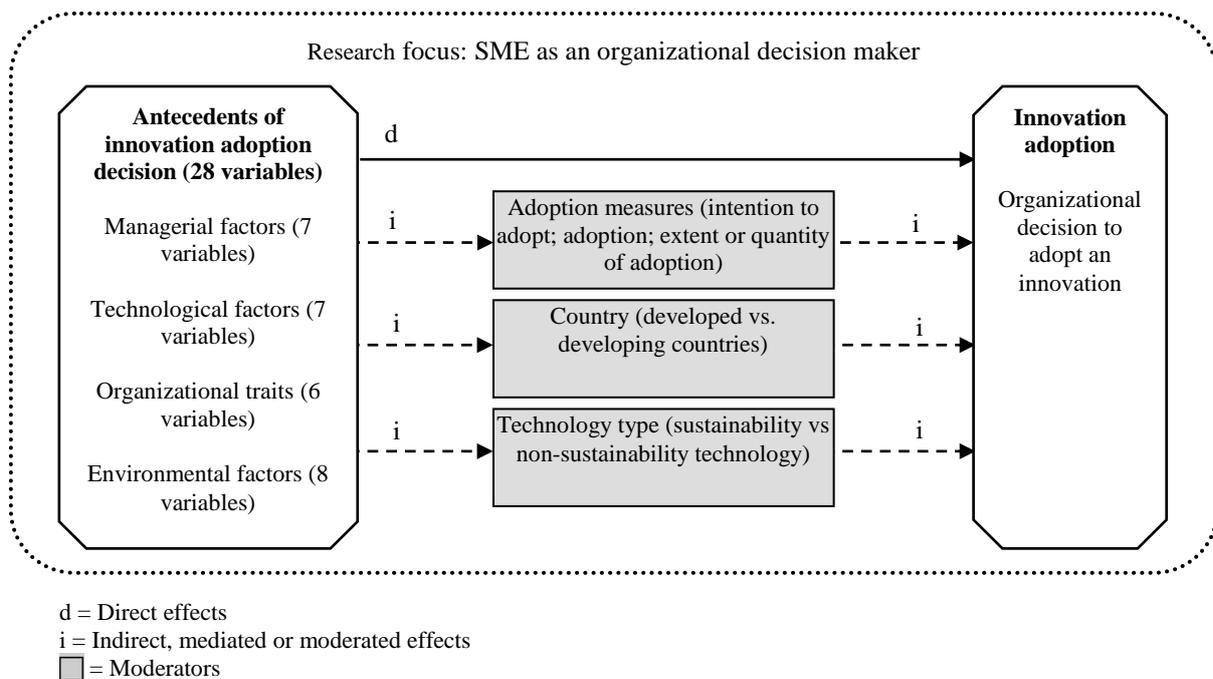
**Methodology.** From a set of published empirical studies over a 15 years long period of time, 28 antecedents were detected and grouped into 4 categories. 3 moderators were investigated, too. A longitudinal meta-analysis was then conducted.

By combining the method of systematic literature review proposed by Wolfswinkel et al. (2013) and a meta-analytical analysis of empirical findings (Montazemi and Qahri-Saremi 2015), this study aims at exploring categories and constructs - including sustainable innovation and/or technologies - as factors explaining the adoption of innovations in SMEs. The method employed allows us to consolidate and integrate research through the derivation of cumulative evidence from previous empirical findings.

In short, a longitudinal meta-analysis of the decision to adopt innovations in SMEs was conducted. Thus, the influences of 28 antecedents from 133 empirical works (i.e., 115 journal articles, 9 conference papers, 5 books, 4 doctoral theses) published between 1990 and 2014 were evaluated.

Concerning the theoretical framework, after reviewing a wide body of literature, a conceptual model was shaped in order to be tested through a meta-analysis. The framework is summarized below (Tab. 1).

Fig. 1: Conceptual framework



Source: our elaboration.

Regarding the antecedents of innovation adoption decisions, during the mentioned systematic review, factors related to innovation adoption and arising from prominent theories - namely, the Upper Echelons Theory (UET) (Hambrick, Mason, 1984), Theory of Reasoned Action (Fishbein, Ajzen, 1975), Innovation Diffusion Theory (IDT) (Rogers, 1983), Technology Acceptance Model (TAM) (Davis, 1989; Moore, Benbasat, 1991), Theory of Planned Behaviour (TPB) (Ajzen, 1987; Ajzen, 1991), and Technology, Organization, and Environment model (TOE) (Tornatzky, Fleischer, 1990) - were found and included in the conceptual framework above.

As a result, a list of 28 antecedents was outlined. For each antecedent, a definition and a series of coherent operationalizations were derived from literature, also registering the number of works sharing the same operationalization. The expected relationship with innovation adoption decision, as suggested by the reviewed literature, was consequently associated. Then, such determinants were collected into 4 groups, as shown below (Tab.1).

Tab. 1: Antecedents of innovation adoption decision in SMEs

Group of antecedents	Id.	Antecedent	Number of measures or operationalizations in literature	Expected relationship with decision to adopt innovation, from literature
1. Managerial	1	Top management support	6	+
	2	Education	6	+
	3	Innovativeness	9	+
	4	Prior technological experience	13	+
	5	Attitude toward behavior	9	+
	6	Perceived behavioral control (i.e., potential obstacles)	1	+
	7	Subjective norm (i.e., perceived social pressure)	4	+
2. Technological	8	Relative advantage (including individually perceived usefulness and organizational direct, indirect and combined benefits)	29	+
	9	Cost of adoption	16	-
	10	Compatibility	4	+
	11	Complexity	2	-
	12	Perceived ease of use	3	+
	13	Trialability	1	+
	14	Observability	1	+
3. Organizational	15	Employees' knowledge	26	+
	16	Firm innovativeness	6	+
	17	Readiness	2	+
	18	Centralization	4	+
	19	Formalization	4	+
	20	Size	19	+
4. Environmental	21	Uncertainty	5	+
	22	Competitive pressures	18	+
	23	Government pressures	5	+
	24	Customer pressures	4	+
	25	Supplier pressures	8	+
	26	Combined external pressures	16	+
	27	External support	15	+
	28	Trust	1	+

Source: our elaboration

More precisely, the managerial group of antecedents includes variables related to characteristics and attitudes of top managers, while the technological group adds perceived ease of use and potential costs to the five variables derived from Rogers' (1983) IDT, i.e. relative advantage, compatibility, complexity, trialability and observability. The organizational group, moving from the premise that an organization's propensity to adopt innovations is a type of dynamic capability, assumes that physical and financial resources - especially if abundant - as well as the organizational structure provide the necessary support to the development of adequate capabilities to adopt innovations. Finally, the environmental group, based on Kwon and Zmud (1987), implies that the effects of the environment on firms' innovation adoption decision are generally analyzed using two perspectives, i.e. the environment as a source of information and as a stock of resource.

As for potential moderators, this study also investigated how 3 moderating variables affect the relationship between SMEs' decision to adopt an innovation and its determinants. The first moderator (i.e. adoption measures) has a methodological nature and captures the way that the decision to adopt is measured in empirical studies (Harrison et al., 1997; Jeyaraj et al., 2006). The other two moderators (i.e. type country and type of technology) are related to the context in which SMEs' decision to adopt takes place (Camisón-Zornoza et al., 2004; Damanpour, 1991; Vincent et al., 2004). Concerning the latter moderator, it was even explored whether the determinants of sustainable technologies adoption from SMEs differ, in terms of magnitude and significance levels, from those related to the adoption of other technologies.

**Findings.** This study contributes to the literature by considering how the decision to adopt innovations in SMEs is differently related to its antecedents. Both main/direct effects' and moderators' existence were measured and tested. The results from meta-analysis were also connected to relevant theories on the innovation adoption decision.

In short, findings show that: (1) the perceived inconsistency and instability in research findings on SMEs' innovation adoption decision is mainly due to statistical artifacts and errors; (2) after controlling for those statistical inconsistencies, much of between-study variance is explained; (3) a significant number of antecedents suggested by extant studies have relevant relationships with innovation adoption in SMEs; (4) future research does not need further explore the antecedents that are statistically significant in nearly all subgroups (subjective norms, relative advantage, employees' knowledge, competitive pressures, external support, size); (5) debates on extant theories and models of innovation adoption (UET, TPB, IDT, TAM, TOE and Dynamic Capabilities Theory) can be addressed by hints; (6) future empirical works testing antecedents/moderators of innovation adoption decision should always provide a correlation matrix, measures of the effect sizes and other relevant statistical data.

As for the main effects (i.e., the antecedents of the innovation adoption decision from a SME mentioned above), the meta-analysis yields that cost of adoption and complexity (trialability and centralization) are negatively (non-significantly) related to innovation adoption decisions. All the other antecedents have a positive relationship. Relative importance and cross-situational consistency of antecedents were respectively assessed by means of: (1) the comparison with the conventional medium effect size of population and the so-called "30% rule" (Cohen, 1983: 60); and (2) the 75% rule and the Chi-square homogeneity test. As a result, subjective norm, top management support, customer pressures, perceived ease of use, relative advantage, trust, firm innovativeness, attitude toward behavior, formalization, innovativeness, compatibility, and supplier pressures resulted as salient determinants of innovation adoption from SMEs, but none of them was cross-situationally consistent.

Regarding the moderating effects, anytime that an explained variance lower than 75% was reported, a subgroup analysis for each pair of moderators' subgroups was conducted. Results turn out that: (1) the strength, not the direction, of determinants-innovation adoption decision relationships are affected by moderator subgroups; (2) all selected moderators significantly impact on the relationship between SMEs' adoption decision and its antecedents.

In particular, evidences that the adoption of sustainable innovations in SMEs moderate the determinants-adoption decisions linkages were acquired. For example, the magnitude of the signs of the top managers prior experience-, perceived relative advantage-, employees' knowledge-adoption decisions linkages in SMEs is higher in sustainable innovations than in other innovations

Given our findings, this paper also offers some future directions for research. Regarding antecedents of innovation adoption decision, there is need for further examination of the factors whose impact on the decision to adopt innovations in SMEs is not highly consistent across many studies or subgroups (e.g., education, observability, firm innovativeness, uncertainty, and trust) or seems to be not significant (e.g., centralization, very debated in literature: see Zmud, 1982; Jeyaraj et al., 2006; Thompson, 1965; Moch, Morse, 1977; Daft, 1982; Damanpour, Gopalakrishnan, 1998). Concerning moderators of innovation adoption, future studies might introduce more fine-grained distinctions of sustainable innovations in adoption decisions and assessing their moderating influence for the determinants-adoption decisions associations in SMEs. Moreover, assessing both the cross-situational consistency of results even on post-adoption stages in SMEs and the performance implications of adoption decisions represents important challenges for future meta-analyses.

**Research limits.** Only extant studies providing the correlation matrix and/or information to measure effect sizes were included for deriving the antecedents of innovation adoption decision. Again, due to data restriction, subjective/objective measures for the dependent variable as well as other potential moderators - such as innovation types (incremental vs. radical innovation), product complexity (simple vs. complex), type of SMEs (family vs. non family), or research design (cross-sectional vs. longitudinal) - were not included.

Since the extent of original works and their internal and external validity determine the generalizability of meta-analysis and the quantity of considered studies is relatively limited, a cautionary interpretation of some results (particularly of the moderation analysis) is recommended. Finally, linear relationships between the decision to adopt innovations in SMEs and its antecedents were assumed; as a consequence, non-linear relationships between innovation adoption decisions from a SME and their antecedents were not considered.

**Practical implications.** This analysis provides business owners and/or managers with various suggestions and guidelines. Findings may also benefit deciders' awareness of internal and environmental factors affecting the pace of innovation adoption processes.

Making it very short, organizational leaders should: (1) dedicate time and resources to understand opportunities and threats associated to potentially adoptable innovations; (2) implement a systematic problem-solving process encompassing multiple factors, including the organization, technology and the environment; and (3) be conscious of the importance of stimuli from the external environment.

**Originality of the study.** It is one of the very few studies investigating a wide range of antecedents of innovation adoption decisions, even if some moderators, with a focus on SMEs. The time range of considered works is longer than in previous meta-analysis and encompasses different economic cycles. A meta-analysis of the specificity of the determinants-sustainable innovation adoption decisions associations in SMEs is further provided.

**Key words:** sustainability; innovation adoption; decision making; SMEs; meta-analysis; moderation effect

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# Corporate governance practices and value creation: evidence from AIM-listed Italian firms

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**Objectives.** *The aim of this article is to investigate the value creation effectively realized by AIM-listed Italian companies in terms of market capitalization growth in the year following the IPO and the amount of capital raised through their IPOs on AIM Italia. In so doing, we focus on corporate governance practices of AIM-listed firms.*

*Alternative Investment Market (AIM) Italia is the Multilateral Trading Facility (MTF) devoted to Italian small and medium-sized enterprises (SMEs), managed by Borsa Italiana. It was established on the basis of AIM UK, the Alternative Investment Market managed by the London Stock Exchange. In 2012 AIM Italia merged with Mercato Alternativo del Capitale (MAC), established in 2007. The merger was operated with the aim of rationalising and strengthening the MTF markets devoted to small caps, creating a single market conceived for Italian SMEs. Due to the tightening of loans granted by banks in the aftermath of recent financial crisis, SMEs, which traditionally had difficulties in accessing funding other than bank loans, needed to diversify their sources of capital. AIM Italia aims to provide an alternative way of financing and accessing capital to SMEs through IPOs. Indeed, IPOs may offer reputational advantages, enhancing both the company's status with respect to customers, suppliers, the banking system and the competitive advantage of the business. AIM could thus play a key role in fostering national growth as SMEs largely characterize the Italian economy. The great advantage of AIM with respect to the MTA market (Mercato Telematico Azionario) of Borsa Italiana consists of the slim requirements required to firms willing to enter into the market and go public. As MTF AIM Italia is regulated and managed by Borsa Italiana implying a trade-off: the stricter the requirements, the lower the number of companies that can access the market but the higher the reputation the market can achieve. The key figure of AIM Italia is the Nominated Adviser (Nomad): an investment bank, an accountancy firm or a company mainly operating in the corporate finance sector authorized to serve as a Nomad by Borsa Italiana and included on the AIM Italia Register. A Nomad must assess the appropriateness of the candidate company for the admission to the market, coordinate the listing process and stimulate the attention by the company to comply with the rules deriving from being listed on AIM Italia, thus supporting the maintenance of an adequate level of transparency.*

*Following the example of the first Alternative Investment Market developed by the London Stock Exchange in UK, all the major operators of regulated stock markets in EU countries developed MTF targeting domestic SMEs: The Alternative Investment Market based in UK, the Euronext Growth (Ex Alternext) based in France, the Open Market-Entry Standard based in Germany and the Mercado Alternativo Bursátil based in Spain.*

*Concerning the review of prior literature, there is scarce empirical research on AIM Italia and equivalent European markets. Gerakos, Lang and Maffet (2013) investigate whether the lack of public regulation affects the performance of AIM-listed firms. Their main finding is that there is an effective underperformance of firms listed on AIM UK compared to firms listed on traditionally regulated stock exchanges. Espenlaub, Kurshed and Mohamed (2012) delve into Nomad reputation, looking at its impact on IPO survival on AIM. The results of their model show a positive and significant impact of Nomad reputation on survival. Mallin and Ow-Yong (2011) analyze the ethical implication of the lack of oversight of Nomad and their failure as gatekeepers, causing scandals or collapses on AIM. Their study argues that, in general, Nomads have a positive influence on the directors of AIM companies, albeit with some exceptions. On the other hand, the institutional investors do not view the AIM company's Nomad as a significant factor in their investment, although, in the event of a previous bad experience with a particular Nomad, they claim to take a closer look at the company they are interested to invest in. Finally, the Nomads interviewed claim that the decision to accept or not a client is affected by the company's corporate governance structure and performance. Martínez (2015) reports the financial scandal of Gowex in the Spanish Alternative Investment Market (Mercado Alternativo Bursátil, MAB). According to Martínez "Gowex's collapse does not represent a failure of MAB (and, in general, of the Alternative Investment Markets) but a failure of the gatekeepers in charge of overseeing Gowex's activities", in other words the Nomad. Nomads, indeed, are required to check all information regarding the company they are advising or, at least, verify the content of financial statements. Hence, in his article, Martínez proposes that "regulators should enhance the role and the effectiveness of Nominated Advisers since they are created for the purpose of compensating for the lower level of information issued by the listed companies". Revest and Sapiro (2013) discuss the*

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real performance of AIM firms in relation to private small and medium enterprises. Their claim is that AIM listed companies grow faster in terms of employees, but such growth is not matched by a comparable growth in added value, involving the underperformance of AIM-listed firms compared to comparable private companies in terms of productivity. A study by Acedo-Ramírez and Ruiz-Cabestre (2017) aims to analyze the underpricing of IPOs in the UK's Alternative Investment Market. Their empirical evidence suggests that when the number of newly issued shares sold is lower the underpricing is greater and when the offering price is higher the underpricing is lower. Additionally, it is shown that the adjustment of shares has a positive relationship with underpricing, meaning that investors providing information are effectively rewarded. Piotroski (2013) replies to the paper by Gerakos et al., introducing the problem of the persistence of the underperformance over time. According to the authors, indeed, the fact that the AIM is privately regulated, thus offering a weak investor protection, should not explain the persistence of the underperformance of the listed firms, since investors should learn from the previous years of bad outcomes, if they are rational. Afrifa (2015) focuses his research on the relationship between Working Capital Management practices and AIM-listed firms' profitability. Afrifa concludes underlying the importance for the management of AIM-listed companies to focus on target setting and alteration frequency practices of WCM in order to maximize profitability. Amini and Keasey (2012) extend the research carried on by Gerakos et al., suggesting that default probability is higher for AIM-listed firms. Espenlaub et al. (2012) focus on the impact of Nomad reputation. Nielsson (2013) examines whether the Alternative Investment Market, having as a distinctive feature a lighter regulation and less listing requirements, attracts lower quality firms. Nielsson concludes that firms listed on AIM are smaller in size but otherwise comparable to firms listed on the other stock exchanges and equivalent in terms of delisting patterns. AIM-listed firms also raise proportionally higher amounts of capital. Then, the results show that smaller firms may choose to list their shares in less regulated markets because of other types of needs (e.g., costs and capital raised) rather than having lower quality. Pozniak, Bellanca and Vullo (2016) conduct a study on AIM Italia concerning the internet financial communication and disclosure procedures.

**Methodology.** A multivariate regression analysis is employed. As of 31 December 2017, the number of companies listed on AIM Italia was 95 with a total market capitalization of € 5.6 billion. In 2017, the number of IPOs was 25 (11 in 2016) with a raised capital of € 1.3 billion (210 million in 2016), representing 64% of the total raised capital since 2009.

Our sample consists of Italian companies listed on AIM Italia in the 2009-2016 period. It includes 69 firms which conducted an IPO between 2009 and 2016 and are still listed in the market. After excluding 5 firms with some missing data, our final sample consists of 64 companies.

There are not specific requirements imposed to AIM-listed Italian firms concerning the presence of independent directors in their board of directors (BoDs). However, 83% of our sample of AIM-listed Italian firms have at least one independent director in their board of directors, while 17% do not have independent directors in BoDs. 22% of BoDs have an independent directors' quota lower than 20%, 40% have an independent directors' quota between 20% and 33% and 20% of BoDs have an independent directors' quota greater or equal 1/3 (see Fig. 1 Panel A)

The Law 120/2011 established a gender quota of 33% of least represented gender for the boards of directors of listed companies to be achieved by 2015. However, 47% of BoDs of our sample of AIM-listed Italian firms have no female quota, 27% have a female quota lower than 20%, 16% have a percentage of women between 20% and 33% and only 11% of companies have a female quota greater or equal to 33% in their BoDs (see Fig. 1 Panel B).

Our sample includes AIM-listed Italian firms operating in 13 industrial sectors: Corporate Advisory, Energy, Engineering, Financial Services, Food & Beverage, ITC, Leisure, Logistics, Manufacturing, Marketing, Media, Publishing and Wholesale/Retail Trade. 20% of AIM-listed Italian firms operates in the Financial Services sector, 19% operates in the Corporate Advisory sector, 17% operates in the Manufacturing sector and 13% operates in the ITC sector. The other sectors comprise each a percentage of listed companies lower or equal to 5%.

The companies located in the Northern part of Italy are 70, representing 75% of the total number of listed companies. Companies having headquarters in Central Italy are 21, representing the 22% of the total number of listed companies and companies with abroad headquarters are just 3, representing 3% of the total listed companies. No companies are located in the Southern part of Italy.

AIM-listed companies also include SPACs. The first Special Purpose Acquisition Company (SPAC) launched in Italy (Made in Italy 1) was established and listed on AIM Italia in 2011. As of 31 December 2017, the total number of SPACs listed on AIM Italia is 9, representing 10% of the total number of listed companies.

The Nomad Register, managed by Borsa Italiana, includes 18 registered Nomads. As of 31 December 2017, 15 Nomads supported companies through the IPO process. Envent Capital has the greater market share: 24% supporting 23 companies, followed by Integrae Sim (17%), Banca Finnat Euramerica (11%), Ubi Banca (7%) and Banca Popolare di Vicenza, Banca IMI, Banca Akros (6% each). All the other Nomads account for the remaining 21% of companies (see tab. 5, Fig. 10). However, market share is not directly proportional to the average capital raised by each Nomad: Envent Capital raised, on average, € 5.4 million, € 4.9 million were raised by Integrae Sim and € 5.3 million were raised, on average, by Banca Finnat Euramerica. Nomads that, on average, raised more capital are Mediobanca (€ 97.6 million raised versus a market share of just 2%), Banca Akros (€ 90.9 million) and Banca IMI (€ 74.4 million).

The aim of this study is to investigate the value creation effectively realized by AIM-listed Italian companies in terms of market capitalization growth in the year following the IPO (MODEL A) and the amount of capital raised through their IPOs on AIM Italia (MODEL B).

*MODEL A.* Our primary purpose is to detect the characteristics of AIM-listed firms contributing to value creation in the year following the IPO (see Tab. 1). We use the market capitalization growth (dependent variable) as a proxy for the value creation of AIM-listed companies. The independent variables are classified into three main categories, each representing distinct characteristics of those firms that have chosen to go public on AIM Italia: governance characteristics (accounting for the implementation of select corporate governance practices), market characteristics (reflecting prices and volumes of stock transactions on AIM Italia, their volatility, the occurrence of underpricing, the market share of Nomads) and firm characteristics (reflecting the economic and financial soundness, sector and geographical location of AIM-listed firms). More specifically, we use the Independent Directors Quota and the Female Quota in BoDs as governance characteristics.

Our sample consists of 63 companies which conducted an IPO on AIM Italia in the 2009-2016 period and are still listed in the market.<sup>1</sup> To run our empirical analysis, we employ a multiple regression model estimated with the ordinary least squares (OLS) method (see Tab. 3)

**Findings.** Our empirical evidence suggests that the market capitalization growth of AIM-listed firms increases with the number of women sitting in their Board of Directors: the coefficient is positive and strongly statistically significant ( $p < 0.01$ ). However, albeit the Law 120/2011 has provided for a gender quota of 33% of least represented gender for the Boards of Directors of listed companies to be achieved by 2015, 47% of firms with shares listed on AIM Italia do not have women holding board seats. Our findings also show that the independent directors' quota in the Board of Directors of AIM-listed firms has a negative and statistically significant impact on their market capitalization growth. As already mentioned, companies listed on AIM Italia are not required to comply with specific corporate governance requirements. However, as remarked by Martinez (2015), the imposition of independent directors in AIM-listed firms would reduce the conflict of interests that may arise in the board rooms when managing the business. Independent directors may also perform the task of overseeing financial reporting and disclosure of price-sensitive financial information, as well as ensuring the compliance with listing and other legal requirements. However, our empirical evidence shows that the resort to independent directors is less important for small- and medium-sized firms listed on AIM Italia.

Our findings include a positive and highly significant coefficient ( $p < 0.05$ ) for the standard deviation of log returns, a measure of volatility. Hence, companies experiencing higher volatility have a greater increase in market capitalization growth in the first year following the IPO. The coefficient of the underpricing variable is positive and highly significant ( $p < 0.01$ ), implying that companies experiencing underpricing on the first day of trading of their shares tend to record a higher market capitalization growth during the first year of listing. Bookbuilding is a common practice on AIM Italia. This explains why the average underpricing on such a market is quite small (around 2.5%). Indeed, bookbuilding has a mitigating effect on underpricing by enabling bookrunners (Nomads) to reward informed investors through allocation of shares based on their actual bids. Despite the bookbuilding practice, the occurrence of underpricing on AIM Italia implies that there exist investors, not fully satisfied with the initial allocation of shares via bookbuilding, who are willing to buy a larger number of shares on the market due to their expectations about the company's potential for value creation. The geographical location (Northern Italy) has a significant positive relationship with market cap growth. The coefficient of the energy sector variable is also positive and statistically significant ( $p < 0.01$ ), suggesting that companies operating in the energy industry have higher market capitalization growth during their first year of trading on AIM Italia compared to firms of other industrial sectors.

*MODEL B.* Our second econometric model aims to detect the determinants of the amount of the amount of capital raised by firms listed on AIM Italia (see Tab 2). The understanding of such determinants may be important for candidate firms willing to maximize the amount of equity capital collected by market participants. To do so, we use the natural logarithm of capital raised through the IPO as dependent variable. Independent variables account for companies' economic and financial soundness, industrial sector and Nomad activity (see Tab. 4).

Our empirical evidence suggests that the amount of capital raised gets lower as the Nomad's market share increases. We may interpret such a result relying on the fact that the fees a Nomad typically receives depend on the amount of capital raised. Nomads with a larger share of the AIM-related advisory market (thus attracting more candidate, fee-paying firms) tend to be more prudent when targeting potential capital raising on behalf of such firms, while Nomads advising a lower number of companies tend to be more reckless. This may lead to better performances in terms of collection of equity capital from market participants.

Our findings also show that companies operating in the financial sector have a positive and significant impact on the amount of capital raised. Companies operating in such a sector are more aware of the mechanism behind equity financing, and then more expert in managing a higher amount of equity and relationships with investors. Firms with higher profitability (ROE, ROA) are more capable of improving the size of capital raising when opting for an IPO on AIM Italia. The coefficient of the variable Debt to Equity ratio is positive and significant ( $p < 0.05$ ): companies having a higher degree of financial leverage in the year prior to the IPO tend, on average, to raise more capital so as to be able to rebalance their capital structure through reimbursement of part of their outstanding debt. The coefficient of the Cash Conversion Cycle (CCC) is highly statistically significant ( $p < 0.01$ ) but very low, implying that the impact of CCC on the amount of capital raised is nearly zero. CCC affects the amount of working capital a firm may need, which is typically financed by short-term instruments. However, when raising capital through an IPO, a company increases the

<sup>1</sup> Six firms were excluded from an initial sample of 69 firms due to missing data.

amount of equity, which is a mean of financing long-term investments (e.g., fixed assets). We find a loose relationship between working capital and the amount of equity capital raised, which validates the (asset-liability) matching principle applied by companies.

**Research limits.** The main limit of our study lies in the relatively small size of our sample, which is contingent on the modest number of IPOs so far completed on AIM Italia.

**Practical implications.** Our study has implications for Nomads, entities managing stock market exchanges and SMEs. Nomads are offered guidelines for identifying companies with high market value potential and better ability to maximize the amount of capital raised. Entities managing stock market exchanges may be able to detect the characteristics of those candidate firms that should be attracted into accelerated IPO track programs so as to maximize the prospective growth of the market. SMEs planning to list their shares on the AIM Italia may receive helpful suggestions as to which (governance, market, firm-specific) characteristics should be stressed in order to make the most of their IPOs in terms of both expected excess returns for investors and capital raising. Indeed, higher expected stock returns would increase collection of equity capital during the IPO process. For example, as described above, candidate AIM companies can increase their value creation (and equity raising) making changes to their corporate governance practices.

**Originality of the study.** Our study enriches the scarce research so far conducted on firms whose shares are listed on Alternative Investment Markets around Europe.

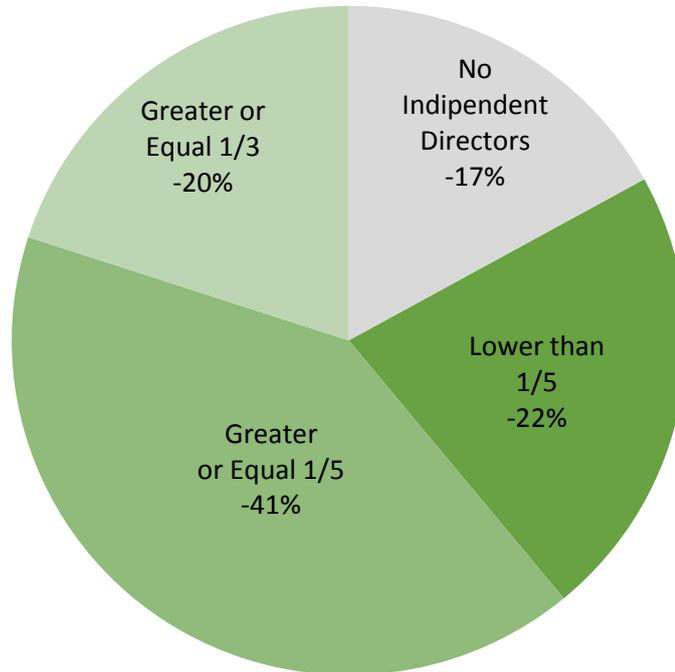
**Key words:** AIM Italia; market capitalisation; equity capital

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Fig. 1: Corporate governance practices at AIM-listed Italian firms

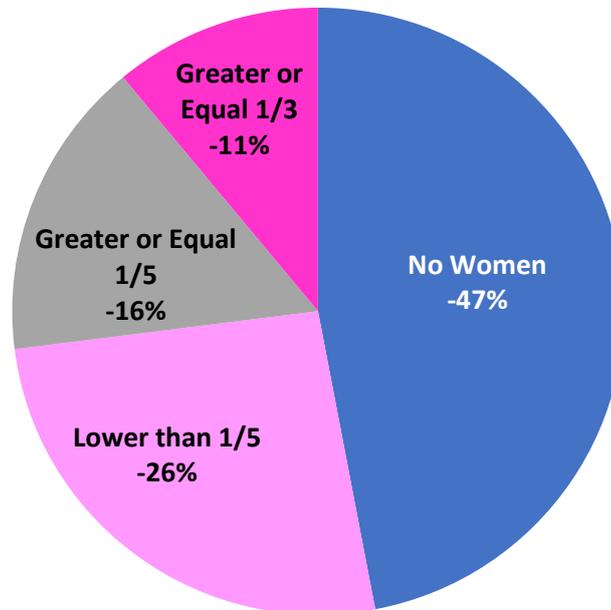
Panel A Quota (%) of Independent Directors in Board of Directors (BoDs)



Osservatorio IR Top (2016)

Panel B Quota (%) of females in Board of Directors (BoDs)

**FEMALE QUOTA IN BOD (%)**



Osservatorio IR Top (2016)

Tab. 1 Definitions and Sources of Variables (Model A)

Variable	Definition	Source
Market Cap Growth	Ratio of the difference of market cap between IPO and one year later to market cap at IPO	Bloomberg
Female Quota	Ratio of Number of Women in the BoD to total number of Directors in the BoD	Osservatorio IR Top (2016)
Independent Directors Quota	Ratio of Number of Independent Directors in the BoD to total number of Directors in the BoD	Osservatorio IR Top (2016)
STD of Log Returns	Standard Deviation of the Log Returns from IPO to May 2017	Bloomberg
Average Prices	Simple mean of Daily Prices from IPO to May 2017	Bloomberg
Underpricing	Ratio of IPO price to first trading day closing price	Osservatorio IR Top (2016), Yahoo finance, Bloomberg
STD of Volumes	Standard Deviation of Daily Volumes from IPO to May 2017	Bloomberg
Nomad's Market Share	Ratio of number of issues a Nomad backed to total number of IPOs	Osservatorio IR Top (2016), Borsa Italiana
Region	Dummy: 1 if the firm is based in the North of Italy and 0 otherwise	AIDA, Company Website
Energy Sector	Dummy: 1 if the firm operates in the Energy sector and 0 otherwise	Aida
Net Income	Net Income of IPO year	AIDA, Company Website
ROE	Return on Equity of IPO year	AIDA, Company Website
Personnel Costs/ Net Income	Ratio of Personnel costs to Net Income of the IPO year	AIDA, Company Website
CCC	Cash Conversion Cycle of the IPO Year	AIDA, Company Website
Debt to Equity	Ratio of Debt to Equity of the IPO year	AIDA, Company Website

Authors' Elaborations

Tab. 2 Definitions and Sources of Variables (Model B)

Variable	Definition	Source
Capital Raised	Natural Logarithm of Capital raised through IPO	Osservatorio IR Top (2016), Borsa Italiana
Nomad's Market Share	Ratio of number of issues a Nomad backed to total number of IPOs	Osservatorio IR Top (2016), Borsa Italiana
Financial Services Sector	Dummy: 1 if the firm operates in the Financial Services sector and 0 otherwise	AIDA
ROE	Return on Equity in the year before the IPO	AIDA, Company Website
ROA	Return on Asset in the year before the IPO	AIDA, Company Website
Debt to Equity	Ratio of Debt to Equity in the year before the IPO	AIDA, Company Website
CCC	Cash Conversion Cycle in the year before the IPO	AIDA, Company Website
Net Working Capital	Net Working Capital in the year before the IPO	AIDA, Company Website
Interest Coverage	Ratio of EBITDA to Interest Expenses in the year before the IPO	AIDA, Company Website

Authors' Elaborations

Tab. 3 Regression Analysis (Model A)

		<b>R-squared</b>	58.75%	
		<b># Observations</b>	63	
<i>Dependent Variable</i>		<b>Market Cap Growth</b>		
<i>Independent Variables</i>		<b>Model A</b>		
		<b>Coefficient</b>		<b>P &gt;  t </b>
<b>Governance Characteristics</b>	<b>Female Quota</b>	1.3806	***	0.005
	<b>Independent Directors Quota</b>	-1.9015	***	0.001
<b>Market Characteristics</b>	<b>STD of Log Returns</b>	20.4572	**	0.029
	<b>Average Prices</b>	0.0058	**	0.022
	<b>Underpricing</b>	2.1868	***	0.000
	<b>STD of Volumes</b>	0.0000		0.352
	<b>Nomad's Market Share</b>	0.0255		0.975
<b>Firm Characteristics</b>	<b>Region</b>	0.3137	*	0.069
	<b>Energy Sector</b>	0.9068	***	0.01
	<b>Net Income</b>	0.0000	**	0.049
	<b>ROE</b>	0.0099	**	0.013
	<b>Personnel costs/Net Income</b>	0.0017	***	0.008
	<b>Cash Conversion Cycle</b>	0.0002	**	0.041
	<b>Debt to Equity</b>	-0.0393		0.329
	<b>Constant</b>	-2.8122	***	0.000

Authors' Elaborations

Tab.4 Regression Analysis (Model B)

		<b>R-squared</b>	55.54%	
		<b># Observations</b>	64	
<i>Dependent Variable</i>		<b>Capital Raised</b>		
<i>Independent Variables</i>		<b>Coefficient</b>		<b>P &gt;  t </b>
	<b>Nomad's Market Share</b>	-5.1007	***	0.000
	<b>Financial Services Sector</b>	0.7937	*	0.066
	<b>ROE</b>	0.009	**	0.041
	<b>ROA</b>	-0.0080	*	0.08
	<b>Debt to Equity</b>	0.02	**	0.045
	<b>CCC</b>	0.0001	***	0.000
	<b>Net Working Capital</b>	0.0000	***	0.007
	<b>Interest Coverage</b>	0.0000		0.181
	<b>Constant</b>	15.9524	***	0.000

Authors' Elaborations



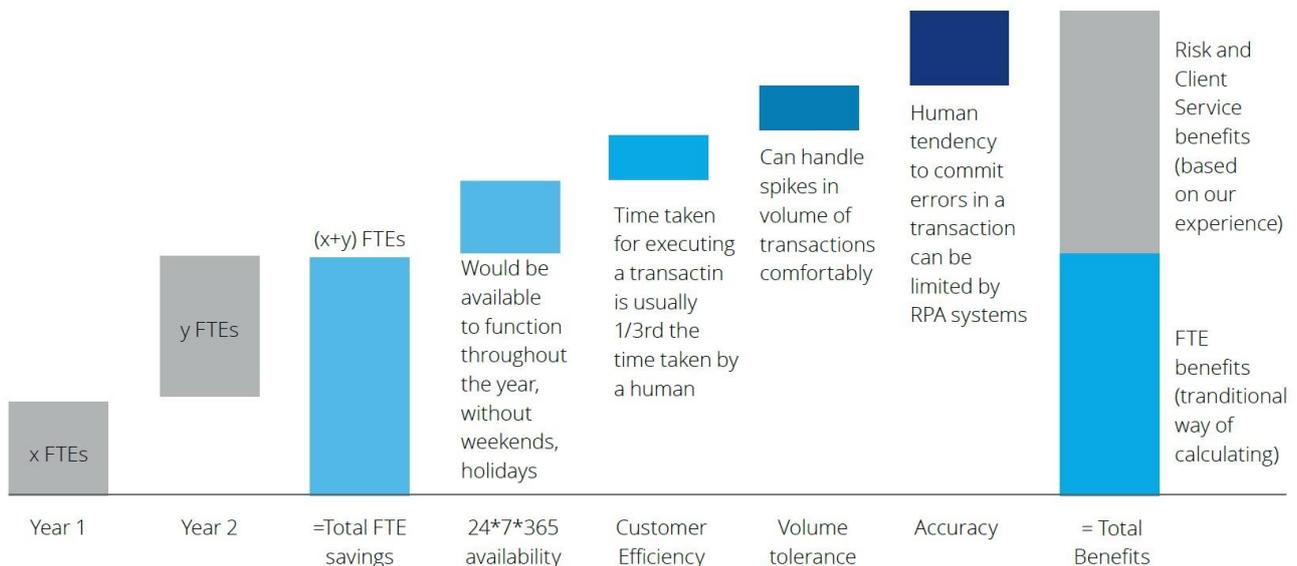
# How the automation impacts on the reshoring strategy in the financial and business services

MICHELE COSTA\* ALBERTO PASTORE•

**Objectives.** *The Automation is taking strategic importance on the location decisions of the Financial and Business Services companies and in the nascent line of research regarding the reshoring (Kinkel, 2012), i.e. “the re-concentration of parts of production from own foreign locations as well as from foreign suppliers to the domestic production site of the company” (Kinkel and Maloca, 2009). Scholars and researchers, mainly in the manufacturing field, have identified the automation as one of many motivations and drivers that encourage the management to relocate previously offshored activities back to the home country (Tate et al., 2014; Arlbjorn, 2014; Ancarani et al., 2015; Fratocchi et al., 2016; Foerstl et al., 2016; Bals et al., 2016; Uluskan et al., 2016; Zhai et al., 2016).*

*Automation within organizations includes the introduction of a series of emerging technologies as Robotic Process Automation (RPA), Artificial Intelligence (AI) and Machines Learning, re-designing the processes in order to optimize and enhance them. The first applications of these technologies have been rapidly implemented within organizations, providing many advantages, as saving time and costs, and reducing operative losses and risks. In particular, Robotic Process Automation (RPA), the software/technology that mimics and integrate the action of humans, will drastically change the way labor has been conceived so far, automating manual and simple rule-based repetitive processes, becoming one of the most transformational tools of today. The robots are more cost-effective than labor units. They are scalable and suitable to many fields in the Financial and Business Services companies, from the front-office to back-office, because of the huge repetitive volumes (Figure 1). The technology progress will play a crucial role in the competitiveness of the Financial and Business Services Industry and in the composition of the future operations and production landscape. The technology arbitrage guarantees an increase in the productivity, deriving from high-speed and 24/7 performance, as well as a significant cost reduction: “where 800 Full-time equivalent (FTE) work can be done with 50 robots, this reduces average handling time from 30 to 10 minutes and reduces costs by 80%” (PWC, 2016).*

Fig. 1: Robotic Process Automation (RPA) Benefits



Source: Deloitte (2017)

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*In academic literature, topics such as location decision have already undergone a process of theoretical conceptualization. It is possible to highlight three main theories concerning the location decision: Transaction Cost Economies (TCE), the Internalization theory and the Foreign Direct Divestment.*

*The focus of the Transaction Cost Economies theory (TCE) stands on what Williamson (1975) defines the “make-or-buy decision”: the company considers all the potential risks and costs of buying a certain asset instead of producing it, with the purpose of balancing the transactions and investments costs. Also, the Internalization theory grows around the make-or-buy decision and is grounded in the work of Coase (1937), but, starting from there, it escalates to a global level in which the decision of the location takes into consideration all the elements and factors related to costs and risks, including the foreign direct investment (Casson, 2013). According to the Foreign Direct Divestment theory developed in the early ‘80s, location decisions might in some circumstances take the form of de-investment (Fratocchi et al, 2015), in order to adapt the operations of the firm to the international context, eliminating foreign branches and subsidiaries. In particular,*

*“foreign direct divestment takes place whenever a firm: (1) ceases to possess net competitive advantages over firms of other nationalities; (2) or, even if it retains net competitive advantages, it no longer finds it beneficial to use them itself rather than sell or rent them to foreign firms - that is, the firm no longer considers it profitable to “internalize” these advantages; (3) or the firm no longer finds it profitable to utilize its internalized net competitive advantage outside its home country - that is, it is now more advantageous to serve foreign markets by exports and the home market by home production, or to abandon foreign and/or home markets altogether.(Boddewyn 1985)”.*

*The reshoring has recently started to gain some consistency in the academic research as well. Most of current literature, however, has focused the attention mainly in the definition and positioning of this phenomenon on manufacturing companies (Fratocchi et al., 2014, 2015, 2016). By analyzing the literature, we could highlight that there is no significant theoretical nor empirical study on the relationship between automation and reshoring, which so far has been limited to the identification of automation as driver in the re-location decision process. As underlined by Arlbjørn and Mikkelsen (2014) this relationship is under-researched and to be addressed in the future, investigating “at least three aspects related to automation: 1) types of automation solutions within a single company and in supply networks and business clusters; 2) incentive programs to apply automation; 3) the true creation of new jobs through automation.”*

*Moreover, the analysis of literature showed that the researches that have been engaged so far are almost exclusively notable only in the sphere of manufacturing, creating the need for a deeper focus on Financial and Business Services, following the evident and growing trend of the reshoring phenomenon.*

*In such a context, where academic research about the relationship between automation and reshoring is meagre, the purpose of this “work in progress” exploratory-conceptual paper is to provide some reflections on such an important theme, answering the following research question:*

*- How does the Automation, and specifically the Robotic Process Automation (RPA), impact on the reshoring and location decisions in the Financial and Business companies?*

**Methodology.** *Seen the shortage of empirical studies on the relationship between automation and reshoring, we applied an explorative approach for a conceptual working paper, discussing phenomena that haven't been clearly described so far, and whose conceptualization is not possible to be directly deducted from the already consolidated theory.*

*This type of contribution, with a flexible design and unstructured research process, aims to give a better understanding of the context, taking all the aspects into consideration. In this way it is possible to gain more familiarity and additional insights into the phenomena in a context in which the theory is too generic, developing hypothesis and setting priorities for further examinations.*

*Consequently, our exploratory research attempts to provide some considerations on the studied phenomenon, in relation to the chosen problematic to understand and answer the questions of “how” and “why” events change (Mintzberg 1979; Langley 1999). As a completion of such a “work in progress” it will be necessary, subsequently, to use qualitative and case study research for a stronger and deeper understanding of the context (Dyer and Wilkins 1991).*

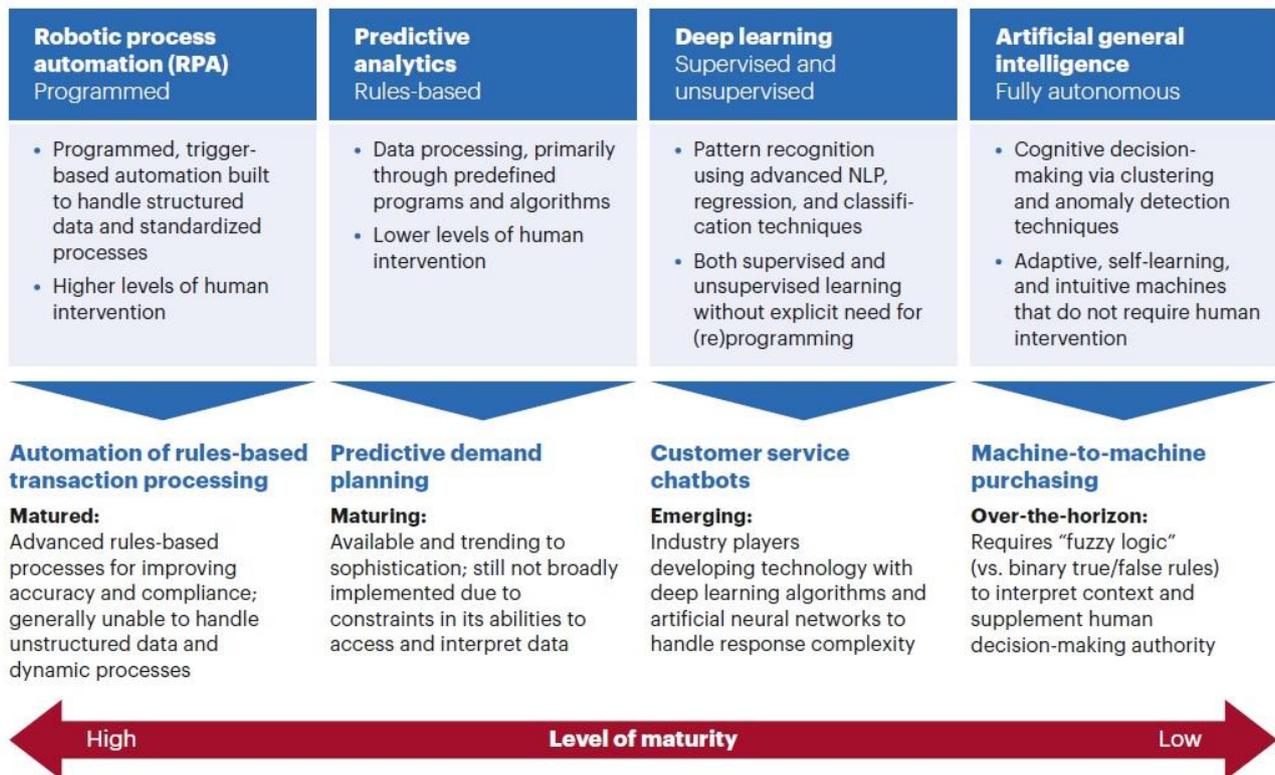
**Findings.** *Although the literature on the topic is, as pointed out above, limited and incomplete, our study introduces some new key considerations.*

*The intention of Financial and Business companies to integrate the new technologies for creating new business models is revolutionizing, among other aspects, the location decisions process. The growing centrality that Automation is acquiring in companies of all sizes, especially in this moment when the processes is becoming a competitive advantage, led us to the consideration that in this sector RPA will represent one of the main drivers in the decision to reshore.*

*RPA, however, is only one of the possible applications of intelligent automation in the Financial and Business Services Industry. There is a wide range of solutions, going from the currently implemented mature RPA technology to the cognitive computing that eventually, evolving in forms and capabilities, won't need human supervision or programming. The culmination of this technological evolution will be represented by the creation of fully independent robots. In our opinion, the great benefits provided by RPA are nothing but the preparative stage for the technological*

revolution that will be Artificial Intelligence. The robotic automation we can currently rely on, is able to handle structured and semi-structured data in order to reproduce human activities through the user interface, performing a set of repetitive tasks that follow predefined rules, leading to a deterministic behavior of the robot. In the next future, we can state that Artificial Intelligence will be a support and a completion for the RPA. All kind of data (structured, semi-structured, as well as unstructured data) will be input through machine vision, speech recognition and innovative pattern detection capabilities, allowing the robot to learn the process and improve it through experience, developing a probabilistic behavior (Figure 2).

Fig. 2: Intelligent automation in BPO industry, from RPA to cognitive computing



Source: A.T Kearney (2017)

Furthermore, the automation will also change the current understanding of the location strategy decision in the Financial and Business Services. Our argument is that the reshoring will be a natural development of the whole strategy, a culmination of offshoring projects and not an inverse trend as a reaction to the failure of the initial plan. This new concept contributes to overcoming the dilemma “lift and shift” vs “transform and shift”. Until today, the companies that aimed to globalize their activities obtaining some services from a foreign supplier, could choose between one of these two approaches: taking the process as it is and globalize to the host country (lift and shift) or transforming these activities to “world-class” performance level, and only then to globalizing it (transform and shift). In the new scenario the internationalization of the processes will involve both approaches in two phases, as follows:

- in the first “lift and shift” phase, the companies move the processes “as-is” to the host country, taking advantage from the availability of low-cost qualified labor and infrastructure of the emerging markets, without any improvement or reengineering of them. This stage provides, in the short term, an increasing of vertical/cost-driven investments, as Foreign Direct Investment (FDI), in the host countries in which the companies offshore specific service functions as back-office that do not involve direct contact with the customer and are less complicated. From “lift and shift” the companies could, moreover, benefit of the advantages as speed execution with a shorter time to start transition project, limited usage of up-front investment and a rapid recognition of workforce and cost savings.
- In the second “transform and shift” phase, as part of a long-term plan, the companies should standardize and save cost of the activities, reducing the workforce through the re-design, reengineering and automation of the processes. Automation technology can improve efficiency, productivity and accuracy, eliminating the high-volume repetitive and most time-consuming manual processes, freeing up the internal capacity for the high-value and customer-centric activities. After this, the companies could get further advantages from transferring the whole activity back to the home country, where the new high qualified IT professionals will be able to interpret context and data, and supplement human decision-making of the management, centralizing data close to the headquarter to achieve synergy effects. As stated by K. Mikolajow, UBS Investment Bank, “by using RPA on top of the processes we can harvest much more information and data than through traditional methods. This opens new

opportunities like leveraging information for cognitive and AI type of technologies. As we scale up and more data become available, this link will be stronger and stronger” (Deloitte, 2017).

In conclusion, we can consider that automation will have a great impact on location decision and, in particular on reshoring strategy. In the first place, automation, specifically RPA, will not eliminate the offshoring and outsourcing projects, but will change how they are conceived. As per our understanding, the reshoring, in the Financial and Business Services companies, is not to be interpreted, as in the Manufacturing companies, as reaction to the failure (Gray et al., 2013; Kinkel and Maloca, 2009) or unsatisfactory performance, but is mainly motivated by the implementation of automation and new technologies. At the current technological level, companies belonging to Financial and Business Industry will keep on implementing offshoring projects, taking advantage from the opportunities provided by the Globalization benefits, as the labor arbitrage of host countries, while freeing up resources for investment to boost the technological change and innovation to increase the productivity and the quality of the services provided. But in a second moment, thanks to the automation of the processes, companies can take advantage from the opportunities provided by the transformation benefits, such as the technology arbitrage. Automation will create the conditions for a new kind of job positions, more skilled and more remunerated, necessary for the management of these new technologies. This does not imply, however, that these new positions will be assigned to the same people that lost their job because of automation, and not even necessarily to the same host countries, since in a clear majority of cases they will need to be located closer to the existing business, reducing the resulting cost from long “mental and physical” distances (Kinkel, 2014).

This work in progress study follows from the branch of research on the location decision, representing an attempt to further explore the relation between automation and reshoring. The consideration risen in this occasion will necessarily need to be followed up by further in-depth analysis and empirical case-studies, to increase the degree of validity of what has been stated hereby. Additional developments to the study are strictly connected with the progress of technology itself.

**Research limits.** Given the lack of information about reshoring in the Financial and Business Services field, the research has an exploratory character and at present it lacks a part of empirical verification, to be carried out, first of all, through the analysis of case studies.

**Practical implications.** The relevance of the reshoring phenomenon in the field of Financial and Business Services is rising in the recent time, drawing the attention of both popular (Hagerty, 2012; Gray et al., 2013) and economic press (Booth, 2013). With dynamic changes in technological conditions, the design of Global Business Process strategies has become extremely important for practitioners and has great potential for Business and Operations Management scholars. Understanding and clarifying the specificities of reshoring could allow the management and consultants of Financial and Business Services companies to better define their plans and make these relocation strategies more efficient. Managers and consultants should take into consideration the main role that the technology will play, designing new reshoring strategies and implementing new operating models.

Moreover, the reshoring has social and economic implications (Heikkila et al., 2018) that represent a rising opportunity also for the policy makers. The latter will have the possibility to apply a lean bureaucracy and tax incentives to encourage the return of previously offshored activities. The change in the conditions that had propelled the transfer of the activities beyond national borders, the underestimation of the indirect costs, the increase in wages in the emerging and developing countries might enhance the attractiveness of the home country and push back the activities.

**Originality of the study.** This work in progress research aims to represent an original contribution to the literature available in the Financial and Business Services Industry, proposing a different interpretation of the reshoring’s phenomenon, not as reaction to the failure or unsatisfactory performance after the offshoring but as a culmination of the whole project. Considerations about the relation between the reshoring strategy and the Robotic Process Automation (RPA) has been also introduced, opening new ideas for further research.

**Key words:** reshoring; backshoring; offshoring; financial and business services; robotic process automation; location decision

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# Does CSR adjust investor's risk perception? Evidences from S&P 500 controversial companies

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**Objectives.** *An increasing number of companies has been willing to integrate corporate social responsibility (CSR) into different aspects of their business. Indeed, CSR activities can match corporate strategies to social needs, building a positive corporate image and developing a stricter relationship with consumers and related stakeholders. Consequently, companies involved in typical controversial sectors (e.g. firms acting in the tobacco or alcohol industries) often leverage on CSR activities to improve their reputation (Yoon et al., 2006). Despite several studies focus on companies belonging to controversial industry sectors (Palazzo and Richter, 2005; Banerjee and Bonnefous, 2011), the relationship between firms' social commitment and investor's risk perception has not been considering the controversy as an independent factor from industry sector. Therefore, we consider the firm's controversy level as an effect of CSR practices and not depending from the relative industry sector's reputation.*

*Accordingly, the aim of this work is to explore the relationship between controversial firms' ESG assessments and their risk exposures, aiming at identifying whether the investors' risk perception could be affected by corporate sustainability on stock exchange market. To identify firms with bad reputation, we refer to the Sustainalytics' Controversies Research approach, which defines as "controversial" those companies involved in incidents and events that may negatively impact stakeholders, the environment or the company's operations.*

*Corporate Social Responsibility and risk. Many researchers shed light on the ability of a socially responsible behavior to improve transparency and to lower company's risk (Jensen and Meckling, 1976; Alejandro, Garcia and Sàenz, 2013); indeed, a deeper degree of transparency tends to reduce the informational asymmetries between the company and investors thus lowering the perceived firm's risk (Orlitzky and Benjamin, 2001). Consequently, firms could adopt CSR practices to increase the legitimacy towards the external context, seeking to influence stakeholders' behavior and creating a positive corporate image (Brown and Dacin, 1997).*

*Particularly, several authors suggested a positive association between risk reduction and CSR activities (Spicer, 1978; McGuire et al., 1988; Boutin-Dufresne and Savaria, 2004). For example, Salama et al. (2011) focused on the relationship between environmental responsibility and perceived risk, demonstrating that the environmental performance is inversely related to firm systematic risk.*

*In addition, a lot of studies focused on the central role of CSR in controversial industry sectors showing mixed results (Jo and Na, 2012; Melé and Armengou, 2016). For instance, Jo and Na (2012) explored the negative association between firm risk and CSR engagement, finding that risk reduction in controversial sectors through CSR engagement is more significant than those acting in non-controversial ones. Particularly, accounting research showed that stakeholders in these sectors ask for a higher informational level, making companies more prone to disclose non-financial reports (Kilian and Hennigs, 2014). Conversely, Strahilevitz (2003) argued that CSR activities do not improve the reputation of companies perceived to be unethical; this implies they can only deliver products in line with stakeholders' expectations and moral norms.*

*Although the growing consensus about the risk-mitigation view (Goss and Roberts, 2011), many researchers considered investments in CSR as value-destroying from a shareholder perspective (Friedman, 1970; Tribó et al., 2009) as the higher the costs to satisfy stakeholders needs the greater the complexity and the volatility of earnings (Alexander and Buchholz, 1978; Frooman et al., 2008). Moreover, Bassen et al. (2006) did not find a clear relationship between CSR and financial performance. Finally, Trotman and Bradley (1981) analyzed the impact of social disclosure on firm's systematic risk without finding any significant association between these two phenomena.*

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ESG Rating and risk perception. *Many empirical findings suggest that investors consider both the expected rate of return and the investment risk degree in their decision-making processes. Accordingly, they seem to assess not only economic factors but also non-financial parameters (Margolis, Elfenbein and Walsh, 2007; Boatright, 2013). Therefore, the investors look at the company's commitment into environmental dimension as well as into social and governance ones, according to the ESG (Environmental, Social, Governance) paradigm. Hence, the information available to investors and its completeness and reliability affects the information asymmetry degree (Czerwinska and Kaźmierkiewicz, 2015).*

*Moreover, some researchers argued that the adoption of ESG criteria to build up an investment portfolio tends to reduce investors information asymmetry, allowing them to overperform (Kempf and Osthoff, 2007). On this ground, the ESG paradigm impacts positively on the investment portfolio performance as ethical firms can reach better long-term financial results. Nevertheless, scholars showed not-agreeing findings about this relationship (Wright and Ferris, 1997; Ullman, 1985; Margolis and Walsh, 2001). Likewise, the same ambiguous results were verified also in terms of financial risk. Indeed, Oikonomou et al. (2012) found a negative but non-significant association between ESG commitment and systematic risk, while a socially irresponsible behavior is positively linked to the systematic risk in regard to S&P 500 companies. Instead, Bousslah et al. (2013) analyzed a set of US firms from 1991 to 2007 founding that a corporate sustainable approach is able to impact positively on investors' idiosyncratic risk. Moreover, Humphrey et al. (2012) suggested that companies with high ESG scores do not overcome those with low scores in terms of their systematic risk and performance.*

*As shown in this short literature review, the relationship between CSR and investor's risk perception is bringing a lot of researchers to focus on this topic. Prior studies suggested that fitting ESG performance within the various industry contexts may explain such differences in this relationship (Brammer and Pavelin, 2006). Referring to the controversial sectors, stakeholders' pressure for a deeper ESG commitment leads companies to disclose urgently non-financial information (Kilian and Hennigs, 2014) thus facilitating the investor's risk reduction. However, these studies often tend to overestimate the sectorial bad reputation on the companies' CSR assessment without analyzing the specific firms' activities (Rodrigo et al., 2016). Therefore, our work aims to fill this gap in the literature investigating if the CSR practices implemented by controversial companies can improve the investor's risk assessment without considering the specific industry sector reputation. In doing so, this work analyzed whether controversial firms' ESG commitment affects investors risk perception both from a systemic and idiosyncratic market perspective.*

*Hence, we formulated the first three research hypotheses in regard to the single impact of ESG components, as follows:*

*HP1: A Corporate Environmental Assessment adjusts investors' risk perception.*

*HP2: A Corporate Social Assessment adjusts investors' risk perception.*

*HP3: A Governance Assessment adjusts investors' risk perception.*

*The last hypothesis aims at exploring how the ESG components - jointly into an overall rating - may influence financial risk:*

*HP4: An overall Corporate Sustainability Assessment adjusts investors' risk perception.*

### **Methodology.**

*Sample and data. We applied a cross-sectional study to our research design using an Ordinary Least squares (OLS) approach to test how CSR practices affect firms' risk exposure, testing the three single impacts of ESG components as well as the impact of an overall ESG assessment (Table. 1). In our analysis we considered the 500 large-cap companies belonging to the S&P 500 stock market index, given that it lists 505 common stocks which represent about the 80 percent of the securities traded on U.S. stock exchange market. We also filtered our sample basing on Sustainalytics' Controversies Research which identifies companies involved in incidents and events that may negatively impact stakeholders, the environment or the company's operations. Controversies are rated on a scale from one to five - with five denoting the most serious controversies with the largest potential impact. In line with our research objective, we selected only those companies showing at least a "significant controversy level" (from level three to five of the scale).*

*We worked on these companies to understand whether Environmental, Social, Governance - analyzed separately and jointly - affect investors risk perception both from a systemic and conjunctural market perspective.*

*In order to test our hypotheses, we collected ESG data from three global providers engaged in financial and non-financial disclosure: 1) Sustainalytics, a rating agency which since 1992 has been adopting the ESG framework (Environmental, Social, Governance) to sustainability assessment; 2) Yahoo Finance and Morningstar, investment research and financial management organizations.*

*Variables. We used ratio and ordinal scales measures for both dependent and independent variables, including ESG components and controls (Table. 1). Moreover, to achieve a wider perspective of risk performance, we followed a double approach: on one side we focused on the systematic risk exposure of S&P companies for considering a market view; on the other side we dealt with the volatility risk measure for giving an overall investor perception.*

**Dependent variables.** We measured firms' risk according to a double analysis model: a) a systematic risk through 5-year monthly beta risk estimation, whose values were collected from Thomson Reuters database; b) an investment-based risk through a 5-year standard deviation of companies daily adjusted close prices, basing on Yahoo Finance and Thomson Reuters analyses. The first measure (Beta Risk) is a ratio which explains the undiversifiable investment risk over our timeframe. The second risk measure (Standard Deviation) looks at idiosyncratic risk of an investment portfolio as well as market microstructure phenomena, through an overview of prices formation process and estimating its daily volatility by standard deviation.

**Independent variables.** In assessing the impact of ESG components on companies' risk measures, we considered - standing alone - environmental rating, social rating, and governance rating as well as the overall ESG assessment employing the five-year average on annual basis issued by Sustainalytics agency (from 2014 to 2018). Thus, we referred to a "buy and hold" approach consistent with the time-frame of the analysis and considering the compound investment's ethical rate compared to the previous annual ESG evaluation.

On this ground, we identified how each pillar of corporate sustainability affects firms' risk, in order to highlight which component plays a driving-role in investment risk analysis. Accordingly, we verified the relationship between the full ESG evaluation and corporate risk exposure, pointing out where a reliable synthesis of the three components - issued by the same agency - can steer more easily investors towards a sustainable investment portfolio.

Our research interest in testing the impact of all sustainability measures, from a single perspective to an overall evaluation, can explain the main factors underlying a socially responsible investment and whether investors pay attention to a deeper information of each ESG components rather than a gross sustainability assessment. Moreover, a five-year average is aligned to risk measurement timeframe and reflects the buy and hold timeframe of a socially responsible investor, besides all the potential up/downgrade of the investment portfolio.

**Control variables.** In order to improve the reliability of our analysis, we employed four control factors to explain the variability related to risk exposures. In doing so, each control provided a different corporate perspective, such as a market-based measure using the multiple price/earning regarding financial statements disclosed in 2018; an accounting-based measure expressed by Total Asset of companies; and an organizational-based measure reporting the number of employees which proxies a firm's dimension. Finally, we also considered the industry sectors to which companies belong following the Global Industry Classification Standard (GICS), an industry taxonomy applied for the first time in 1999 by MSCI and Standard and Poor's (S&P) that ranks all companies into 11 industrial sectors.

Tab. 1: Variables

Variables	Description	Measure	Source
<i>Dependent Variables</i>			
BETA	5-year monthly Systematic Risk estimation	Ratio	Thomson Reuters©
VOLATILITY	5-year standard deviation on daily variation rate of stock prices	Standard Deviation	Yahoo Finance
<i>Independent Variables</i>			
ENV (Hp1)	5-year geometric mean on annual basis of environmental assessment	Value	Sustainalytics©
SOC (Hp2)	5-year geometric mean on annual basis of social assessment	Value	Sustainalytics©
GOV (Hp3)	5-year geometric mean on annual basis of governance assessment	Value	Sustainalytics©
FULL (Hp4)	5-year geometric mean on annual basis of the overall ESG assessment	Value	Sustainalytics©
<i>Control variables</i>			
TA	Total amount of assets owned by the companies	Value	Morningstar©
PE	Company's current share price relative to its per-share earnings	Ratio	Morningstar©
EMP	Full-time employees working at companies headquarter or branches within 2018 fiscal year	Value	Yahoo Finance
<i>GICS Industry Sectors</i>			
CD	Consumer Discretionary Sector	0,1	GICS®
CS	Consumer Staples Sector	0,1	GICS®
ES	Energy Sector	0,1	GICS®
FIN	Financials Sector	0,1	GICS®
HC	Health Care Sector	0,1	GICS®
IND	Industrials Sector	0,1	GICS®
IT	Information Technology Sector	0,1	GICS®
MAT	Materials Sector	0,1	GICS®
RE	Real Estate Sector	0,1	GICS®
TS	Telecommunications Services Sector	0,1	GICS®
US	Utilities Sector	0,1	GICS®

Source: our elaboration

Tab. 2: OLS Regression Model (Backward Stepwise approach) - Dependent variable: BETA

	MODEL A <sup>1</sup> Dependent variable BETA	MODEL B <sup>2</sup> Dependent variable BETA	MODEL C <sup>3</sup> Dependent variable BETA
<i>Independent variables</i>			
ENV (Hp1)	6,22339*	6,88395**	8,05105***
SOC (Hp2)	8,31733**	9,17982**	10,0660***
GOV (Hp3)	5,30490*	5,66453*	6,58116**
FULL (Hp4)	-13,8820*	-15,3284**	-17,3321**
<i>Control variables</i>			
TA	8,72206e-011	-	-
PE	6,53618e-05	-	-
EMP	-2,01325e-07	-1,57606e-07	-
CD	0,816066***	0,729805***	0,558300***
CS	0,367088*	0,279550	-
ES	0,517691***	0,442393***	0,416345**
FIN	0,732166***	0,714188***	0,526802***
HC	0,545677***	0,464406***	0,331192***
IND	0,756228***	0,674599***	0,504181***
IT	0,594843***	0,521652***	0,355201***
MAT	1,06681***	0,991572***	0,830858***
RE	1,29760***	1,22441***	1,05869***
TS	0,211248	-	-
R <sup>2</sup>	0,398674	0,391111	0,371231
R <sup>2</sup> _Adj	0,298453	0,309925	0,306742
Model F	3,977943***	4,817511***	5,756497***
Refer to Table 1. for the description of the variables. * P < 0.1; ** P < 0.05; *** P < 0.01			
1 - Model A refers to the full model			
2 - Model B refers to the refined model			
3 - Model C refers to the model limited to the only significant variables			

Source: our elaboration

Tab. 3: OLS Regression Model (Backward Stepwise approach) - Dependent variable: VOLATILITY

	MODEL A <sup>1</sup> Dependent variable VOLATILITY	MODEL B <sup>2</sup> Dependent variable VOLATILITY	MODEL C <sup>3</sup> Dependent variable VOLATILITY
<i>Independent variables</i>			
ENV (Hp1)	0,0774255	-	-
SOC (Hp2)	0,00321902	-	-
GOV (Hp3)	0,294997	0,239486*	0,251885**
FULL (Hp4)	-0,530858	-0,419767***	-0,481369***
<i>Control variables</i>			
TA	2,38535e-012	-	-
PE	-0,000310179***	-0,000308168***	-0,000308546***
EMP	4,79405e-010	-	-
CD	-0,0219237	-0,0163849**	-0,0164942**
CS	-0,00488260	-	-
ES	0,000461978	-	-
FIN	-0,00528026	-	-
HC	-0,0252095*	-0,0200220***	-0,0188436***
IND	-0,00802502	-	-
IT	-0,0147607	-0,0109117	-
MAT	-0,00854808	-	-
RE	-0,0149681	-	-
TS	-0,00791330	-	-
R <sup>2</sup>	0,350968	0,341873	0,334813
R <sup>2</sup> _Adj	0,243846	0,307235	0,306141
Model F	3,276342***	9,869801***	11,67742***
Refer to Table 1. for the description of the variables. * P < 0.1; ** P < 0.05; *** P < 0.01			
1 - Model A refers to the full model			
2 - Model B refers to the refined model			
3 - Model C refers to the model limited to the only significant variables			

Source: our elaboration

**Findings.** We followed a backward stepwise method in our research design using an OLS statistical approach. Backward refining began from the full model which took into consideration all potential predictor variables. We improved the adjusted R<sup>2</sup> removing variables from the first model through a stepwise approach. The meaning underlying each elimination step is to leave out the variables which do not lead us to better adjusted R<sup>2</sup> values.

Looking at the impact of the single ESG components on beta risk measure as shown in Table 2, they affected significantly a systematic risk exposure (BETA:  $p_{ENV} < 0.05$ ;  $p_{SOC} < 0.05$ ;  $p_{GOV} < 0.1$ ). We found that the overall ESG rating affects negatively investors' systematic risk ( $p_{FULL} < 0.05$ ), which in turn means that the higher is the ESG full rating the lower is the market risk perception. Conversely, as highlighted by the estimated coefficients, the single ESG components partially balanced the overall ESG effect.

On the other riskiness versant (Table. 3), i.e. prices volatility, our model highlighted here too a negative and significant effect of the full ESG assessment on firms' risk exposure ( $p_{FULL} < 0.01$ ). This is aligned to our empirical findings on beta risk measurement. Unlike systematic risk, in this model the overall ESG rating is partially balanced only by governance component ( $p_{GOV} < 0.1$ ).

This means that ethical investors can adjust their perceived risk only through an overall ESG assessment regarding controversial companies. Indeed, an overall ESG rating helps socially responsible investors to save time in asset allocation as it shows jointly the consistency between the Environmental, Social and Governance perspectives thus lowering investors' information asymmetry.

**Research limits.** Concerning with the limits of our research study, we filtered our sample considering only the most controversial companies belonging to the S&P 500 Index. In addition, in our analysis we employed the ESG and sustainability scores issued by one ESG rating agency. Therefore, a lot of agencies could apply divergent ESG methodologies in social rating issuance, implying different assessment on the same firms' cluster.

From our work we propose a research agenda in three different directions. First, we could extend our study to the entire S&P index, in order to explore where ESG commitment implies different investors' risk perception.

In addition, we could develop for future research works a risk-return analysis on a firms' sample filtered according to ESG paradigm, aiming at studying whether corporate sustainability commitment could increase on one side the firms' returns and on the other side could lower risk exposure. Third, given that the level of company's controversy depends on country-level variables (Waller, Fam and Erdogan, 2005), we suggest developing future studies in other contexts to verify whether they still hold.

**Practical implications.** This research work fits in risk analysis research field, investigating how additional and non-financial disclosure regarding sustainability issue decreases information asymmetries on investor's decision-making. Therefore, further information available for investors can imply a lower risk perception whether it is easily accessible on the market.

On this ground, we can frame our conclusions through three main perspectives:

**Market perspective.** Regarding market risk perception, corporate sustainability and ESG paradigm should be not considered as a risk reduction tools but as a reliable leverage to keep risk exposure under control over high market volatility periods. Accordingly, an investor would be able to handle the risk portfolio through an ESG stock-picking diversification whether its investment covers a multi-yearly time frame.

**Investors' perspective.** Although the effect of overall ESG assessment is partially balanced by the singular ESG components for beta measures and by the governance component in idiosyncratic risk, investors seem to pay attention to a full rating aiming to manage their investment risk. Indeed, an overall ESG assessment could decrease investors' risk perception, once the lower transaction costs in getting additional information allow an investor to undertake a socially responsible investment in a short timeframe. Hence, an overall ESG rating is helpful for socially responsible investors in terms of saving time in asset allocation on sustainable blue chips securities.

Furthermore, as shown by our empirical results, investors could minimize idiosyncratic risk focusing on the Health Care, Consumer Discretionary and Information Technology industries, due to their significant and negative impact on volatility (Table. 3). Conversely, concerning with systematic risk (Table. 2), investors might only refer to the extent of the regression parameters in their portfolio management, due to the total industry sectors positive impact on beta risk. Therefore, they could identify which of them have a lesser - though significant - impact on systematic risk growth.

**Company's perspective.** First, our results suggest that managers could improve company's reputation engaging in socially responsible activities. Thereby, controversial firms can leverage on ESG commitment to hide their bad practices that may negatively impact on stakeholders' relations.

Moreover, considering the lower beta values due to a positive full ESG valuation, our findings could advise that a corporate sustainability management in controversial companies is able to decrease the cost of capital. In fact, basing on asset pricing theory, the beta risk is a component of cost of capital estimation (Treyner, 1962), hence an ESG rating could be a leverage in corporate finance.

Besides, the separated ESG assessments according to the single components suggest where investors perceive a higher or lower corporate risk, regardless of the full rating. This could depend on the industry sector; the customer base; the stakeholders involved in the value chain; the core business or the geographical areas of production, highlighting which ESG single factors have to be managed in order to avoid an opposite effect to the overall assessment.

**Originality of the study.** Despite all the limits previously exposed, our findings denote some empirical evidences on the positive effect of controversial companies' ESG commitment on the investor risk perception. Indeed, the

originality of this work is to analyze the companies' controversy from a business perspective, regardless the industry sectors they belong. Thereby, a greater emphasis is given to the internal firms' strategies rather than to the sectors externalities in building a positive corporate reputation.

**Key words:** investor's risk; corporate social responsibility; esg ratings; corporate sustainability; controversial sectors; sustainability

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# An investigation of the impact of diversity management in marketing effectiveness

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**Objectives.** *The paper investigates the impact of a diversity-based company strategy on brand reputation, trust and loyalty. Several types of diversities are present in our society today: gender, ethnicity, sexual preference, age, religion, handicap/health condition and social-economic status. Most part of developed countries - unfortunately with some relevant exceptions - tend to have policies to support inclusive policies (e.g. Ainscow et al., 2006). Several companies start to approach and develop diversity management, while others make unhappy affirmations or policies against some minorities with evident consequences on their performances, in some cases leading to online boycott.*

*Studies on this topic start to appear mainly in HR and organizational behavior studies (e.g. Pelled, Eisenhardt & Xin, 1999) or business ethical researches. In most part of cases they focus on a single type of diversity (more often cultural- and gender-specific), showing the positive impact of diversity management (e.g. mixed team) on company productivity and trust climate. Our research is one of the first attempts to identify how the management of different types of diversity can affect positively the reputation and trust patrimony of the brand in the market's perception. In particular, the study aimed to answer to the following research questions: How an overall diversity-based strategy can affect brand trust? How this can generate competitive and relational advantages for companies? The first results of the empirical research confirm that a diversity-based policy is clearly perceived by the market increases brand trust and relationship-based performances.*

*Multiplicity and differences are precious values and resources, but today unfortunately, a full and extensive inclusion is a goal that is not reached, in both society and companies. If at theoretical level, it is easy to agree on the importance of inclusion, on a practical level good intentions leave room for unconscious bias, often linked to a mainstream view, generating prejudices and discriminations.*

*To affirm a culture oriented towards the inclusion of diversities it is fundamental that each stakeholder plays an active role in this direction: institutions, companies, opinion leaders, customers, individual citizens. Everyone can act to ensure that diversity is a source of value and not of discrimination.*

*To activate this cultural path, we have first to understand what diversity means and how it has been defined and classified in previous studies. By analyzing the different definitions of 'diversity and inclusion' (D&I) available in the literature it has been possible to generate an overall conceptualization: "the acceptance and full respect of differences and uniqueness of each individual, making sure that personal differences are not a source of discrimination, but the object of attention and listening, giving maximum centrality to the person".*

*Previous researches have studied diversity in different areas and perspectives, featuring the construct as multi-faced. The main forms of diversity generally considered by the literature (Henderson & Williams, 2013) are:*

- *disability: people with disabilities include those who have long-term physical, mental, intellectual or sensorial problems creating various barriers to their full and effective participation in society on an equal basis with others. It is estimated that about 15% of the world population lives with a form of disability;*
- *age: it refers in particular to the so-called "extreme age groups", i.e. persons under the age of 18 (juniors) and persons over 50 years of age (seniors). The extreme age groups weight more than 50% of the total European population. In general, people find themselves having to relate to a social model strongly anchored to the 18-50 age range;*
- *ethnicity: a community characterized by homogeneity of language, culture, history, traditions, and religion, traditionally allocated to a specific territory and which claims a common identity. The foreign population resident in developed countries is constantly increasing for immigration flows: people who clash daily with a mainstream that labels them as "different";*
- *gender: term used to refer to "woman", "man" or other genders, attributable to roles, expectations and socio-cultural conventions built on the biological differences between men and women, which determine behaviors and roles to be considered masculine or feminine. More than 50% of the European population is female, but in the large companies only a small part is in middle and top management.*
- *sexual orientation: the emotional, romantic and/or sexual attraction of a person towards individuals of the same sex, of the opposite sex or both; 12% of the world population identifies as LGBTQ;*

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- *religion or creed: a complex of beliefs, feelings, rites that link an individual or a human group with what it considers sacred and divinity, or the complex of dogmas, precepts, rituals that constitute a given religious cult. The variety of religions is increasing also as a consequence of the etnical meltdown of our society;*
- *socio-economic status: refers to the social and economic status of a person, taking into account different dimensions, including education, income, participation to the labor market, family structure and so on. The numbers provided by ISTAT (Italian Statistics Institute) are alarming. 6.1% of Italian families live in conditions of absolute poverty (4.6 million people); 10.4% in relative poverty (2.7 million households counting for 8.3 million people).*

*The breadth of the boundaries of diversity is evident: it can involve many more or less visible spheres of the person that can feed discriminatory paths that are sometimes not voluntary. Thinking about diversity, the common understanding is based on the perception that involves a limited numbers of people. In reality, the seven forms of diversity involve a large number of people. These numbers increase further if we consider all those people who, although not directly affected by the forms of diversity, live the problem daily: family members, friends, colleagues (generally defined as "allies").*

*Companies and brands can play a decisive role in the construction and dissemination of an inclusive culture in society, working on two fronts: employees and markets. On the first aspect, HR activities play a key role (e.g. Pelled, Eisenhardt & Xin, 1999; Roberson, 2006); on the second front, a social responsibility of companies and their brands is to convey messages that are inclusive and fair to their target markets (e.g. Perkins et al., 2000; Henderson & Williams, 2013). Companies can involve a significant number of people in a virtuous circle of inclusion, pushing to implement visible Diversity and Inclusion (D&I) strategies both inside and outside the companies' boundaries.*

**Methodology.** *The aim of the research is to measure consumers' perceptions of the level of brand inclusion and their rcommitment to D&I, considering all forms of diversity. Not wanting to overlap with previous studies, our research does not aim to carry out internal climate surveys, assessments of company HR policies, and vertical assessments on a single form of diversity. On the contrary, a holistic approach for investigating many diversities, integrated with a branding perspective, is at the heart of the research.*

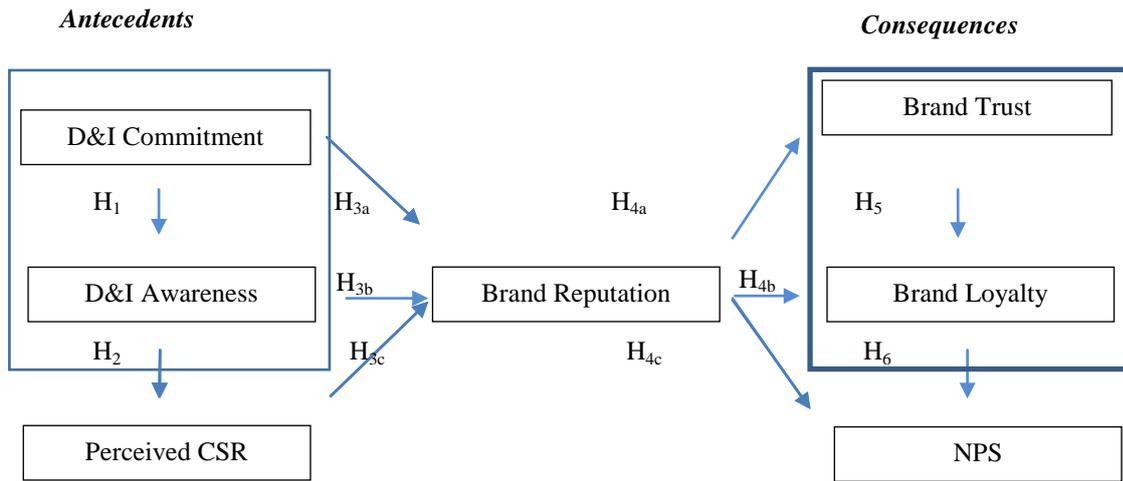
*The research was based on a Desk Analysis and a survey. The desk analysis mapped all companies and brands that have implemented D&I initiatives or activities aimed in the Italian market, classifying them on the base of the previous seven forms of diversity recognized in the literature. At this stage, we detected 112 different initiatives. The survey measured consumers' perceptions about the level of brand inclusion, through a CAWI (Computer-aided web survey) on a representative sample of the Italian population composed by 1,068 respondents.*

*The aim of the research is to measure consumers' perceptions of the level of brand inclusion and their commitment to D&I, considering all forms of diversity. Not wanting to overlap with previous studies, our research does not aim to carry out internal climate surveys, assessments of company HR policies, and vertical assessments on a single form of diversity. On the contrary, a holistic approach for investigating many diversities, integrated with a branding perspective, is at the heart of the research to pursue the following objectives:*

- *understanding the perception of the final market regarding the brands' D&I actions;*
- *measuring the impact of consumers' perceptions of inclusion on reputation, trust, brand loyalty, and Net Promoter Score.*

*In particular our aim is to investigate the relationship between D&I commitment, D&I awareness and CSR on one side, and brand trust, loyalty and NPS on the other hand, considering the mediating role of brand reputation. The previous literature studied in particular the relationship between CSR policies at environmental and social level and their consequences in terms of brand reputation, trust, and loyalty (e.g. Castaldo et al. 2009). In this research, we would test the effect of D&I policies as main driver of brand reputation, trust and loyalty. In particular, the commitment towards D&I topics of a company should be the driver of its D&I awareness (H1) and perceived CSR (H2). These variables have an impact on brand reputation (H3a,b,c), and, as a consequence, on trust, loyalty and NPS (H4a,b,c). On the base of previous studies (e.g. Oliver, 1999; Reichheld, 2003; Marsden et al., 2005; Castaldo et al., 2010) we expect also that trust impacts brand loyalty (H5), and this last construct has a direct effect on NPS (H6) (Figure 1).*

Fig. 1: The model overview



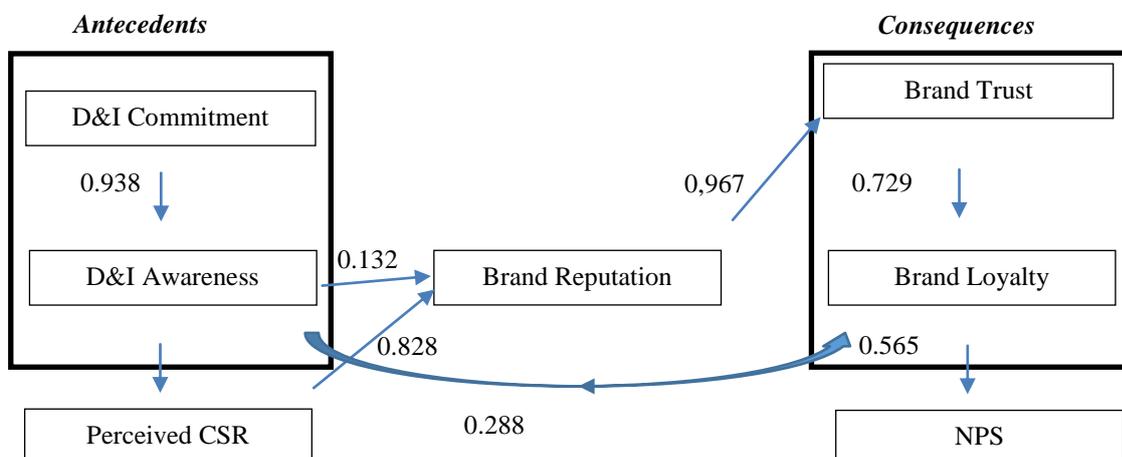
To comply with these objectives, we followed a two steps research process:

- i. Desk Analysis: Mapping of all companies and brands that have implemented D&I initiatives or activities aimed in the Italian market, classifying them on the base of the previous seven forms of diversity recognized in the literature. At this stage, we detected 112 different initiatives.
- ii. Survey: Construction of a questionnaire, using mainly scales already tested in literature, and measurement of consumers' perceptions about the level of brand inclusion, through a CAWI (Computer-aided web survey) on a representative sample of the Italian population composed by 1,068 respondents.

**Findings.** Familiarity, interaction and involvement in relation to the individual forms of diversity were three key control variables in our research. The evaluation of the most inclusive brands for each form of diversity occurred, in fact, only for those diversities where the customers presented a medium-high level of familiarity. The sample shows a medium-high level of familiarity with the concept of diversity in its various forms with values, on average, higher than 5.5 (on a scale of 1 to 7) for all forms of diversity. Disability (5.71), aging (5.70) and socio-economic status (5.69) are the three forms of diversity on which consumers feel more familiar. In terms of contact (interaction's frequency) with the individual forms of diversity, however, the values are lower and included in a range of 3.80-5.26 (on a scale of 1 to 7): the gender leads the ranking, with ageing and socio-economic status. The psychological involvement towards the forms of diversity is, in general, low. The range shrinks further: 3.95-4.69 (on a scale of 1 to 7). Customers feel more involved in ageing (4.69), disability (4.66), socio-economic status (4.61) and gender (4.46). The involvement on religion and ethnicity is less than 4. These evidences show that the sample "on paper" thinks of knowing the forms of diversity, but in reality, it experiment relatively little contacts with them, with an even smaller involvement. On a general level, customers seem good theorists who do not interact in reality with the individual forms of diversity, still a bit detached from the topic.

After the scale reliability analysis, we used the SEMs to test the main hypotheses of our model, correlating the commitment of companies, the diversity awareness, with reputation, trust, loyalty and NPS towards the brand.

Fig. 2: First results



GFI:0.882; RFI: 0.940; CFI: 0.954; RMSEA: 0.053

The first results (Figure 2) show that D&I commitment and awareness are antecedents of brand reputation, trust and loyalty (both direct and indirect). The inclusion initiatives affect the awareness of the final market (0.938). The result is a better reputation (0.132), which is fueled also by perceptions about CSR topics (0.828), generating trust in the brand. D&I Awareness contributes also directly to generating brand loyalty (0.288). It is important to underline that for consumers and consumers D&I and CSR cannot be assimilated: they represent two distinct constructs with a different identity. The richness of content and significance related to diversity leads to inclusion as a driver of value for brands that cannot be simply "reduced" within the CSR, already declined on a wide range of topics.

Working on D&I from a consumer-based perspective generates important results for brands: Net Promoter Score (NPS) is significantly higher for brands perceived as inclusive. The balance between the percentage of promoters and that of detractors clearly recognizes the inclusive brands in the perceptions of consumers and consumers. Between a non-inclusive perceived brand and a highly inclusive brand, there may be a maximum difference in terms of NPS of 113.83%. It is evident how the inclusion of brands feeds positive word of mouth. Numerous international studies have shown how NPS and business revenue growth are closely related. Finally, the research shows that about 80% of the population prefer inclusive brands. Only one customer out of five seems to be insensitive to inclusion messages.

**Research limits.** The papers focuses only on Italian companies and refers to self-reported measurement of companies' performance. Future studies could use secondary data to measure companies' performances and test the model in a multi-country study.

**Practical implications.** Brands that have a continuous relationship with their customers can feed a rich and multifaceted experience in which the D&I can play a decisive role in the growth of trust, loyalty and NPS. The D&I Awareness directly feeds trust and loyalty in the brand. Commitment to D&I fuels trust, loyalty, positive word of mouth and business growth. The benefit is evident for brands. However, it is not enough to work on the D&I; it is equally important to communicate the experiences and share them with the final market. This last part of the process seems an obstacle, similar to a 'business fear'. The development of targeted KPIs can facilitate the path of affirmation of D&I within companies and remove obstacles to external communication, dropping the aforementioned "fears".

Inclusion is a cultural journey: companies have a social responsibility in this area. Working for D&I internally and externally is essential. Not just one of the dimensions is enough. Employees are a target and driver of inclusion policies, through their stories and word of mouth, but they are not enough. Customer oriented initiatives of involvement and communication make the difference from an ethical and business point of view. The D&I is able to bring the two aspects together in a harmonious way, breaking down discrimination and generating value for companies.

**Originality of the study.** Our research is one of the first attempts to identify how the management of different types of diversity can affect positively the reputation and trust patrimony of the brand in the market's perception.

**Key words:** Diversity; Brand; Trust; CSR; Customer Relationship Management

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# A new game for retail: a conceptual analysis

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**Objectives.** *Interaction between retailer and customer has changed a lot with the introduction of digital technologies (Poushneh, 2018). As a matter of fact, online retail marketing channels (e.g. ATM/Kiosk, mobile phone, Internet and interactive television) and offline ones (e.g. in-store, telephone, mail order and direct selling) have shaped their boundaries (Barlow, Siddiqui and Mannion, 2004). According to Zygon (2002) consumers use at least three channels to research or to purchase a product, that means the connection between the search online and the effective purchase in-store is very common.*

*In this vein, customers seek to maximize their income both in term of quality and in purchase experience (Lemon and Verhoef, 2016). Thus, retailer should to adapt their store to this incoming type of new consumer (Cruz et al., 2018).*

*Many companies have just become to implement such as technologies in store, in particular to avoid customers dissatisfaction in buy something online, which doesn't fit with their actual décor at home (Hilken et al., 2018) or which has not the characteristics shown on the web.*

*Thus, the introduction of augmented reality (AR) in companies' business could be a valid solution to solve this problem. AR is "a human-computer interaction paradigm in which images are projected over the real world making virtual and physical realities meet" (Välkynen et al., 2011, p. 1).*

*This technology attracts many companies interesting (Yim et al., 2012), even if companies are failing to take all advantages provided by the introduction of this technology (Hilken et al., 2018).*

*Despite that, this technology has just been implemented in a numerous way, such as mobile applications (e.g. IKEA Catalogue and Snap Shop, pp. contact lenses, head-mounted display (e.g. Microsoft Hololens, Google Glass) and different device in-store (e.g. Magic Mirror) (Poushneh, 2018).*

*Notwithstanding, research on use of AR in retail and its perceived usefulness by retailers is still in infancy and literature is still fragmented. Thus, Authors aims to extend the existing marketing literature on this field, contributing to create two theoretical propositions, in term to better understand the correlation between willingness to adopt this technology in-store and its rejection.*

**Methodology.** *Drawing as a conceptual work, this paper aims to investigate retailers' adoption of AR technology in physical stores and their willingness to adopt this new kind of technology in their business. For this reason, the present study is created using two different frameworks. First of all, the situated cognition theory (Robbins and Aydede, 2009; Semin and Smith, 2013), which suggests customers' embeddedness, embodiments and extendedness in a situation allow them to live more realistic experiences. Then, the innovation decision process framework by Rogers (2002), where the adoption of an innovation is designed on five stages (knowledge, persuasion, decision, implementation and confirmation). During these steps, individuals decide to adopt or reject the usage of an innovation.*

*Thus, Authors made a metatheoretical effort to design two theoretical prepositions, using an inductive method, starting from a deep analysis of the two frameworks abovementioned and the literature on augmented reality to formulate two theoretical propositions.*

**Findings.** *Innovations are changing the game of retail (Grewal et al., 2017). As a matter of fact, from the early 2000s retailers have introduced new technologies in both physical and online stores to offer a digital environment, where consumers could implement their shopping experience (Pantano, 2015).*

*One of this technology, which could supplement reality without replacing it, is augmented reality (AR), a new form of digital customer experience in retail, which is able to "facilitate omnichannel behaviour throughout the customer's journey" (Hilken et al., 2018, p. 511). This technology blurs the boundaries between online and offline channels, where the customer experience assumes the three attributes theorised by the situated cognition (Robbins and Aydede, 2009; Rigby, 2011; Semin and Smith, 2013): embedded, embodied and extended experiences. As a matter of fact, this theory suggests that customers live more realistic and compelling experience when they are: (a) embedded, id est they use*

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their surroundings to evaluate products (Wilson, 2002, pp. (b) embodied, that means both the simulation of physical interactions (e.g. touchscreens) and the physical one (touching and see the product) could evoke affective reactions on customers (Grohmann et al., 2007; Rosa and Malter, 2003) and (c) extended, id est the natural tendency of sharing experiences, so customers rely on other people to make an evaluation on a product/service (Echterhoff et al., 2009).

Thus, AR could enhance customer experience, offering a “touch-and-feel” experience, using “vivid, customized and connected digital content” (Hilken et al., 2018, p. 512). As a matter of fact, this technology blends real and virtual world (Huang and Liao, 2015, pp. offering virtual try-ons, additional contents and digitalized information to customers (Yim et al., 2017; Olsson et al., 2013).

Its participating both the online and offline settings (Hilken et al., 2018, pp. let the customer experiencing its functional and hedonic aspects. Here the importance for retailers to stress the adoption of immersive technologies such as AR, focusing both on customers’ experiences in-store and off-store and their engagement (Bonetti, Warnaby and Quinn, 2018). Despite this benefit to connect digital and physical world, companies are not yet ready to apply a successfully integrated digital experience in their business (Hilken et al., 2018). As a matter of fact, the lack of knowledge of generated profits with the introduction of AR in companies’ business (Bonetti et al., 2018, pp. the scarce promotion of this tool when used (Zagel, 2016) and consumers level of cognitive innovativeness play an important role in companies’ adoption of AR.

In addition, some scholars have analysed this technology as a disruptive one, which trigger big changes in consumer behaviour and industry dynamics (Spreer and Kallweit, 2014). For instance, AR could destroy the dominance of in-store promotions and packaging (Hilken et al., 2018, pp. enhancing customer experience in an omni-channel environment (Spreer and Kallweit, 2014).

Thus, this technology offers many benefits from retailers’ adoption, such as cutting costs, overcoming operational barriers, saving time (Bonetti et al., 2018, pp. the creation of an increased customer experience (Spreer and Kallweit, 2014, pp. as well as a new marketing experience (Pantano, 2015).

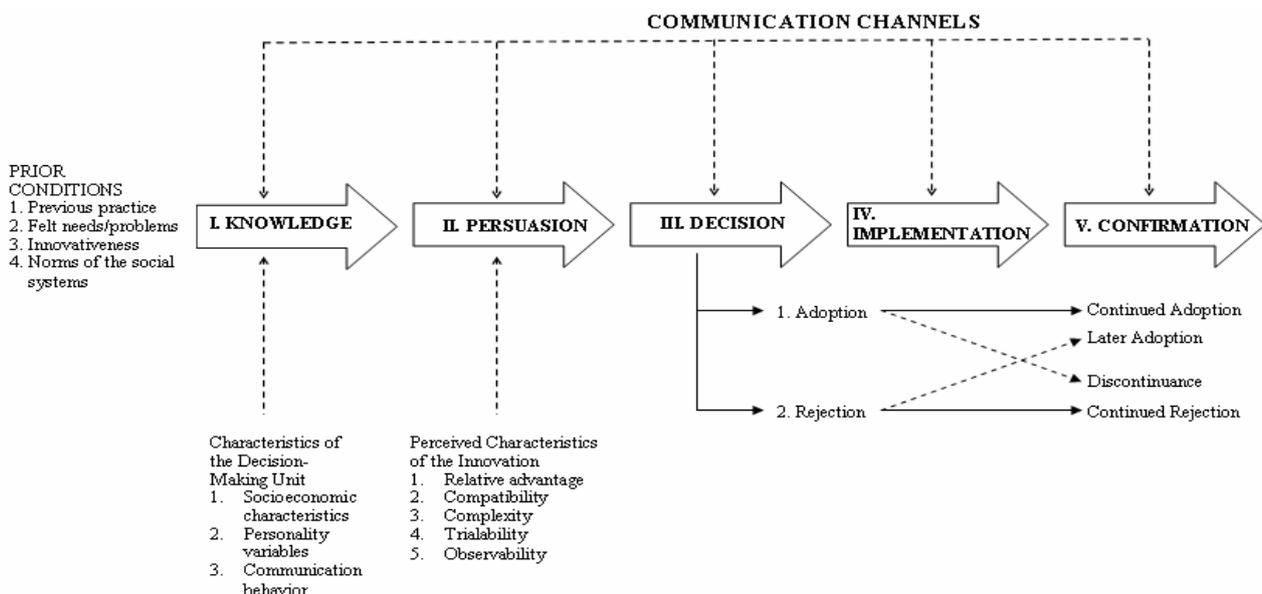
Thus, in line with literature on the usage of augmented reality in physical store, Authors have formulated the following preposition:

P1: The greater is the level of cognitive innovativeness by consumers, the more companies are involved in adopting AR technology in store.

In 2002 Rogers described the innovation-decision process as a theory where the individual passes from five stages (Figure 1): knowledge, persuasion, decision, implementation and confirmation (Rogers, 2002).

Thus, an attitude towards the innovation is created, making the individual adopt or reject the implementation of the new idea.

Fig. 1: Innovation-decision process theory



Source: Rogers, 2002

The Author describes knowledge as the understanding of how the innovation functions by the individual or the other decision-making unit. Coleman et al. (1966) stated that initial knowledge starts with communications and messages (such as salespersons and advertising). In this vein, Hassinger (1959) argues that individuals tend to expose themselves to a message concerning innovation only when they feel the needs of this innovation. In this term, the predispositions of individual towards these kinds of messages depends of personal interests, making a selective exposure (Rogers, 2002).

Persuasion means that the individual states its favorable or unfavorable idea toward the innovation. The psychologically involvement of the individual is the focus of this second stage. As a matter of fact, individuals' behavior is focus on where they found information, what messages are perceived and how information is interpreted. Thus, individuals mentally apply their experiences to develop a favorable or unfavorable attitude towards the innovation, before to have tried it.

Then, decision stage consists in the engagement of individuals in activities able to make them adopt or reject the innovation.

In this vein, Eveland (1979) distinguishes two types of rejections: (a) an active rejection consists in adopt the innovation first and then deciding not to continue with the adoption, whereas (b) a passive rejection refers to the completely no consideration of the innovation.

So, if individuals decide to adopt an innovation, next step consist in implementing it, that means the idea is put into practice.

Notwithstanding the choice to adopt the innovation, individuals still feel a certain degree of uncertainty in the adoption. For this reason, active information could assist clients in the beginning of the implementation process.

Finally, last step refers to confirmation, which means searching for further information about the adoption the innovation was a good choice. As a matter of fact, Mason (1962) found individuals tend to continue in the sought of information after they had just applied the innovation before. So, they search for some reinforcement of their decision to adopt the innovation, which is exposed to conflicting messages. This is due to the internal disequilibrium of the human being (Rogers, 2002).

Referring to this steam of literature, Authors have stated this second proposition:

P2: The greater is retailers' comprehension about an innovative technology, the more they are willing to adopt it.

**Research limits.** Notwithstanding, theoretical and managerial contributions of this study, referring to the analysis of the two prepositions abovementioned, Authors believe further researches could be conducted. As a matter of fact, this study is a conceptual work. Thus, Authors believe it could be applied on some companies, maybe in the four sectors of the "Made in Italy" brand, conducting some interviews to understand Marketing Managers' point of view referring to this topic.

Then, a correlation between the adoption on AR technology and different sectors, such as the so called "4F" (Fashion, Food and Beverage, Furniture and Ferrari/Automotive/Industry) of the "Made in Italy" brand could be conducted, to understand where AR adoption could be more profitable for retailers. In particular, Authors believe the abovementioned analysis on the "4F" could be conducted not only in the Italian territory, but also abroad, to verify if there are any variables correlated with the willingness to use by retailers of this technology, along with their reasons.

Finally, further research could be conducted applying Lemon and Verhoef (2016) studies on customers' journey to better understand if augmented reality could be a useful technology during the post-purchase step and how retailers could increment the service offered during this phase, integrating this kind of technology.

**Practical implications.** This study is a work-in-progress. Notwithstanding, it presents many theoretical and managerial implications, which are related with the adoption of augmented reality technology in physical stores by retailers. Firstly, referring to theoretical implications, this study is represented by the unique combination of cognitive innovativeness of retailers and their willing to apply the new technology into their business. In this vein, boundaries between online and offline world could be blurred, embedding, embodying and extended customer shopping experience within the use of augmented reality, as suggested by the situated cognition theory (Robbins and Aydede, 2009; Semin and Smith, 2013).

Then, referring to managerial implications, the confirmation of the second proposition suggests companies should understand better this technology along with its possibilities and potentials to be applied in-store. In this phase, consumers' interesting should be analyzed, also with the use of satisfaction questionnaires (Attkisson and Zwick, 1982).

**Originality of the study.** In light of the rapid development of innovative technologies in retail, this study provides a practical guide of the introduction of AR in companies business. As a matter of fact, the introduction of technologies such as augmented reality in-store could facilitate the wide range of services offered (Walker and Johnson, 2006). In this vein, also consumers are changing their shopping habits, experiencing new technologies such as augmented reality in physical stores (Renko et al., 2014). So, the more consumers implement these technologies, making confident with them, the greater they are willing to use them during their shopping purchases. Furthermore, technology should offer easy and time-saving experiences, otherwise consumers will decide to not experience this service (Walker and Johnson, 2006).

So, in this vein, to enhance cognitive innovativeness to consumers, retailers should to implement quickly and friendly technologies, such as augmented reality is (P1).

To do that, retailers' comprehension on digital technologies and their application in physical stores ought to be deep and very vast. Moreover, technology adoption by retailers is also driven by perceived technology usefulness (Chen et al., 2014; Inman and Nikolova, 2017), where benefits such as cutting costs, new marketing experience and a more extended customer engagement ought to be present (Bonetti et al., 2018; Spreer and Kallweit, 2014; Pantano, 2015).

So, referring to that, it is simple to constate how a deeper comprehension of augmented reality by retailers could

mean a higher adoption into their businesses (P2). To do that, companies need information such as profits generated with the introduction of AR in business (Bonetty et al., 2018), implementing their promotion around the introduction of this technology, as a new service for consumers. So, in this vein the company image increases its value as a high-tech company, place itself as an innovator in the market (Rogers, 2010).

**Keywords:** augmented reality; retailing; perception; customer experience; technology in retailing; digitalisation

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# Managing sales transformation in btob: between human and digital

DANIELA CORSARO\*

**Objectives.** *The sales function is an engine of growth and sustainability within organizations. It is important to understand the customer's value drivers, to communicate the company's value proposition, and to spread insights on the market within the organization (Lacoste, 2018; Haas, Snehota and Corsaro, 2012).*

*This deep change in the market and social contexts is leading organizations to rethink the role of sales. This is a pervasive change, which affects the skills of sales people, the management of customer relationships, the organization of sales function as well as the impact of technologies to support the commercial activity.*

*In managerial literature this is known as Sales Transformation, and it is caused by different factors. First, the purchasing function is playing a more strategic role than in the past (Sheth, Sharma and Iyer, 2009). It has experienced a higher sophistication, since it has a greater responsibility in realizing high profits and margins, containing costs, contributing to a higher value for the stakeholders and increasing attention to the measurement of facts (Peasnrugghe, et al. 2018; Janda and Seshadri, 2001). Nowadays, 80% of BtoB purchase decisions require the approval of an executive level, including finance, whose voice is increasingly important for the decision making process (Riesterer, 2017).*

*Secondly, there is a process of servitization which is affecting many industries and according to which the value-in-use logic has supplanted that of exchange value: companies, in addition to consumers, are less interested in paying to buy and own an asset, but rather prefer to access to the use of the same. Third, thanks to digitalisation sales will be more intelligent, including new forms of automation and human-machine interaction. The number and type of touchpoints for salespeople has multiplied (Jaakkola and Alexander, 2014; Shams and Kaufmann, 2016), which, in turn, has led to a higher heterogeneity of actors involved in business relationships. The velocity of business interaction has increased dramatically, leading to an acceleration process in sales approach too (Baumgartner et al., 2016). Mobile technology, for instance, has helped to create the so-called 'culture of immediacy': 64% of business customers expect the company to interact with them in real time.*

*Today, however, only 25% of companies believe they can adapt their sales development plans to changing environments (Sales Management Association, 2017). At the same time, according to Miller Heiman Group (2016), the percentage of companies that have a sales enablement program has gone from 19% in 2013 to 36% in 2016.*

*Notwithstanding its relevance, the phenomenon of sales transformation seems to remain quite ambiguous and not clearly described at theoretical level yet (Corsaro, 2018; Moncrief, 2017). Given that, this paper's aim is providing a conceptualization of the Sales Transformation process in BtoB. Empirically, we interviewed sales directors from companies operating in different industries and organized two focus groups for a total of 41 key informants. This study provides a model representing the main dimensions of sales transformation, organized around four pillars: Person, Technology, Processes of Integration and Processes of Acceleration. Thanks to this, the research will also provide guidelines that can be useful for managerial practice.*

**Methodology.** *The qualitative part of the research consisted of 30 semi-structured interviews, carried out in 2019 (see Table 1) and two focus groups involving 11 managers (see Table 2). The heterogeneity of industries included in our theoretical sample aimed at gaining a multi-sided and rich perspective of observation, in order to identify commonalities in sales transformation process rather than differences.*

*The people interviewed were all sales directors who we consider key informants since they have a strategic view of the sales transformation process and who, at the same time, could formulate considerations on how sales transformation translates for salespeople under their responsibilities (Ivanova-Gongne and Törnroos, 2017).*

*In this study we adopted the "systematic combining" approach, a process in which theoretical framework, empirical fieldwork, and case analysis evolve simultaneously to develop new theories (Dubois and Gadde, 2002).*

*The interview scheme included direct and open questions like: Has the term Sales Transformation any sense for you? What is Sales Transformation? Which are the main changes affecting sales approach and sales organization in the last 5 years? How do you cope with changing environments? What is the role of technology in this transformation? Which are the main skills of salespeople that you think will matter in the future? Which are the last training activity you and your salesforce experienced? How do you select sales people?*

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The interviews as well as the focus groups also included indirect questions where the narrative of episodes and events that occurred in their relationships were discovered. Data analysis involved a detailed coding process that identified the major themes addressing the research objectives of the study. Primarily, we have selected a particularly 'rich' transcript from each respondent and analyzed these transcripts, line by line, in order to develop an initial list of first-order concepts (the value actions). As subsequent transcripts were coded, the set of concepts expanded.

Once the initial coding was complete, we searched for associations between first-order concepts (factors of sales transformation) and categorized them into higher, second-order concepts (dimensions of sales transformation). For example, the activities we labelled 'loose fast' and 'access from mobile' were aggregated to the dimension of acceleration process.

**Findings.** A sales transformation process is in act in companies of different industries which makes relevant to understand its effects and implications (Moncrief, 2017). This implies not only a change in the role and skills of the commercial function, but also an alignment of the entire organization and the relationship with the external context.

Our study has identified a model to interpret sales transformation that is composed by four dimensions: People, Technology, process of Integration and process of Acceleration.

As for people, although purchasing departments often state that price is the most important variable in sales relationships, when their processes are analyzed in depth, a greater relevance of the service and sales experience emerges. Customers, especially key customers, are looking for valuable experiences that go beyond the concept of supply. Moreover, the increasing bargaining power of the purchasing function along with the market hyper competition are making the sales force central to put the accent on the points of difference compared to competitors and identify new ways of co-creating value with customers (Haas et al., 2012).

We already know from the literature that the job of sales managers is becoming more and more transversal and includes different roles. Sisti et al. (2015) identified the roles that salespeople should take in a modern sales approach: customer's partner, market analyst and planner, sales team coordinator, customer service provider, customer purchasing behavior expert, collector of market information, sales forecasting expert, cost analyst and technologist. Sales skills are therefore configured as a set of technical, relational and interpersonal skills that make their combination and amalgamation quite complex. In addition to those that have emerged so far, we carried out a more detailed analysis of the skills that are needed to be strengthened in the future for sales transformation purposes.

The salespeople of the future will be more and more hybrid figures that combine soft and hard skills, have an in-depth knowledge of customer processes, operations and performance measurement metrics. They will have to develop capacity for adaptation, relational intelligence, being ready to challenge the status quo of the customer context and offering unique perspectives. Put differently, they moving from the role of salesman to that of advisor 'in context'.

This implies that in the future the sales force will increasingly act as boundary spanner, but whose purpose is not only to link the supplier's capabilities with the client's needs (Lysonski and Johnson, 1983) rather the sales force will act as an intermediary in a broad sense, which influences and shapes the client's cognitive processes through interaction, often in a holistic manner, going beyond the characteristics of the product and considering both the business, cultural and social context jointly. Adopting a relational perspective centered on people, which is now prevalent in sales, means seeing the person holistically, as an expression of their different identities that interact: the person-consumer who is also a corporate decision-maker, and change his/her behaviour according to the social and business contexts in which he/she finds. Somehow, managers themselves often mention that the distinction between BtoB and btoc is becoming increasingly meaningless for them, especially when their sales process is very human-centered.

It follows that being charismatic is not sufficient anymore for sales people (Dubinsky et al., 1995). On the one side, they should be very prepared and informed on the customer processes and provide facts about the economic and non-economic impact of their solution on the customer's business; on the other side they should be able to communicate the 'value story', and thus develop storytelling skills by creating a narration of the value. This is becoming important also in BtoB where it is increasingly shown that buyers are not involved only at rational level, but emotionally too (Hall et al., 2017).

In terms of sales technology, in developing a social media strategy, we observed that BtoB companies are more and more looking at btoc to understand the social selling practices that can be experienced also in their context. For example, it has been shown that corporate buyers involved in non-complex purchases, seek purchasing experiences similar to those that live as consumers: immediacy, simplicity, mobile access, engagement and socialization.

The sales process will be supported by increasingly granular and contextualized data that will lead to enabling a better customer experience across all touchpoints, both physical and virtual (Miller Heiman Group, 2016). Our analysis revealed that experimenting increasingly proactive and intelligent sales through virtual assistants, predictive and artificial intelligence would free the time of sales people dedicated to administrative activities or low value added (corrupted selling time), allowing them to concentrate on those activities with the greatest return and also that motivate them more.

However, people and technology are not sufficient to understand the sales transformation in course (Edmunds, 2017). Processes of integration in space and acceleration in time are also needed to stress the contextual nature of sales transformation.

Integration makes the change a fluid and comprehensive and occurs at different levels. First of all, integration is occurring between physical and virtual sales in order to take advantage of technology to enable an integrated strategy

across multiple sales channels and markets. To reach this goal, social CRM are diffusing which are able to integrate data from inside and outside, in order to offer few but relevant insights, in real time, and easy to understand, also thanks to visual dashboards.

The business customer journey is mapped in order to guarantee a smooth customer experience along all the touchpoints with the customer by offering contents studied jointly by marketing and sales. Technology is used to listen, attract and engage the customer, to improve human-machine interaction and integration, as well as to empower people's abilities.

New forms of interaction between the sales force, channel partners, and other actors in the inter-organizational network are part of the process of integration (Bolander et al., 2018), which also implies the use of technological tools to support information sharing in network and the availability of multi-channel sales dashboards.

But integration occurs at intra-organizational level then, especially between marketing and sales (Rouziès et al., 2005; Malsche et al., 2017) based on a formal process of collaboration, and not informal as it often happens. The two areas start to share information through CRM and contribute to lead qualification and to guide management. They jointly identify market opportunities, participate in mutual meetings, carry out job rotation activities and last but not least, implement KPIs to measure the performance of common initiatives.

Finally, our study revealed that acceleration is important in a world where everything is going extremely fast: companies should understand how to cope with this velocity and maintain the quality of the relationship at the same time. Organizations that have a dynamic sales process are able to adapt better to change, and more quickly. Technology of course has a role in making the sales process increasingly smart, capable of shaping itself with respect to changing contexts (and also to changes in subjects in different contexts). Technology will be able to enhance and accelerate the management of the sales funnel, especially in the qualification phase of the leads. But velocity is also about moving deals in a 'no decision state' to the next level, even if it would imply to lose the deal.

Furthermore, mobile facilitates interaction with business customers in real-time client and, in turn, having real-time analytics and granular data generates better adherence to the context. Modern CRMs themselves are now native mobile and provide increasingly predictive (what will happen) and prescriptive (what to do) indications, so as sales managers will soon develop a decision-making approach based on real-time observation of interactions as they occur.

Lastly, the study confirmed the importance of leveraging visual representations and symbols to facilitate interpersonal and offline/online communication (Corsaro, 2014). It's extremely important to generate sufficiently flexible representations that can be quickly transferred to different contexts and communicated to different interlocutors.

**Research limits.** This study also has some limitations. In line with interpretative research, it was not aimed at generalization but rather at providing a framework which we suggest could be very useful to get a more comprehensive view of sales transformation. At the same time, we know the importance of context specificity. Then, the framework proposed should be contextualized in order to identify specific activities that characterize sales transformation in a certain context, that is with respect to more idiosyncratic time and space boundaries. Further, The empirical study considered only the suppliers' side while an investigation also on the customer's side could be interesting to understand the buyer transformation in parallel.

**Practical implications.** As a consequence of the changing customer behaviour, salespeople are required to offer customized solutions with high added value, which leads to a deep level of interaction with customers to understand their needs, objectives and business processes. In the following list, we can find suggestions to manage sales transformation in a practical stance:

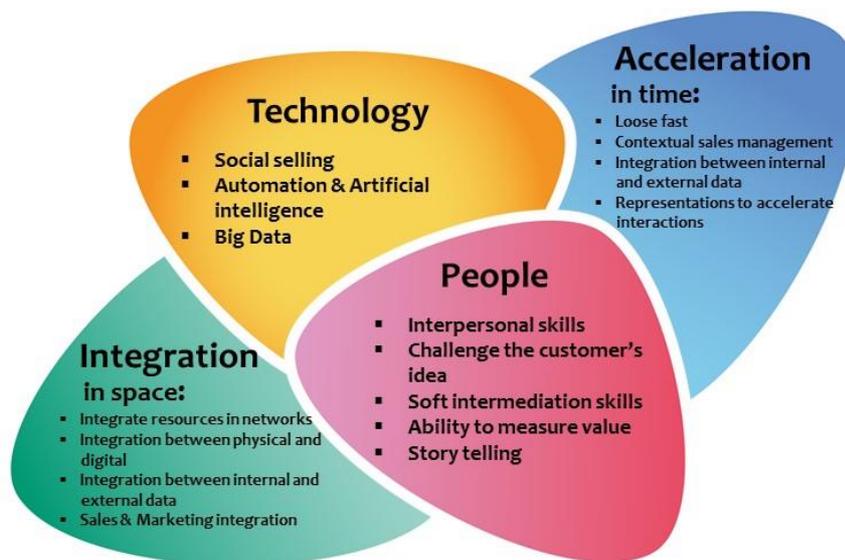
- Select sales talents. Identify the predictive traits of the personality and test the emotional intelligence. Leveraging on cognitive diversity. Reduce the time needed to make sales people productive.
- Customize training. Develop sales skills while respecting the individual characteristics of people. Combine lectures with self-learning mode. Create and share contexts of experience as a way of learning.
- Develop a formal coaching process. Train people to a 'learn-it-all's' attitude rather than 'know-it-all's. Formalize a dynamic coaching process. Train both the individual and the team. Strengthen improvement and establish kpi for coaching activities.
- Implement heterogeneous KPIs: important to have both short and long term performance kpi. Combining economic and financial kpi (turnover, margins, growth, etc.) with the quantification of softer and more intangible dimensions (effort, empathy, alignment, relational atmosphere, opportunism). Translate scenario forecasts into three-year sales plans and allocate sales budgets to opportunities beyond the current year.
- Enable marketing and sales integration, through job rotation, joint kpi and a social media marketing strategy should be aligned with that of social selling
- Encourage people. Link sales people performance to customer experience measurement metrics. Make incentive plans clear to motivate people, especially in a changing environment.
- Enable human-machine interaction. A gradual approach to automation is recommended, focusing on what the technology will do and not on what it can do. It emerges the need to train service personnel interacting with machine in a purposeful way. Investment in/enthusiasm for technology must not throw a shadow on investment in human resources.

- Implement a social CRM system, which should be in cloud, mobile, highly customizable and which provide integrate internal and external data and provide dashboards and analytics easy to be understood.
- Identify the agents of change. Communicate the change in a simple way. Create a story of change. Translate the story into a few continuously repeated messages. Involve people from the start in change processes. Assign the most suitable people to guide the transformation by providing them with appropriate resources.
- Create sales leadership. Help people move between a more comprehensive and their own vision, contributing to the creation of a collective vision. Clearly define what the leader expects from people. Give people the power to do what they do best and achieve their personal goals. Generate trust, credibility and respect.

**Originality of the study.** While at managerial level many companies are experiencing such process of change, at theoretical level it is still missing an understanding of the phenomenon of sales transformation and what it relates to.

Figure 1 contains an illustration of the dimensions and factors that characterizes the process of Sales Transformation as we mapped in the study.

Fig. 1: A map of the Sales Transformation process in business to business



Source: Personal elaboration

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**Appendix**

*Tab. 1: Key informants interviewed divided by company and industry*

<i>Companies</i>	<i>Industries</i>
Wika	Thermic measurement equipment
Perrigo	Pharmaceutical
Reputation Institute	Service/Consulting
Technogym	Fitness equipment
DNVGL	Service/Certification
Sei Laser	Packaging/printing
Coca Cola HBC	Beverage
General Electric- Medical	Medical equipment
Salesforce	CRM solution provider
Akamai	Cloud computing
Doxa	Market Research
Comark	Export consultancy
Copernico	Co-Working spaces
Gruppo Cimbali	Coffe Machine equipment
Reckit-Bankiser	Pharmaceutical division
Danone	Food industry
Vagheggi	Beauty industry
Gattinoni	Travel chain agency
BIT	Consultancy
Volksbank	Banking
Lavazza	Coffè producer
Scheffler	Manufacturer of rolling element bearings
Urban Vision	Advertising
Cameo	Food Industry
RCS	Publishing House
Campari	Beverage
Twinsset	Fashion
Evoca	Vending Machine
Airplus	Travel Credit Card
Rovagnati	Food Industry

Source: Personal elaboration

Tab. 2: Focus Groups Participants

<b>Companies</b>	<b>Industry</b>
Best western	Hospitality
Centro Medico Santagostino	Healthcare
Credit Agricole	Banking
Credem	Banking
Dale Carnegie	Training
Mondadori	Publishing House
Callipo	Food Industry
Faber-Castell	Art & Graphic
Digi-International	ICT Security
Mayborn Group	Baby products
Connexia	ADV agency

Source: Personal elaboration

Tab. 3: Some exemplifying quotes

<b>People</b>	<b>Interpersonal skills</b>	<p>"I don't think our market will move into a completely digital sale. I think there will still be plenty of space, more and more, for sellers because empathy is still key". (Wika, Sales Director).</p> <p>"Even in the tender phase, sometimes the proposals are very similar and it is difficult to be able to establish oneself as distinguished, so it is the relationship that wins". (Gattinoni, Sales Director)</p> <p>"The seller's task is to align his decision-making style with that of the client to increase the probability of success. Understanding the decision style of the customer will become increasingly important in the future, also to avoid the customer procrastinating his decision".</p>
	<b>Challenge the customer's idea.</b>	<p>"That is, I am not looking for people who actively listen and then do work, but who are a constructive and contributory. The market is constantly evolving, and who better than the people who are doing something in the market every day, can help you understand, improve a system or whatever" (Technogym, Sales Director).</p> <p>"We realize that people in our sector are often much less reported and often presumed to know everything, to have already done everything. If this type of belief is not undermined, it becomes difficult to take any result home." (Lavazza, Sales Director).</p> <p>Because they have a clean mind. That is, to make a person who comes from a different sector and who has the open-mindedness and willingness to question them, allows them to work together on projects without any filter and prejudice. (Campari, Sales Director).</p> <p>"We had a salesman who got excellent results by selling equipment for body treatments. His colleagues were surprised because he had sold them in the months of November and December, so months in which in the sector (which lives by a certain seasonality) we talk more about the face than the body. And then the colleagues said -but how did you sell the body equipment in the face season?" And he replied "but sorry what is the face season?"- This means that he did not have that superstructure that they had, and he went to the customer, he analyzed what the customer lacked and what would have helped him to make the customer center perform at its best, and he made a sale not only effective for him, but above all for the customer" (Vagheggi, Sales Director).</p>
	<b>Soft intermediation skills.</b>	<p>"The intelligence activity should be part of the DNA of the commercial function and not be seen only as a sporadic activity made ex-post the occurrence of important events."(Scheaffler, sales Director)</p> <p>"It is a diagnostic, preventive and continuous activity. The tendency to look ahead should become institutionalized."( Volksbank, Sales Director)</p>
	<b>Ability to measure value</b>	<p>"Reasoning in the multinationals is a fundamental in a financial perspective. Thinking about local companies is a little less pressing point, but in multinationals it has become almost the fulcrum" (Perrigo, Sales Director)</p> <p>"Today there is certainly a need to have salespeople that, in addition to turnover, are able to calculate and estimate. Buyers have a higher attention to marginality that in the past when probably it was not so important". (Connexia, sales director)</p>
	<b>Story telling.</b>	<p>"Simply telling the truth is not enough, the truth must be made alive, interesting and theatrical" (Carnegie, 2008).</p>
<b>Technology</b>	<b>Social selling</b>	<p>"More and more because the SEO and digital presence, however, even in B2B, people are like consumers because people inform themselves and look at social networks (we are also present on social networks) and then they are visited by our commercial" (Airplus, Sales Director).</p> <p>"We are active exclusively on LinkedIn and on Youtube. Still the company does not see FB, Twitter, Instagram as channels for our world". (Wika, Sales Director).</p> <p>"We study their behavior over time and we qualify the leads, in fact in the field we call it Digital lead generation, which is a tool through which we try to qualify interests from parts of existing customers or potential customers" (DNVGL, Sales Director).</p> <p>"We have launched an e-commerce about 2 years ago but sales are still insignificant on the overall volume and we also want to preside over that channel waiting to see what will happen. It is obvious that a part will move, but we must still think that customers buy as a company and not as private individuals, so even our client companies have to structure themselves to buy digitally. For example, many companies do not have a company credit card to place orders, or they do not have their integrated management systems". (Wika, Sales Director).</p>
	<b>Automation and AI</b>	<p>"Based on our segmentation we have certain types of customers where the presence of a commercial is necessary, while other customers where the whole sale can be completely digital and on which we are working on specific segmentation" (Airplus, Sales Director).</p>
	<b>Big data</b>	<p>"Leads are attracted by these digital tools, which in the consumer world are already widespread; while we are strongly pushing it this year with a system that gives us the possibility to trace everything that happens in the digital world and on what to take action. We believe the customer is interested and has given us consent." (Scheaffler, Sales Director).</p>

<b>Process of integration in space</b>	<b>Integrate resources in the relevant external network.</b>	<p>“A salesman in this type of business who does not have a loyal customer portfolio, has no value for us. So inserting a junior figure at a commercial level is absolutely unthinkable”. (Gattinoni, Sales Director).</p> <p>“Before we prefer to recruit new sales people from other industries so that they had a fresh perspective and can learn our approach without resistance. Over time, we changed strategy and now we select them based on their portfolio of contacts” (Reputation Institute, Sales Director).</p>
	<b>Integration between physical and digital</b>	<p>“We think that when we combine the machine and the human interaction in the service experience, the effect is not a sum but a multiplication” (Reputation Institute, Sales Director)</p> <p>“We have a tool called WIKA costumer portal, which practically looks like a complete e-commerce dedicated to the customer: enter with a username and password, find all the prices there, configure the product and then send us the orders. We try to take advantage of all the news that digital is giving us, but at the same time a mix between traditional sales and digital sales will come out. (Wika, Sales Director)”.</p> <p>“It is essential to devote as much time as possible to negotiation, the relationship with the client and less to that which is the management of the external customer, to the part of sending the order, formation of the order and all the internal procedures. So the one with automated systems that provide a fast and suitable service to man is fundamental.” (Akamai, Sales Director)</p> <p>“Wasting time in entering orders, checking discounts, etc. means arriving later at the point of sale and therefore providing our customers with a much lower service (Sei Laser, Sales Director)</p>
	<b>Integration between internal and external data</b>	<p>“For us these worlds are a bit separated. The CRM uses the traditional sales network and is little connected” (Wika, Sales Director).</p> <p>“Now we have a CRM that is not integrated with most other business tools. It was taken by itself without integrating it with other systems, so it does its sales work, but it is not integrated for example with the part that uses our customer care, for product management. The one we are going to implement, will be the starting point of everything: the customers will be in there and anyone will look at a customer from any angle, including marketing. With Microsoft Dynamic we would have a single tool that goes from the lead to the sales part to the numbers part and so on”. (Airplus, Sales Director).</p> <p>“Social CRM are now able to integrate data from inside and outside the organization, in order to propose (few) relevant insights, in real-time, easy to understand, also thanks to the support of dashboards.”</p> <p>“CRM 2.0 should also enable new forms of interaction between sales force, channel partners, and other actors in the inter-organizational network and provide both predictive (what will happen) and prescriptive (what to do) indications.”</p> <p>“Welcome to the Internet of customers, where every company can connect every app, employee, partner, product, and device with its customers using the power of social, mobile, and cloud” (key account manager, Europe).</p>
	<b>Sales-Marketing Integration</b>	<p>“Marketing and sales are converging; it is then in the organizational ability to make them work together. In our company, they have common kpi on the digital transformation part, on the one that generates the digital channel”. (DNVGL Sales Director).</p> <p>“I have always argued that we should have a global sales-marketing director who integrates these two functions and this is not the case. It is a typical defect of German companies. I don't think our CEO attaches great importance to marketing” (Wika, Sales Director).</p> <p>“The crucial element for me is the trade marketing, in the sense that it is the trade union between the pure marketing vision (which often remains outside the commercial logic) and the pure sales vision (which just as often remains outside what is internal company vision). A strong trade marketing allows a constructive and profitable relationship between these two functions” (Perrigo, Sales Director).</p> <p>“I always say that it would be enough to stay two days in the shoes of the other so we realize that the points of view change”. (Vagheggi, Sales Director).</p>
<b>Process of acceleration in time</b>	<b>Loose fast</b>	<p>“Since we know that 70% of deals will be lost, what is really important is to lose fast, in order to free energies to invest in other opportunities” (Miller Heiman Group, Sales Coach).</p>
	<b>Contextual sales management</b>	<p>“The fact of being able to think that if something works today, it must also work in a year and instead it is absolutely not true. Among other things we have created an internal motto: “if it works it is already obsolete”, it begins to think about how to do things differently.” (Technogym, Sales Director).</p> <p>“It is essential to create channels that allow you to respond quickly and be decisive and efficient on the market. Anticipating competitors on certain topics is the winning key and we are living proof of this” (DNVGL Sales Director).</p>
	<b>Representation to accelerate interactions</b>	<p>“In this process the customer is an integral part of the context and is put in a position to concentrate on what he sees, finding an impact visualization and thus generating a one-to-one approach; it is not just a receiver, but the data is contextualised according to your environment” (Sales Director, Coca Cola HBC).</p>

Source: Personal elaboration



# Millennials beyond health: social networks as sources of supplements information in decision-making processes. An exploratory study

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**Objectives.** *The well-established conception of food that configure it as a commodity has been questioned in different research fields, including those of medicine, sociology and marketing (Cronin et al., 2005). By the 1970s, health domain studies had extended beyond the boundaries of medicine to enter in the field of social sciences with the expansion of medicine into everyday life domains and the introduction of the well-being. Routine behaviors were challenged to switch towards self-determination and choice behavior (Crawford, 1980; Assadi, 2017). This cognitive and perception transformation has drawn the attention away from a definition of health as the absence of disease, in which behavior reflects prevention and treatment, to a definition of health as well-being (World Health Organization, 1948; Laffrey et al., 1986). The well-being paradigm refers to a lifestyle that means to realize all those actions that contribute to maintaining or improving the level of wellness (body body-focused dependent upon physical, social, and mental state), personal growth and individual achievement (Walker et al., 1987). From a research perspective, the concept of wellness is the result of a process in which an interdisciplinary approach converges in concerns the domain of health, lifestyles, behaviors and, of course, consumption. Lifestyle-related nutrition is an accredited research field in behavioral studies focused on the improvement of one's health (Deci and Ryan, 2004;). This statement covers many behaviors. Although research focused for a long time on the medical aspects of diet and exercise (Kraft and Goodel, 1993), recent years have seen food become one of the most critical topics in the field of wellness, including eating or diet habits, healthy lifestyles, and functional foods. Even here, however, research has focused on behavior and food education/knowledge and on communication and patient/consumer satisfaction, as a sectoral extension of similar research conducted in other industries (Hare et al., 2013; Cavusoglu and Demirbag-Kaplan, 2017).*

*Three relevant aspects and changes, for which health and wellness studies must account, require specific focus: the new meaning of health, the neoliberal policies of the government, and the role of social networks. The health paradigms towards wellness have already been mentioned.*

*The neoliberal policies advocate the dismissal of the public in the healthcare services provision, implying the redefinition of the relationship between patients and physicians and the conversion of patients into health consumers (McGregor, 2001). Lupton (1997) introduces the commodification of health in which the relationship between physician and patient becomes the exchange between a supplier and a consumer of services, in which the supplier, or the physician, asserts his authority and knowledge (Crawford, 1980). At least until digital media and social networks came along. The meaning production processes and health perception have been modified, and the digital media and social networks have become the primary agents in the definition of health and wellness (Olof Lagrosen and Grundén, 2014). The physician-patient relationship, as well as health and wellness perception and consumption have moved from the medicalization dimension to the medialization dimension (Hjarvard and Petersen, 2013; Moorhead et al., 2013). Wellness, as well as having a health and aesthetic implications, has becomes a social construct to meet the need to feel adequate and look better (Feinstein et al., 2013).*

*Health decisions are of primary importance and are made to minimize risk and maximize effectiveness. For this purpose, the pre-purchase process concerns the consultation of multiple verified sources (Taylor, 2014). However, the involvement and the sources depend on the health meaning and wellness as it is perceived by the health consumer (Sadovykh et al., 2015).*

*Over time the overflowing attention to health and wellness and free access to information have generated a radicalization and a distortion of the health meanings (Sun et al. 2018), especially regarding the dietary supplements. As it relates to health, food (Cavusoglu and Demirbag-Kaplan, 2017) is mainly associated with the consumption of healthy food, linked to weight loss and having a fit body. Wellness is achieved both with sport and fitness, but increases the belief that supplements, such as slimming pills and fat-burning herbs, are necessary to achieve the desired results rapidly.*

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Since their market entry in the early 1950s, dietary supplements have reflected the progressive attention given to Complementary and Alternative Medicine (CAM). Supplements are food products that integrate into the common diet and provide a concentrated source of substances with nutritional and/or physiological power (UE directive 2002/46/CE and Legislative Decree 169/2004). The same EU directive also identifies the maximum dosage of essential ingredients and the maximum daily contributions (RDA recommended dietary allowances). The supplements are classified according to the target they contribute to achieving and are distinguished in the categories of (i) supplements for sports, (ii) slimming supplements, (iii) supplements for health and wellness; (iv) supplements for beauty and aesthetics and (v) supplements against aging (Franchini and Romagnoli, 2010). The regulation analysis supports market consumption understanding.

In last decades, the dietary supplements market has grown up to 14,1 billion euros in Europe and Italy is the first market with 3,3 billion euros equal to 23,5% of market share (Federsalus, 2018). Supplements market reveals consumption as a demographic, collective phenomenon. However, Millennials are the primary users, (18-24 years 38% market share and 25-34 years 46% market share) (Federsalus, 2017). Women are the most active and involved in the information searching and are the most significant multi-supplements segment (24% of total integrating consumers equal to 39% of value). Internet is a significant sales channel for recognized or codified supplements by national organizations, such as the Ministry of Health for Italy or the Food and Drug Administration for the USA (in Italy the Internet is the third sales channel with 9% of the total).

However, the Internet is also the first sales channel for unnotified supplements (not registered in official registers or approved by national organizations) as well as illegal supplements (containing prohibited principles or substances). The Internet offers the chance to buy supplements from a country where they are coded and send them to one where they are not and their sale is prohibited. The same channels can also sell supplements that contain illegal substances, such as ephedrine for weight loss.

The consumer behavior literature review on the wellness topic and the market analysis seem to highlight a discrepancy between a healthy lifestyle meant as taking care of one's health rather than the image that we wish to transmit to others. What drives a person to buy supplements that are prohibited and potentially harmful to health in order to achieve a state of psychophysical wellness? Although digital health perception represents a critical field, studies on social media impact in consumers' meaning-making and wellness information-seeking behavior are lacking.

Health decision-making process literature review refers to healthcare decisions, wellness and well-being, and the role of supplements in the achievement and maintenance of a healthy lifestyle. Wellness relates to lifestyle applied to behavioral models based on individual responsibility and the self-determination to choose one's behaviors. Previous research focused on both personal behavioral aspects (Holt, 1997), relating lifestyles and consumption, and the influence of the socio-cultural environment in the development of beliefs and behavior (e.g. Cockerham, 2005, 2017). The literature review allows the identification of different cognitive approaches that explain the consumption and/or abuse of supplements. (Arent and Lutz, 2015). Furthermore, the literature review highlights some functional and symbolic factors according to which consumers buy products that are potentially dangerous for their health (Ueland et al., 2012). Among these are the ambition for an ideal body form in as short a time as possible and the improvement of sports performance.

The role of social networks in decision-making processes is one of the most widely discussed topics in recent years, mainly referring to the development of consumer behavior in marketing. However, there is a lack of depth regarding the relationship between the health decision-making process and choices and social networks as information sources. Social networks are, therefore, a primary relevance in health-related choices (Sadovykh et al., 2015). But the enforcement of the decision-making process regarding dietary supplements requires further investigation. The overexposure of images and contents can influence people's emotional states: generate a mechanism of imitation, adaptation, or competition (Vogel et al., 2014), a process enabled by an influencer.

Social networks are sources of functional and cognitive information: they help to find relevant information about health and wellness; to evaluate the alternatives, options, and choices; to observe and share the decision-making process, to identify the preferred resources to implement and to receive and share feedback (e.g. Laurent and Kapferer, 1985; Schaninger, 1976). As a source of information, social networks reduce risk perception (Cox, 1967) and bias about product performance (Emilien et al., 2017). The degree of the product's desirability and the perception of control deriving from comparison and different information sources, although not certified, diminishes the perception of risk. Consumer risk perception refers to two dimensions: product desirability and control perception. First, popular products are perceived as having fewer risks and more benefits. While for the second dimension, Wansink (2004), demonstrates that consumers are led to believe that they have control and knowledge about a product to perceive its benefits. However, a perceived high level of control can lead to a low perception of risks.

De Jong et al. (2003) theorizes that, in order to generalize consumer characteristics of functional food and supplements, it is necessary to focus on lifestyle factors, as well as consumers' attitudes, norms, and knowledge related to dietary patterns and health risk perception profiles.

Age is a discriminating variable of consumer behavior in the wellness market (Othman et al., 2011). Attention to a healthy lifestyle grows with increasing age. Jones et al. (2011) found substantial differences in consumption habits and consumer behavior in Millennials as compared to those of other demographic groups. This generation is, therefore, the most inclined to use social media as an information research source (Mangold and Smith, 2012), a social comparison source, and an arena of involvement (Eastman et al., 2014). Their health idea is the outcome of querying multiple sources, from traditional ones (physician-patient, film, television, newspapers, etc.) to digital resources (platforms,

*blogs, social networks and forum health discourses). Millennials are the most oriented generation to purchase of the online supplements (Cavusoglu and Demirbag-Kaplan, 2017). Millennials*

*This study aims to contribute to filling the gap in the understanding of pre-purchase consumer behavior decision-making process, as related to the unnotified and illegal supplements and to outlines the dynamics that unfold inside a virtual community. Dietary supplements have an online collection of chaotic information that includes both official and reliable content and unsafe and unverified content (Siracusa and Petrelli, 2016). Furthermore, the regulatory gaps in the sale of online supplements have given rise to a shadow market, a mixture of unnotified and illegality products. The study focuses on the Millennials' wellness meaning-making and the information-seeking behavior, centered on social networks as a shadow markets of information on unnotified and illegal supplements.*

**Research and methodology.** *The literature review showed poor attention to the online decision-making process of unnotified and illegal supplement and the influence of social networks in the pertain information-seeking process (Saddovykh et al., 2015, Egan et al., 2011).*

*From these considerations, the following study aims to contribute to filling the gap referring to (i) behavior in the decision-making process concerning food supplements purchase (ii) the social networks impact within the unnotified and illegal supplement market.*

*A qualitative multi-analysis in two consecutive phases was conducted, using both semi-structured individual interviews (Cohen and Crabtree, 2006, 2008) and a Netnographic analysis (Kozinets, 2010). The semi-structured individual interviews, were carried out in September, October and November 2018, over the phone or face to face (depending on the interviewee's availability), recorded, transcript and analyzing with manual hierarchical coding. To stress the Millennials behaviors, the Netnographic analysis was conducted on a Facebook group and focused on conversation about unnotified and illegal supplements. The Facebook group has 3,697 members (September 2018), two online sellers affiliate (Musclenutrition and Prozis) with a high engagement level (Neiger et al., 2012).*

*The research is still in progress, and the coding process is realizing according to Miles et al. (1994) qualitative data analysis model. A snowball sampling technique was adopted: through Instagram and Facebook, content posts were collected, also within private groups. The process was interrupted when new information couldn't be obtained, reaching a total of 23 interviewees (13 females and 10 males). The selection criterion of the interviewees was not random, but people who had specific requirements have been selected: (i) ages between 19 and 39 years; (ii) conducting a healthy lifestyle; (iii) consumption of supplements; (iv) social media users.*

*The interview began with a few general questions to make the conversation as informal as possible and to further explore (i) the socio-demographic and cultural characteristics. Subsequently, it continued with questions relative to (ii) consumption of dietary supplements; categories of consumption; motivations and expectations; frequency of purchase and use; and the sources of information. Finally, the analysis was deepened by questions concerning (iii) source information and purchase channel and online promotion; the trustworthiness of purchase from international sites; the use of the social network for the seeking-information process, alternative evaluations and depth of knowledge of uncodified and illegal supplements. The second research, consecutive to the first, focused on the virtual communities (Rheingold, 1993), present in social networks, as a source of information. The Netnographic research focused on a close-range observation of the community conversation and interaction, using a pure approach, and non-intrusive participant observation. Two research queries (Kozinets, 2010) guided the analysis: (1) exploring decision making process - seeking-information and alternative evaluation processes - related to the purchase of unnotified and illegal supplements; (2) outline the dynamics that unfold inside a virtual community.*

*According to Kozinets (2010), Netnographic analysis followed the four phases (i) the explorative phase: in which a community, relevant to the study objectives, was identify; (ii) entrance into the virtual community: during which a friend request to the group admins was sent; (iii) gathering and analysis of the data: during which we observed the interactions and conversations for a few weeks according to the lurking technique (presence of the researcher not revealed to the group members). For the data collection a kind of electronic logbook on word was kept, in which fragments of conversations and notes on the impressions were collected; (iv) interpretation of the collected data: a hermeneutic approach (Kozinets, 2010) was used to identify some significant relations in the collected information: by identifying some typical users and/or symbolic figures, different units of significance, that are different roles and attitudes of consumer types. According to Kozintes (2010) Netnography methodology, typical users have been identified, classified into four symbolic figures (Hill et al., 1997) and four meaning units.*

**Results.** *The study investigated a phenomenon still not very well explored in literature, allowing the identification of some relevant results both in the first and second parts of the analysis. All respondents were chosen because they use food supplements. However, frequency analysis has shown that they are heavy users who (19/23) buy supplements monthly and use them daily (19/23).*

*A first answer coding showed three different behaviors related to supplement use: (i) those who know they are exceeding the RDA and continues with this practice; (ii) those who do not know they are exceeding the RDA and exhibit passive behavior; (iii) those who know the risk of exceeding the RDA and are informed before taking food supplements, thus maintaining an active and conscious behavior.*

*According to Sadovykh et al. (2015), the pre-purchase decision-making process is structured in information-seeking, alternative evaluations and choice. However, the process does not develop following the traditional sequence, and Millennials use the Internet and social networks as a source of information, as well as a place to build*

*relationships, share similar experiences with others, find emotional support to achieve one's personal goals, accept oneself, or improve oneself. An example of relationships and experience sharing is presented below:*

*"a few months ago, I joined a Facebook group that I consider trustworthy for share (sic) information, questions and doubts if I decide to try a new product". Respondents (18/23).*

*Two sub-categories have been identified from the coding of answers relating to the category of the online purchase of unnotified and illegal supplements. The first sub-category trusts intermediaries (e.g. Amazon, Prozis, Musclenutrition, Myprotein) and does not have enough knowledge of unnotified and illegal supplements. The purchase of these products happens unconsciously. An example of trust and lack of knowledge: "I don't know them, but I trust the site where I buy them, nothing is written, so I think it's safe" (man 39 years old) and "I know what they are, anyway if you buy on reliable sites and brands I don't see where the problem is" (woman 28 years). According to Taylor (2014) search engines such as Google have become sources of production and information consumption spaces without a source control system provided by intermediaries (gatekeepers). However, qualitative analysis reveals that, for the information-seeking process for supplements, e-commerce marketplaces such as Amazon, Prozis, Musclenutrition, etc., are preferred because they are considered trustworthy. E-marketplaces are also considered more authoritative for product research. The process is still in progress but as reported in Jumpshot Q2 report (2018), from 2015 to 2018 Amazon surpassed Google for product searches.*

*A Netnographic analysis of Facebook virtual community conversation analyzed has shown that in the same virtual community more needs coexist. The identified units of meaning are:*

- 1) Give me some advice, referring to the information-seeking phase;*
- 2) American (products) are better, referring to those who seek solutions in the virtual community to purchase unnotified or illegal substances, mostly American;*
- 3) I do it by myself, relating to users who exchange information to compose the non-notified or illegal supplements on their own. They use substances purchased from an herbalist, extracted from generic drugs, or purchased from international sites. An example is the "stack homemade," consisting of 25mg of ephedrine, 200mg of caffeine, and 300mg of aspirin (called Stack ECA);*
- 4) I care about you, referring to the group's advisors who provide advice, make suggestions, and stimulate discussions. They share lived experiences, recommend supplements, unnotified or illegal, and relate links where they can be purchased. The possibility that they are ambassadors of the very sites that they link to is not excluded.*

**Practical implications.** *The supplement market is a market regulated by the EU and individual countries. The countries' regulations are not harmonized, meaning that the sale of the same supplement could be prohibited in one country and legal in another. Since supplements are non-medicinal products, their purchase does not require a prescription, and online sales allow their maximum distribution even in countries where they are unnotified, thus avoiding control channels. The present research, although still ongoing, identifies two main practical implications. The first implication relates to the quality of online information and involves health policymakers, health institutions, physicians, and professionals. For consumers, social networks, and e-marketplaces provide useful and reliable information, influencing decisions and choices. Social networks, however, are a source of information relating to wellness, data that are unverified and whose quality is not guaranteed. From a practical point of view, this means medializing the medicalization, with the involvement of doctors, nutritionists, and influencers. The aim is to educate the consumer and avoid the dissemination of dangerous information such as "illegal supplements are more effective," without considering the side effects.*

*The second implication involves the role of people in the choice of supplements. Physicians and nutritionists consider the consumer as a passive subject, a recipient of products and communication campaigns, relegated to the patient position. Meanwhile, supplement companies and marketplaces compete on online channels to reach consumers through messages focused on the effectiveness and quickness of supplements' effects. For Millennials, people have an active role in contributing to the creation of their meaning of health and of useful behaviors to achieve wellness. With their lifestyles and behaviors, influencers are able to play an active role and influence people's behavior regarding food and sports preferences.*

**Research limits.** *The study is still in progress, and this fact allows for defining improvement actions to overcome the identified limits. Firstly, extending the research field to traditional sales channels, pharmacies. This also means narrowing the research field to unnotified supplements sold in pharmacies as over the counter products in order to compare their sales to those of unnotified products, thereby enabling an analysis of consumer behavior related to the adoption of healthy lifestyles. The qualitative exploratory survey has provided some interesting evidences that it would be better to further investigate with other studies through the adoption of an extensive quantitative approach.*

**Originality of the study.** *Since their introduction, food supplements have been considered an expression of alternative medicine, aimed at improving and maintaining physical wellness. This healthcare-oriented approach has made the topic unattractive in the marketing studies field and has not allowed scholars to intercept the change in wellness lifestyle meaning and consumer behavior, specifically digital health perception and the role played by social networks for Millennials. Despite the policies implemented by governments that have tried to stimulate responsible behavior regarding the adoption of healthy lifestyles, many people today still tend to assume risky behaviors associated with the continuous desire to appear healthy, transcending the real meaning of health (RIF). This study aims to*

contribute to filling the gap in the understanding of pre-purchase consumer behavior in the supplement market. Furthermore, it intends to outline the dynamics that take place within a virtual community.

The findings, consistent with the literature, have shown that social networks:

- are a source of information that reduces risk perception (Cox, 1967) and bias about product performance (Emilien et al., 2017, Ueland et al., 2012),
- introduce into the decision-making process the use of similar experiences of others and online emotional support, provided by unknown people with a similar or equal experience of health Sadovykh et al. (2015),
- modify the creating process of wellness meaning (Moorhead et al., 2013) and the production of uncontrolled (not checked) information. As mentioned, the medicalization of information involves a formal review of physicians (medical authorities), while the medialization of information implies a lack of content review (user-generated content) or the authority of influencer review (influencer authorities) (e.g. Conrad and Leiter, 2004; Grant et al., 2010).

Wellness is not completely objectable, but its different interpretations remove it from an objective universal (disease paradigm and physicians' authority) towards a modifiable and malleable meaning creation (wellness paradigm and health digital perception) by anyone who can produce information and communicate its wellness meaning in an effective way (mediatization) (e.g. Kinard, 2016; Crié and Chebat, 2013).

The study deepens the intersection between wellness meaning, expressed through a healthy lifestyle and the related deliberate and autonomous consumption choices (McCann, 2005), and the actions implemented by individuals mediated by social media network mediatization and aimed towards the improvement and modification of one's own image. (e.g. Olof Lagrosen and Grundén, 2014; Thompson and Troester, 2002, Beck, 1999).

**Keywords:** wellness lifestyle; social network; consumer behavior; dietary supplement

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# Emotions in users-brand co-creation of value. Evidence from a sentiment analysis on Twitter

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**Objectives.** *This paper advances knowledge on user-brand co-creation by presenting an original and reliable measure of emotional co-creation (CCS) during Business to Customers online interactions. Through its implementation are given answers to related research questions on the emotional side of user-brand co-creation.*

*The third millennium has been characterized by the advent of diverse disrupting phenomena, such as Internet, networking, on-line platforms and social media. These new means have largely enhanced interactive opportunities among people; in the marketing and brand management domain this can be recognized in the greater frequency and intensity of interactions between the brand and its stakeholders, and between stakeholders themselves (Payne et al., 2009; Hatch and Schultz, 2010; Kornum and Mühlbacher, 2013; Ramaswamy and Ozcan, 2016). Thereafter, companies must acknowledge the key role played by interactions, which help at achieving co-creation processes - the firm-user interaction that produces a mutually valued outcome (Prahalad and Ramaswamy, 2004) - of: brand value (Hughes et al., 2016; Lee and Soon, 2017; Payne et al., 2009), brand meaning (Iglesias et al., 2013; Vallaster and von Wallpach, 2013), and brand identity (Black and Veloutsou, 2017; von Wallpach et al., 2017).*

*In this vein, as seminally recognized by Prahalad and Ramaswamy (2004; p. 11), “direct interactions with consumers and consumer communities are critical. Consumer shifts are best understood by being there, co-creating with them”.*

*Based on this scenario, scholars observed a shift toward a new brand paradigm that empowers consumers, becoming active contributors in the brand value co-creation process, especially when they interact in a digital environment, through brand communities (Cova and Pace, 2006; Merz et al., 2009; Asmussen et al., 2013; Kornum and Mühlbacher, 2013; Schau et al., 2009). Thus, managers aiming at developing brand co-creation should carefully design specific digital encounters, such as brand-owned platforms, the corporate website, and social media (Payne et al., 2009; Iglesias & Bonet, 2012).*

*Due to the increasing attention of scholars in this last decade, the field of brand co-creation is shifting to an intermediate level, with scholars beginning to introduce quantitative measures (Edmondson and McManus, 2007). In recent times, scholars recently provided more quantitative research, such as measurement scales (Merz et al., 2018; Ranjan and Read, 2016), and investigating antecedents and consequences of brand value co-creation (Kennedy and Guzmán, 2016, 2017; Kennedy, 2017). In particular, scholars observed that to participate in co-creation processes, consumers do not ask for monetary incentives (Füller, 2010), but call for social, enjoyable and fun interactions (Füller et al., 2009; Füller and Bilgram, 2017; Kennedy and Guzmán, 2016). However, the emotional value - i.e., “the perceived utility acquired from an alternative’s capacity to arouse feelings or affective states” (Sheth et al., 1991; p. 161; see also Bailey et al. 2001) - has not been specifically and quantitatively addressed, despite in the brand and, more in general, in the marketing domains, it has been considered pivotal for understanding the value of experiential user-brand interactions during co-creation processes (Smith & Colgate, 2007), which is the aim of the current work. From that, we address four research questions:*

**RQ1:** *What is the co-created emotional value of brand-consumer interactions?*

**RQ2:** *What is the reaction of brands when consumers interact with extremely positive or negative sentiment?*

**RQ3:** *Is the co-created emotional value positively correlated with the frequency of occurrence of interaction and Likes?*

**RQ4:** *Do community-based brands co-create emotional value more than other brand typologies?*

*By using sentiment analysis of 21 brands from diverse industries, this study investigates the value - in terms of sentiment - exchanged during co-creation processes between the brand and its consumers on Twitter brand-owned digital platforms.*

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**Methodology.** To this aim, we implement a netnographic sentiment analysis of 9,645 users-brands' interactions retrieved from 21 Twitter brand profiles. In particular, six sectorial clusters of three brands each selected from Global Industry Classification Standard have been identified: 1) food, beverage & tobacco (sub-industries: Soft Drinks (SD)); 2) Distillers and Vintners (DV); 3) information technology (sub-industry: Systems Software (SS)); 4) automobiles & components (sub-industry: Automotive Manufacturers, (AM)); 5) households & personal products (sub-industry: Personal Products, (PP)); and 6) consumer durables & apparel (sub-industry: Consumer Electronics, (CE)). To them has been added one other cluster composed of three renowned community-based (CB) brands, i.e., Patagonia, Lego, and La Roche-Posay. For each cluster three brands from the Interbrand Global Ranking have been selected. For each Twitter account has been detected the presence of UBI (user-brand interaction) - defined as the firm's responses to users - within our timeframe (April 1st 2018 to October 31th 2018). On the collected UBI it has been applied the sentiment analysis through the NRC Word-Emotion Association Lexicon (Mohammad and Turney, 2010). Then, it has been developed an original measure to identify the value of co-creation (RQ1), in terms of sentiment exchanged: the Co-Creation Score (CCS), developed according to the formula:

$$\frac{(ps_{Brand} - ns_{Brand}) + (ps_{User} - ns_{User})}{total\ daily\ UBI} \times 100$$

where *ps* corresponds to positive sentiment and *ns* to negative sentiment.

To investigate how brands react to consumers' extreme positive and extreme negative emotions (RQ2), a series of *t*-tests has been applied to the user's impulses (in terms of quantity of sentiment expressed) included in the lowest (i.e., first) and highest (i.e., fourth) quartiles of the distribution. In particular, three *t*-tests have been conducted: i) between the users' extreme negative expressed sentiment and brand's answers, ii) between the users' extreme positive expressed sentiment and brand's answers, and iii) between the CCS in extreme negative situations and CCS in extreme positive situations. To verify whether Likes and/or the frequency of UBI over time influence the CCS (RQ3), Pearson's correlations have been calculated between the CCS, Likes and frequency of UBI. Finally, to identify differences, if any, in co-creation among the clusters (RQ4), an Analysis of Variance (ANOVA) has been applied, with Tukey's HSD post hoc tests between significant comparisons.

**Findings.** Results for Research Question 1: table 1 shows an overview of the resulting dataset. Only Sprite showed a negative CCS score (-55.94), resulting from both consumers' ( $M = -46.00$ ,  $Std. = 25.80$ ) and brand's ( $M = -9.81$ ,  $Std. = 34.07$ ) negative scores.

Tab. 1: descriptive statistics

Clusters	Company Name	Brand				Users				CCS
		Mean	Std	Min	Max	Mean	Std	Min	Max	
Soft Drinks (SD)	PepsiCo	23.78	25.00	-7	106	8.67	32.2	-100	108	32.45
	Nescafé	19.06	34.83	-100	167	12.11	25.62	-100	100	44.68
	Sprite	-9.81	34.07	-113	200	-46.12	25.8	-200	67	-55.94
Distillers and Vintners (DV)	The Distillers Company	6.97	23.9	-67	133	5.56	28.09	-100	200	12.53
	Hennessy	3.19	15.68	0	150	3.79	20.42	-50	200	6.98
	Heineken	1.49	14.73	-100	100	1.44	18.99	-100	150	2.93
Systems Software (SS)	Salesforce	10.95	27.07	-50	167	19.16	42.02	-67	200	30.11
	Cisco	5.58	20.49	0	200	10.36	41.55	-100	200	15.94
	Sap	8.71	27.58	-100	200	-4.93	38.05	-150	200	3.78
Automotive Manufacturers (AM)	Ford	40.24	27.5	-25	175	20.06	30.02	-33	200	60.3
	Audi	31.84	33.73	-100	200	15.85	33.59	-65	200	47.69
	Volkswagen	17.85	22.38	-33	100	6.04	31.22	-142	125	23.89
Personal Products (PP)	Gillette	41.17	45.77	-50	300	16.97	43.85	-200	300	58.14
	Colgate	21.32	33.21	-28	250	9.87	44.27	-133	300	31.19
	L'Oréal	11.68	42.81	-100	350	9.13	46.18	-100	450	20.81
Consumer Electronics (CE)	Siemens	18.01	41.97	-100	167	29.16	40.94	-200	167	47.16
	Philips	13.96	32.34	-50	200	8.12	42.89	-33	300	22.08
	IBM	4.19	25.9	-75	300	4.6	31.43	-50	300	8.79
Community-based (CB)	Patagonia	31.00	44.00	-83	170	14.00	46.00	-100	200	45.00
	Lego	15.23	21.63	-25	108	17.89	27.57	-83	133	33.13
	La Roche-Posay	0.22	6.02	-50	50	0.82	8.25	0	100	1.04

Source: own elaboration

Although the remaining CCS scores were positive (range: Ford= 60.30, La Roche-Posay= 1.04), Sap showed a positive CCS score (3.78) resulting from a negative mean for users ( $M = -4.93$ ,  $Std. = 38.05$ ) and a positive mean for brand ( $M = 8.71$ ,  $Std. = 27.58$ ), thus confirming the counterbalance effect of the CCS score.

Significant differences emerged for all the Soft Drinks (Pepsi:  $t(364) = 5.08$ ,  $p < 0.0001$ ; Nescafé:  $t(364) = 2.15$ ,  $p = 0.03$ ; Sprite:  $t(364) = 10.04$ ,  $p < 0.0001$ ) and Automotive Manufacturers (Ford:  $t(364) = 3.39$ ,  $p < 0.0001$ ; Audi:  $t(364) = 4.55$ ,  $p < 0.0001$ ; Volkswagen:  $t(364) = 4.38$ ,  $p < 0.0001$ ) brands, for two of the Systems Software (Salesforce:  $t(364) = -2.22$ ,  $p < 0.0001$ ; Sap:  $t(364) = 3.44$ ,  $p < 0.0001$ ) and Personal Products (Gillette:  $t(364) = 5.18$ ,  $p < 0.0001$ ; Colgate:  $t(364) = 2.82$ ,  $p < 0.0001$ ) brands, and for only one of the Consumer Electronics (IBM:  $t(364) = 3.64$ ,  $p < 0.0001$ ), and

Community-based (Patagonia:  $t(364) = -2.30, p = 0.02$ ) brands.

Results for Research Question 2: independent sample *t*-tests applied to determine whether differences exist in brands sentiment exchanges when answering to extreme users' emotions, showed significant results with respect to very negative ( $t(452) = -21.34, p < 0.0001$ ) and very positive ( $t(700) = 16.38, p = 0.005$ ) impulses. The letters NC at the end of the item tested stands for 'negative comments', while PC stands for 'positive comments'.

Tab. 2: *t*-test on users' extreme sentiments and firms' answers

Comparisons	Equal Variances	Levene's Test for Equality of Variances		t test for the Equality of Means		df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		F	Sig.	t						Lower	Upper
UserNC - BrandNC	Assumed	6.45	0.01	-24.120	904	0.000	-5.50	0.23	-5.95	-5.05	
	Not Assumed			-24.120	893.09	0.000	-5.50	0.23	-5.94	-5.02	
UserPC - BrandPC	Assumed	8.43	0.00	15.294	1400	0.000	3.58	0.23	3.12	4.04	
	Not Assumed			15.294	1320.60	0.000	3.58	0.23	3.11	4.01	
CCSNC - CCSPC	Assumed	1.932	0.01	-28.609	1.152	0.000	-10.61	0.37	-11.41	-9.94	
	Not Assumed			-29.642	107.17	0.000	-10.61	0.37	-11.38	-9.97	

Source: own elaboration

Results for Research Question 3: for CCS, no significant correlation emerged with respect to Likes, whereas a low ( $r = 0.14$ ) correlation was found with respect to UBI frequency, with a statistical significance attributable to the large sample size. A low ( $r = 0.26$ ) significant correlation was also found between UBI frequency and Likes.

Results for Research Question 4: the univariate ANOVA showed a significant difference ( $F(6, 3836) = 183.194, p < 0.0001$ ) among the seven clusters in co-creation.

Tab. 3. Tukey's HSD test

Clusters (A)	Comparisons between Clusters (B)	Mean difference (A-B)	Std. Error	Sig.	Confidence interval 95%	
					Lower bound	Upper bound
Soft Drinks (SD)	DV	-4.9319	3.97370	0.878	-16.664	6.027
	AM	0.0026	3.97370	1.000	-17.320	17.371
	SS	0.0435	3.97370	1.000	-17.071	17.942
	PP	0.0026	3.97370	1.000	-17.320	17.371
	CE	0.0026	3.97370	1.000	-17.320	17.371
	CB	-7.65493*	3.97370	0.000	-82.839	-68.148
Distillers and Vintners (DV)	SD	4.9319	3.97370	0.878	-6.027	16.664
	AM	4.9344	3.97370	0.878	-6.001	16.690
	SS	4.9754	3.97370	0.878	-6.753	17.260
	PP	4.9344	3.97370	0.878	-6.001	16.690
	CE	4.9344	3.97370	0.878	-6.001	16.690
	CB	-7.16175*	3.97370	0.000	-83.520	-58.829
Automotive Manufacturers (AM)	SD	-0.0026	3.97370	1.000	-17.371	17.320
	DV	-4.9344	3.97370	0.878	-16.690	6.001
	SS	0.0410	3.97370	1.000	-17.097	17.916
	PP	0.0000	3.97370	1.000	-17.345	17.345
	CE	0.0000	3.97370	1.000	-17.345	17.345
	CB	-7.65519*	3.97370	0.000	-82.865	-68.174
Systems Software (SS)	SD	-0.0435	3.97370	1.000	-17.942	17.071
	DV	-4.9754	3.97370	0.878	-17.260	6.753
	AM	-0.0410	3.97370	1.000	-17.916	17.097
	PP	-0.0410	3.97370	1.000	-17.916	17.097
	CE	-0.0410	3.97370	1.000	-17.916	17.097
	CB	-7.65929*	3.97370	0.000	-83.435	-68.422
Personal Products (PP)	SD	-0.0026	3.97370	1.000	-17.371	17.320
	DV	-4.9344	3.97370	0.878	-16.690	6.001
	AM	0.0000	3.97370	1.000	-17.345	17.345
	SS	0.0410	3.97370	1.000	-17.097	17.916
	CE	0.0000	3.97370	1.000	-17.345	17.345
	CB	-7.65519*	3.97370	0.000	-82.865	-68.174
Consumer Electronics (CE)	DV	-0.0026	3.97370	1.000	-17.371	11.320
	SD	-4.9344	3.97370	0.878	-16.690	6.001
	AM	0.0000	3.97370	1.000	-17.345	17.345
	SS	0.0410	3.97370	1.000	-17.097	17.916
	PP	0.0000	3.97370	1.000	-17.345	17.345
	CB	-7.65519*	3.97370	0.000	-82.865	-64.174
Community-based (CB)	SD	7.65493*	3.97370	0.000	64.148	82.839
	DV	7.16175*	3.97370	0.000	59.829	83.520
	AM	7.65519*	3.97370	0.000	64.174	82.865
	SS	7.65929*	3.97370	0.000	64.422	83.435
	PP	7.65519*	3.97370	0.000	64.174	82.865
	CE	7.65519*	3.97370	0.000	64.174	82.865

\*The mean difference is significant at 0.05 level

Source: own elaboration

The Tukey's HSD Test maintained significant differences ( $p < 0.0001$ ) between community-based brands with respect to the other clusters, with mean differences ranging from 7.2 (DV) to 7.7 (SD, AM, SS, PP, and CE), whereas the other six clusters tend to co-create in an equal manner.

**Research limits.** Some limits affect this work. First, it included a partial list of brands (i.e.,  $n=21$ ) across seven sectorial clusters and only Twitter was considered amongst social media platforms, thus undermining the generalizability of findings. Second, it disregarded the role of cognitive and behavioral brand value co-creation, focusing - in line with the present study's aim - on the emotional value of digital-based interactions. Finally, further studies on this topic can benefit from the consideration of the word-of-mouth literature as to explain the effects on sales of the emotional value.

**Practical implications.** This study offers major practical contributions. First, by operationalising co-creation processes, through the CCS, of Twitter-owned platforms, it offers managers a measure to monitor the value generated over time during brand-consumers interactions. The present paper invites marketing managers to acknowledge that brand co-creation value cannot be manipulated by using artificial intelligence-based tools, such as ChatBot - software designed to simulate a human conversation - because bots are not (yet!) conscious and able to exchange authentic emotions.

This study demonstrates that co-creation should not only be harmonious, but also balanced in terms of sentiment exchange. Thus, managers are urged to pay careful attention to consumers' extreme emotions to avoid relational collapses. This study demonstrates that brand value co-creation is not related to likes and frequency of interactions. Thus, managers should pay attention to the quality of the relationship and not measure their brand performance on the basis of these "quantity-based" measures. To reiterate, the human side is still needed to trigger value co-creation processes.

**Theoretical implications.** This study makes several contributions to the extant literature on brand co-creation. First, it provides an original measure of brand value co-creation. In particular, the CCS, is a valuable mean to operationalize the emotional value of interactions on the basis of the sentiment exchanged. Second, and linked to the above, the paper contributes to improve current understanding on the emotional value of interactions, which originates from the sharing of both brands and consumers' emotions. Third, extending previous findings, it is suggested here that not all the brand-consumer relationships are balanced in terms of sentiment exchanged. Indeed, this study demonstrates that brands tend to give more sentiment in comparison to consumers. It is important to note, that this does not imply co-creating more than other brands, because the CCS stems from the encounter of both actors. Fourth, the paper highlights that brands show different emotional reactions when consumers interact with extreme negative or positive emotions. Not surprisingly, when consumers display extremely negative sentiment, brands reply with positive sentiment. However, when consumers interact by offering to the brand extremely positive sentiment, the brand answers by giving them back positive sentiment but less than that received. Fifth, this paper suggests that community-based brands co-create more than the others. This interesting result can be explained by the brand's willingness to maintain a balanced relationship in terms of exchanged sentiment, in order to avoid a potential collapse of the brand-consumer relationship. Consequently, this study suggests that, in order to maintain co-creation processes over time, interactions must be not only harmonious (Gyrd-Jones and Kornum, 2013; Aspara et al., 2014; Black and Veloutsou, 2017), but also balanced in terms of sentiment exchanged.

These findings support prior studies on brand co-creation, suggesting that harmonious interactions are key to successfully co-create (Aspara et al., 2014; Black and Veloutsou, 2017; Gyrd-Jones and Kornum, 2013) and that when brands have engaged brand communities they activate a virtuous circle of co-creation (Hatch and Schultz, 2010; Huges et al, 2016; Iglesias et al., 2013; Ind et al., 2013).

**Originality of the study.** This work provides an original measure of emotional value co-creation. In particular, the CCS, is a valuable mean to operationalize the emotional value of interactions on the basis of the emotions exchanged. Extending previous findings, it is suggested here that not all the brand-consumer relationships are balanced in terms of emotions exchanged. Indeed, this study demonstrates that brands tend to give more emotions in comparison to consumers.

**Key words:** brand; co-creation; sentiment; emotions; brand measure; marketing management

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# A multidimensional framework for managing market access in the healthcare system

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**Objectives.** *Research projects and technological development has surpassed the capacity of the organizations to adapt to new practices, and has resulted in a continuous conflict of technological innovation and organisational development (Calia et al., 2007; MacVaugh and Schiavone, 2010; Anzola-Román et al., 2018). The notion of diffusion of innovation (Rogers, 2003) has flourished in past years, encouraging organizations to adopt new technology quickly. Rogers (2003:5) defined an innovation as an “idea, practice, or object that is perceived as new by an individual or other unit of adoption”. This quotation is useful at an individual and organisational level. People in the organisation need to do more than perceive the guideline as new, they must adopt new rules, new technology and so on (Manu and Sriram, 1996; Greenhalgh et al., 2004; Makkonen et al., 2016).*

*In the past two decades, recent studies in a wide range of disciplines, turned their attention to investigate the role of pro diffusion functions that support innovation (e.g. marketing, R&D, human resources) (Manu and Sriram 1996; Igartua et al., 2010; Sakari et al., 2014; Jajja et al., 2017). Therefore, the use of push strategies and linear processes were frequent to support innovation. This research deeply analyses the issues of market access (henceforth: MA), especially in the healthcare system and focuses on the innovation process working at the managerial level of the pharmaceutical firms.*

*A healthcare innovation is a “medical technology, structure, administrative system, or service that is relatively new to the overall industry and newly adopted in a particular market area” (Goes and Park, 1997; Greenhalgh et al., 2004).*

*According to Omachonu and Einspruch, (2010), there are five key stakeholders in the healthcare innovation process, and each has its unique and deliberate needs, wants and expectations:*

- 1) *Physicians and Other Care Givers*
- 2) *Patients*
- 3) *Organizations*
- 4) *Innovator companies*
- 5) *Regulatory agencies*

*Therefore, the introduction of new practices in the healthcare system must see a necessary synergy between civil society, research, industry and public and private bodies (Akenroye, 2012). Recent studies established the fundamental role of market access strategies (MAs) in order to have the marketing authorization for pharmaceutical products (e.g. drugs or medical devices) to enter in a new market (Jarosławski and Toumi, 2011; Toumi, 2017).*

*The present study tries to define the meaning of market access (MA) in all its facets, analysing the contributes in management studies, especially regarding his innovative support in the healthcare system. The World Trade Organization (WTO) outlined the importance of this term in order to establish the relations between domestic and imported goods of a specific country. Scholars attested the importance of market access strategies (MAs) for pharmaceutical firms (Smith BD, 2012; Koch, 2015; Koçkaya and Wertheimer, 2018), but there seems to be much confusion regarding this topic. This paper is intended to clarify the difference between the two facets of MA and his innovative support for any products (e.g. diffusion of new drugs) or services or processes. Thus, the research question of the study is: "how does market access support the diffusion of innovationS?"*

*We identify a literature gap in management studies regarding this phenomenon not studied in depth. In particular, this research focuses on aspects such as how various stakeholders (e.g. patients' association, firms, institutions) are starting to use the new pharmaceutical solutions (e.g. MAs) to improve the time to market of new drugs or medical devices. This means that we are expanding the question of whom the subject of adoption is; rather than just a typical consumer it may regard different groups of stakeholders. Another aspect that also is worth considering regard how co-creation of various stakeholders is taking place. The diffusion of new drugs involves many actors at different levels (Cockburn et al., 2016). The traditional research on the diffusion of innovations focused in detail the individual as unit of adoption (Rogers 1962). Moreover, the subject of adoption in the healthcare system is not the classic consumer but*

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refers to the different group of stakeholders (Jonas and Roth, 2017). It is important focuses the emphasis in process-based innovations in organization, for which the main adoption actor is the team or the department. The pharmaceutical industry has traditionally involved a limited number of actors in order to complete the market access of new drugs: physicians, regulatory agencies, and pharmacies (Kumar et al., 2014).

Accessing to the market means identifying at the right level how the actors act, understanding the needs of the stakeholders and defining how to interact with the different figures in business environments (Vasconcelos and Ramirez, 2011). In project stakeholder co-creation skills relate to the capabilities that enable a company to deal with the specific challenges of stakeholder co-creation (Kazadi et al., 2016).

In order to maximize the effectiveness of access strategies, both at a global, national, regional and local level, organizations must develop structures, activities and processes that allow the creation of a valid and convincing value proposition for all the stakeholders involved (Frow and Payne, 2011).

Therefore, healthcare is a complex service system (Rouse, 2008; Tien and Goldschmidt-Clermont, 2009). In healthcare organizations, people are involved in transactions with others within an institutional order. The real Market Access scope is depending from the system's maturity (Nishikawa et al., 2015). Market Access strategies (MAs) might improve healthcare processes to ensure that all patients get rapid and maintained access to the drugs or medical devices, at the right price (Wight, 2012; Odeyemi, 2014). Furthermore, Market Access is inserted in this complex environment (Jommi et al., 2012; Koch, 2015) as the set of levers that promote the access and recognition of the drug value by the market and which presupposes a prior study of the institutional environment, making use of various professional figures.

Thus, the purpose of the present research is to contribute to the existing literature about diffusion of innovation analysing how MA create value and support the process of new drugs or medical devices in the healthcare system.

**Methodology.** To tackle the research question, we use an exploratory case study approach (Strauss and Corbin, 1990; Mills et al., 2010) to analyze the market access strategies (MAs) adopted by a global pharmaceutical company to promote their new products to their different groups of stakeholders. Taking a multidimensional perspective, the research aims at analyzing environmental-, organizational-, and individual-level dimensions (Crossan and Apaydin, 2010).

The study was located in the Italian healthcare context. We reported the illustrative case study of Mundipharma, a pharmaceutical company which have adopted MA to promote their innovative drugs. The Mundipharma case choice respected the following criteria: 1) global pharmaceutical company, 2) presence of a market access organisational unit, 3) presence of market access managers (MAMs), 4) knowledge of the Italian healthcare system.

Furthermore, to have a triangulation of the data (Yin, 2017), multiple sources of evidence have been used:

- interviews with experts;
- archival documents from official web pages of pharmaceutical company;
- documentation from Internet searches (e.g. official reports, social magazines, specialized press).

The units of analysis are the MAs during the diffusion process of new drugs (e.g. new medicines for pain therapy). As can be seen, we made an oriented-selection to the information gathered from multiple sources of evidence and from different groups of stakeholders involved in the Market Access processes (e.g. pharmaceutical companies, public institutions, regions, patients). All the main stakeholders are experts in strategic planning of market access at different levels. We conducted the in-depth interviews using a semi-structured model divided into three main sections:

- 1) innovations in the healthcare system;
- 2) the role of the market access in pharmaceutical companies;
- 3) market access strategies and value proposition (how the MA supports the spread of new drugs).

**Findings.** One of the primary objectives of the Italian National Health Service (SSN) refers to the "sustainability". This condition is very difficult to reach. The recognized universality of the SSN is certainly a crisis factor for the national economy which generates an impossibility to set an optimal pharmaceutical and health spending budget. In this regard, the Market Access is inserted as a possible resolution tool as also stated by the Market Access Manager (MAM) of Mundipharma: "Market Access can be understood as a function to mitigate the problems of sustainability and access to care, since the trade-off between universality of care and sustainability will necessarily increase the need for professionalism of the Market Access, essential for pharmaceutical companies".

To analyse the issues of the Italian healthcare system, the respondents concurred on three main topics:

- a) Different groups of stakeholders in the Italian healthcare system.
- b) Organisational complexity in the pharmaceutical firms.
- c) MAs performance and value co-creation.

The diffusion of new drugs starts with a preclinical and clinical trials. After obtaining the patent, the process necessary to be able to place the drug to the market consists of the stages of obtaining the marketing authorization. This is the phase of classification of the drug according to the reimbursement regime and determining the price.

First, it will be necessary that the company that owns the patent, requires marketing authorization to the competent authority. For example, after the submission to the European Medicines Agency (EMA), the main authorities in the Italian context are: The Italian Medicines Agency (AIFA), the Ministry of Economic Development, the Ministry of Health, the Italian National Health Service and the Regions. Therefore, pharmaceutical companies' interface with a series of stakeholders which are primary interlocutors of the healthcare system at different levels (global, national, regional and local). They can more or less consistently influence the pharmaceutical spending policies. Naturally, they

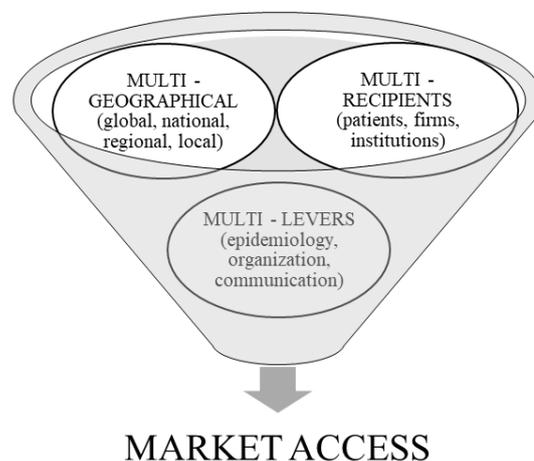
are many and different such as patients, doctors, bio-pharmaceutical companies, policy makers, institutions of Health Technology Assessment (HTA), payers and others decision makers who can contribute to the achievement of various economic objectives.

The MAM of Mundipharma also exposed the high complexity of the pharmaceutical departments for MA performance. He defined the different figures that operate within it, which have a different position depending on the role played in the marketing process of the drug and the interlocutors with which they interface: "More or less in all large companies is conceived as a hierarchical organization, at the top there is the boss, then a P&R office, an office of health economics, pharmacoeconomics and Health Technology Assessment (HTA), follows a territorial structure composed of Field Access Manager (FAM) that deals with relations with public officials, and in some cases there is also a structure of Key Account Manager (KAM), so people whose interlocutors are not regional institutions but hospitals and local health services".

The results demonstrate the innovative support of MAs through three dimensions (see figure 1):

- the recipients' dimension that involve users to perceive and evaluate market access opportunities differently (e.g. patients, payers, pharmaceutical firms, institutions);
- the geographical dimension that involve actors to find immediate solutions and action at global, national, local and, more importantly, at social level in order to identify the MAs and promote the necessary legislative arrangements;
- the levers dimension that generate opportunities with different economic value in different areas (e.g. epidemiology, organization, efficacy, communication).

Fig. 1: The multidimensional framework of pharmaceutical market access



Source: Authors' research

**Research limits.** The main research limit of this study is the sample size. This might produce a risk of generalising the results of the study. Other limitation concerns the trustworthiness of sources of online evidence which could have problems with facts and proven findings. MAs needs to be further developed in the institutional level.

**Practical implications.** We provide implications on the general use of market access in the pharmaceutical industry. The aim is to clarify the role of MAs that support innovation of new drugs in this revolutionized market. The proposed multi-dimensional framework helps to understand the main dynamics of the actual healthcare system. The results of the study raise some practical and managerial implication for pharmaceutical firms.

First, the use of MAs within healthcare system must be relevant for the actors with the same interest to the market access of new drugs. This implicates that each stakeholder participate to the knowledge process and the information are shared at each level.

Second, the time to market for new drugs is based on the different policies adopted from Italy's regions, therefore, the ability of market access managers (MAMs) is to develop a wide range of relations at each level of diffusion process of new drugs.

**Originality of the study.** This research attempts to systematize the existing literature through deepening of the innovation studies that regards the diffusion of new practices within organizations. We try to develop some empirical foundations. The study starts to analyse the diffusion of innovation issues within the strategic management literature, and subsequently focuses on the comparison between medicine and management studies in order to develop a conceptual framework that systematize the meaning of market access in all its facets.

Furthermore, the research investigates the diffusion of new drugs of a pharmaceutical firm in the actual healthcare system, analysing in detail the drugs policies on a large range of levels in order to understand the support of MAs.

The present study offers a knowledge contribution to the management studies about the adoption of innovative strategies that support the drugs process in the pharmaceutical industry. In particular, we expanded the subject of adoption from a typical customer (e.g. patients) to the different groups of stakeholders. This research is able to:

- provide empirical evidences of MAs adoption within pharmaceutical firms;
- analyse the MAs strategies to identify the value proposition from various perspectives;
- demonstrate the support generated by MAs adoption with the traditional support of marketing strategies related to the diffusion of innovations.

**Key words:** market access; innovations; stakeholders; diffusion; system

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# L'assistente vocale di marca: quali implicazioni per il branding?

## Evidenze dal caso Mercedes

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**Obiettivi.** Gli assistenti vocali (AV) sono una categoria di assistenti virtuali che “simulano l'intelligenza attraverso un'interazione vocale” (Fivesight Research, 2017, p. 5). Secondo recenti indagini, queste tecnologie dell'intelligenza artificiale, solo negli Stati Uniti, vengono utilizzate da circa 200 milioni di persone (Voicebot, 2018) e si prevede che nel 2023 il mercato complessivo mondiale arriverà a valere circa 8 miliardi di dollari, con un CAGR (2017-2023) di oltre il 35% (Market Research Future, 2018). Le principali applicazioni degli AV riguardano gli smartphone, gli smart speaker e i sistemi multimediali inseriti nelle automobili (Voicebot, 2019). Circa 114 milioni di utenti negli Stati Uniti hanno utilizzato almeno una volta gli AV a bordo della propria auto, mentre solo 58 milioni hanno utilizzato uno smart speaker (Voicebot, 2019). Inoltre, il numero di utenti che utilizza mensilmente i VA in auto (77 milioni) è superiore a quello degli utenti mensili tramite smartphone (46 milioni) (Voicebot, 2019). Pertanto, l'automobile sta assumendo un'elevata rilevanza come contesto di utilizzo degli AV, favorendo la diffusione di assistenti vocali di marca (sviluppati in-house), ossia che parlano con una specifica voce di marca, invece che con la voce del VA del provider tecnologico (Alexa-Amazon, Apple-Siri, Google Assistant-Google, Cortana-Microsoft, Bixby-Samsung) (Gollnhofer and Schüller, 2018).

Ad oggi, la letteratura accademica non ha approfondito le specifiche implicazioni teoriche ed empiriche per il branding legate agli assistenti vocali di marca, avendo concentrato invece l'attenzione sugli assistenti vocali dei provider negli ambiti di studio del conversational commerce (Vassinen, 2018; Tuzovic and Paluch, 2018; Whang and Im, 2018) e dell'advertising (Jones, 2018; Smith, 2018). Fino ad oggi, l'unico studio che ha analizzato in linea teorica il ruolo giocato dagli assistenti vocali di marca nell'ambito del branding, è il contributo di Vernuccio et al. (2019), i quali hanno sviluppato un framework concettuale sulle relazioni che intercorrono tra il voice assistant, la voce della marca, le nuove modalità di formazione dinamica della brand personality e la conseguente sempre maggiore antropomorfizzazione della marca. A fronte dell'assenza di contributi empirici sulle possibili implicazioni degli AV di marca per il branding, il presente lavoro intende adottare il punto di vista manageriale, al fine di esplorare in primo luogo i driver strategici alla base della progettazione della voce di marca dell'AV e della connessa brand experience; in secondo luogo, gli obiettivi di engagement che possono essere perseguiti attraverso l'esperienza dell'utente con l'AV di marca. A tal fine, è stata condotta una ricerca qualitativa di tipo esplorativo basata sullo studio di un caso emblematico: l'assistente vocale (“Linguatronic”) del sistema multimediale MBUX (Mercedes-Benz User Experience) di Mercedes.

Nella letteratura di marketing e sul sonic branding (Jackson, 2003), il panorama di studi focalizzati sugli stimoli sonori è prevalentemente ancorato all'analisi del ruolo della musica (es. Bruner II, 1990; Fulberg, 2003; Oakes, 2007; Olsen, 2008; Saulpaugh et al., 2012; Bonde e Hansen, 2013; Fraser, 2014; Taylor, 2015). Con particolare riferimento alla voce, la maggior parte degli studi è stata condotta in pubblicità e in misura minore nell'alveo del marketing politico, traendo le fondamentali basi conoscitive dalla ricerca in campo psicologico (Brown et al., 1973; Re et al., 2012; Zhang, 2016). In questo stream di ricerca, sono state analizzate diverse caratteristiche vocali (es., accento, genere, tono), al fine di comprendere l'influenza esercitata su molteplici risposte dell'individuo di tipo cognitivo, attitudinale e comportamentale, anche riguardo al brand oggetto del messaggio pubblicitario. Le relazioni tra le caratteristiche della voce e gli effetti sulla marca, che sono emerse da questo filone di ricerca, sono presentate sinteticamente nella

**Tab. 1.** In particolare, gli effetti di marca più studiati riguardano l'atteggiamento e il ricordo, come pure le

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percezioni in termini di *warmth* e *competence*. La percezione di *warmth* si riferisce a tratti umani del brand quali l'essere amichevole, simpatico, affidabile, onesto e sincero, mentre la percezione di *competence* si riferisce a tratti come la capacità, l'intelligenza e l'abilità (Malone e Fiske, 2013).

Tab. 1: Le caratteristiche vocali e gli effetti sulla marca

Caratteristiche vocali	Effetto
Velocità	Brand attitude (Chattonadyay <i>et al.</i> , 2003)
Accento	Brand evaluation, brand recall (Morales <i>et al.</i> , 2012)
Qualità	Warmth and competence (Wiener and Chartrand, 2014)
Genere	Warmth and competence (Wiener and Chartrand, 2014)
Tono	Voice attitude, brand recall (Zoghaib, 2017)
Tono e timbro	Warmth and competence (Zoghaib, 2019)

Fonte: ns. elaborazione

Spostando l'attenzione dal tradizionale ambito pubblicitario - finora pressoché l'unico analizzato in letteratura per quanto riguarda gli stimoli vocali - all'innovativo contesto esperienziale dei voice assistant, si ravvisa quale nuova opzione strategica di branding, la creazione e l'utilizzo di una voce specifica della marca. Come anticipato, questa strategia si pone come alternativa al ricorso all'intermediazione vocale offerta dai device dei big player sopra richiamati (Gollnhofner e Schüller, 2018). Laddove si rinunci a tale intermediazione e si ricorra all'assistente vocale di marca, secondo Vernuccio *et al.* (2018, 2019), gli AV consentono al brand di acquisire per la prima volta un'importante proprietà tipica degli esseri umani, essendo così in grado di interagire direttamente con il consumatore mediante la propria voce veicolata dall'assistente vocale di marca. Secondo gli Autori sopracitati, una significativa opportunità manageriale di tale opzione strategica è riconducibile alla possibilità per la marca di costruire la propria personalità con modalità più dirette e dinamiche rispetto al passato. La brand personality è intesa come "il set di caratteristiche umane associate alla marca" (Aaker, 1997, p. 347) e si forma attraverso l'attivazione del processo psicologico denominato "animism" (Aaker, 1997). Sulla base di quest'ultimo, l'individuo attribuisce alla marca particolari "personality traits". Se in ambiti relazionali consumatore-marca di tipo tradizionale (es., punto vendita, mass media) il processo di animism è determinato dal brand in larga parte indirettamente attraverso l'utilizzo pianificato di diverse leve di marketing (es., logo, packaging, pubblicità) e, in misura minore in modo diretto, attraverso le attività di comunicazione riconducibili a dipendenti, testimonial o alle persone associate al brand in qualità di consumatori-tipo (Aaker, 1997), in contesti relazionali dove vengono utilizzate le tecnologie dell'AI voice-based, è possibile prefigurare processi di formazione della brand personality con maggiori livelli di dinamicità (Vernuccio *et al.*, 2018, 2019), poiché l'interazione si svolge sulla base dell'apprendimento e dell'adattamento continui (Fivesight Research, 2017).

Nonostante la rilevanza in termini di implicazioni per il branding, che è teoricamente possibile riconoscere alla voce della marca nel contesto dei voice assistant sulla base delle precedenti argomentazioni, non è noto l'effettivo ruolo strategico assegnato alla voce stessa dall'impresa. Di conseguenza, in assenza di studi empirici pregressi, è opportuno innanzitutto esplorare quali siano i principali criteri strategici seguiti dalle imprese di marca nella progettazione della voce stessa. Pertanto, formuliamo la seguente domanda di ricerca:

*RQ1 - Quali sono i principali criteri strategici alla base della progettazione della voce abilitata dall'assistente vocale di marca?*

Nel contesto sopra descritto, la voce della marca abilitata dall'assistente vocale diviene un "brand-related stimuli" e, in quanto tale, può essere considerata come un antecedente della brand experience (Brakus *et al.*, 2009; Khan & Rahman, 2015). La brand experience viene concettualizzata da Brakus *et al.* (2009) sulla base delle dimensioni di tipo sensoriale, affettivo, intellettuale e comportamentale, ossia come "sensations, feelings, cognitions, and behavioral responses evoked by brand-related stimuli that are part of a brand's design and identity, packaging, communications, and environments" (p. 52). La sensory brand experience è riferita alla stimolazione visiva, sonora, olfattiva, gustativa e tattile generata dal brand. L'affective brand experience è legata alla sollecitazione emotiva (emozioni e sentimenti), mentre l'intellectual brand experience si riferisce a quella cognitiva (curiosità e opinioni). Infine, la behavioural brand experience riguarda le azioni e i comportamenti stimolati dal brand (azioni fisiche). Considerando i touchpoint come punti di contatto verbali e non verbali attraverso i quali i consumatori si relazionano e interagiscono consapevolmente con un'impresa o con un brand (Homburg *et al.*, 2017), l'assistente vocale di marca diviene un nuovo touchpoint basato sulla voce, quale innovativo brand-related stimuli (Gollnhofner e Schüller, 2018). Quindi, il VA di marca può giocare un ruolo fondamentale nel disegno e nella generazione di una brand experience caratterizzata da elevati livelli di interattività e dinamicità (Sotolongo e Copulsky, 2019). Il disegno e la gestione dell'esperienza sono attività che rientrano nell'alveo del customer experience management, approccio di marketing management che focalizza l'attenzione sulla progettazione e sulla gestione della customer experience, al fine di raggiungere e mantenere nel lungo periodo la customer loyalty. In questo filone di studi, un contributo fondamentale è fornito da Homburg *et al.* (2017), i quali individuano mindset culturali, driver strategici di disegno della customer experience e firm capability per il rinnovo dell'esperienza stessa. Nello specifico, con riferimento al disegno della

customer experience, gli Autori sopra citati individuano quattro driver strategici: “thematic cohesion of touchpoints”, “consistency of touchpoints”, “context sensitivity of touchpoints” e “connectivity of touchpoints”. Il primo driver è legato alla necessità di creare coesione tematica tra tutti i touchpoint per favorire un coinvolgimento involontario dei consumatori. La consistency si riferisce alla coerenza tra l’esperienza e i principali elementi della corporate identity, mentre la context sensitivity è riferita alla personalizzazione dell’esperienza offerta ai consumatori. Infine, la connectivity fa riferimento ad un’esperienza che integri ambienti offline e online per consentire all’utente una transizione senza discontinuità da un touchpoint all’altro. Quanto alla possibilità di personalizzare l’esperienza, gli assistenti vocali, interagendo con i consumatori attraverso processi di apprendimento e adattamento continui (Fivesight Research, 2017), possono consentire il passaggio da una personalizzazione “classica” ad una nuova personalizzazione denominata “hyper-relevance”, che si basa sulla possibilità di avere sempre una connessione a disposizione e si caratterizza per un maggior livello di dinamicità (Accenture, 2017).

Nonostante la rilevanza che teoricamente gli assistenti vocali di marca possono avere nella progettazione di una brand experience interattiva, dinamica e hyper-relevant sulla base delle precedenti argomentazioni, ad oggi non sono stati condotti studi volti a determinare quali siano i principali driver strategici adottati dalle imprese nella progettazione della brand experience basata sull’assistente vocale di marca. Pertanto, formuliamo la seguente domanda di ricerca:

RQ2 - Quali sono i driver strategici nella progettazione della brand experience basata sull’assistente vocale di marca?

La brand experience può essere considerata un antecedente del customer brand engagement (CBE) (Bowden, 2009, Ahn & Back, 2018), che rappresenta un obiettivo strategico di marketing sempre più rilevante in vista del raggiungimento di fondamentali risultati, quali la brand loyalty (Brodie et al., 2011; Hollebeek, 2011a). Gli studiosi di Marketing hanno proposto diverse concettualizzazioni del CBE. In particolare, Hollebeek (2011b) definisce il CBE come “the level of a customer’s cognitive, emotional and behavioral investment in specific brand interactions” (Hollebeek, 2011b, p. 555). Nella letteratura accademica prevale la visione del CBE come concetto multidimensionale, che abbraccia le fondamentali dimensioni cognitive, affettiva e comportamentale (Hollebeek, 2011), alle quali si aggiungono quelle di tipo sociale ed esperienziale (Gambetti et al., 2012). La dimensione cognitiva è legata alla conoscenza, l’interesse e l’attenzione nei confronti del brand; la dimensione affettiva è riferita all’emozione che l’individuo prova nei confronti del brand e la dimensione comportamentale prevede specifiche azioni da parte del consumatore (Hollebeek, 2011); la dimensione sociale è legata all’interazione e al dialogo tra gli utenti, mentre quella esperienziale si riferisce ad elementi edonistici, quali il contatto multisensoriale, lo stupore, il divertimento e il piacere estetico (Gambetti et al., 2012). Studi successivi hanno definito dimensioni più puntuali del CBE, ossia: interattiva diadica (riferita all’interazione one-to-one tra brand e consumatore), interattiva sociale (riferita all’interazione many-to-many tra i consumatori e tra questi e il brand), partecipativa (legata al contributo in termini di contenuto che l’utente fornisce partecipando ai discorsi sul brand) e di identificazione del consumatore nel brand (Vernuccio et al., 2018).

Secondo Ahn and Back (2018), le diverse dimensioni della brand experience - sensoriale, affettiva, comportamentale e intellettuale (Brakus et al., 2009) - esercitano un’influenza sulle singole dimensioni del CBE - cognitiva, affettiva e comportamentale. In particolare, gli Autori dimostrano empiricamente l’influenza positiva esercitata dalla dimensione sensoriale e dalla dimensione affettiva della brand experience sulla dimensione cognitiva del CBE; dalla dimensione comportamentale dell’esperienza sulla dimensione comportamentale del CBE e, infine, dalla dimensione intellettuale della brand experience sulla dimensione cognitiva del CBE. L’impresa, pertanto, può cercare di progettare e gestire la brand experience al fine di sviluppare il CBE, seguendo un nuovo framework manageriale, che Harmeling et al. (2016) definiscono “customer engagement marketing”. Si tratta quindi di un “sforzo deliberato” da parte dell’impresa volto al raggiungimento dell’obiettivo dell’engagement, attraverso la realizzazione di iniziative di marketing di due tipi, “task-based” ed “experiential”. Le prime sono iniziative attraverso le quali l’impresa incoraggia il consumatore a svolgere un determinato compito (es., scrivere un commento, fornire supporto ad altri consumatori), mentre le “experiential engagement initiative” si basano su eventi esperienziali (es., viaggi, eventi brandizzati), volti a costruire legami psicologici ed emozionali tra il consumatore e l’impresa, il brand o altri consumatori. Anche secondo Alvarez-Milán, et al. (2018), l’impresa è in grado di stimolare il customer engagement attraverso la creazione di contenuti rilevanti, la generazione di ambienti stimolanti emozionalmente e la possibilità di invitare i consumatori in conversazioni.

Alla luce delle relazioni che legano l’esperienza di marca al CBE e dell’importanza di un approccio manageriale improntato al CBE, si evidenzia come anche la progettazione della brand experience basata sull’assistente vocale potrebbe essere opportunamente orientata all’obiettivo dell’engagement con la marca. Analizzando la letteratura accademica sui voice assistant, è stato individuato un unico studio volto a comprendere l’effetto esercitato dagli assistenti vocali sull’engagement (Moriuchi, 2019). Nello specifico, lo studio rivela che la “perceived usefulness” degli AV esercita un effetto positivo sull’engagement.

Quindi, nonostante la letteratura accademica abbia riconosciuto il ruolo della brand experience come antecedente del CBE, nonché l’importanza di gestire questa relazione in un’ottica manageriale, non sono stati condotti studi empirici volti a comprendere tale relazione nel contesto esperienziale dei VA di marca. In particolare, occorre fare luce sui potenziali effetti della brand experience generata (e a monte progettata) dall’assistente vocale di marca sulle specifiche dimensioni del CBE. Pertanto, formuliamo la seguente domanda di ricerca:

RQ3 - Quali obiettivi in termini di customer brand engagement possono essere perseguiti attraverso la brand

*experience generata dall'AV di marca?*

**Metodologia.** *In assenza di studi empirici precedenti, per rispondere alle domande di ricerca sopra formulate, si è fatto ricorso a un disegno di ricerca esplorativo con lo studio qualitativo di un "single in-depth case study" (Yin, 2009). In particolare, discostandoci qui dal tradizionale approccio positivista-costruttivista (test della teoria), si è scelto di seguire un approccio di tipo interpretativo (Welch et al., 2011), sulla base di un ragionamento abduttivo, che presenta elevati livelli di flessibilità con una continua e simultanea interazione/evoluzione tra teoria, rilevazione empirica e analisi. L'iniziale analisi della letteratura oggi disponibile nello specifico ambito di ricerca ha consentito di contestualizzare il nostro studio in un particolare quadro teorico e ha orientato la scelta del caso oggetto di studio. Il caso selezionato è l'assistente vocale "Linguatronic" del sistema multimediale "MBUX" (Mercedes-Benz User Experience) di Mercedes che, ad oggi, è l'unica soluzione di intelligenza artificiale voice-based sviluppata in-house nel settore dell'automotive. In questo caso, quindi, la marca acquisisce una propria voce ed è in grado di interagire direttamente con l'utente. "Linguatronic" è stato inserito nella produzione di serie del nuovo modello di Classe A nel 2018 e può essere attivato all'interno dell'abitacolo di guida premendo un apposito pulsante sul volante oppure attraverso il comando vocale "Hey Mercedes!", consentendo all'utente di chiamare per nome il brand e di dialogare direttamente con lo stesso. Rispetto ai tradizionali sistemi di comando vocale installati a bordo delle automobili che basano il loro funzionamento su comandi fissi specifici, l'assistente vocale "Linguatronic", grazie al riconoscimento del linguaggio naturale, è in grado di portare il dialogo con l'utente ad un livello superiore, riconoscendo e comprendendo affermazioni relative al funzionamento della vettura e all'infotainment anche se formulate in forma indiretta. Prendendo ad esempio l'attivazione del climatizzatore, l'utente potrà dire "Hey Mercedes, ho caldo!" invece di utilizzare il comando "Hey Mercedes, imposta la temperatura a 20 gradi!". Oltre alla capacità di riconoscimento e comprensione, l'assistente vocale di Mercedes è in grado di apprendere adattandosi all'utente e alle sue abitudini, offrendo pertanto un'esperienza altamente personalizzata. Quanto alla capacità di risposta, "Linguatronic" non si esprime più attraverso stereotipi o risposte standardizzate, ma è in grado di variare le modalità di dialogo. Riguardo al suo funzionamento, gli input vocali dopo essere stati epurati da eventuali rumori di fondo sono compressi e trasmessi al computer di bordo e al server in cloud, che valutano i dati ricevuti determinando quale sia la risposta più probabile. Tale risposta, che diversamente dalla maggior parte degli assistenti vocali attualmente sviluppati può essere fornita anche in assenza di connessione, è inviata e trasmessa all'utente in un intervallo di tempo molto breve assicurando una capacità di reazione quasi istantanea. Inoltre, è garantita l'integrazione con altri touchpoint in quanto è possibile richiedere il supporto dell'assistente vocale di Mercedes anche dal proprio smartphone e dal proprio smartwatch. Il lancio del sistema multimediale MBUX e, più nello specifico, dell'assistente vocale è stato utilizzato da Mercedes come leva strategica nell'ambito del progetto di ampliamento del target, rinnovamento della brand identity e riposizionamento del brand nella direzione di un "ringiovanimento". Pertanto, ai tradizionali valori di marca relativi al pregio e all'eleganza, si è iniziato a fare riferimento a nuovi valori quali l'innovazione e l'umanità. Le attività di lancio (out-of-home, video, eventi dealer), contraddistinte dal claim "La cosa più straordinaria che un'intelligenza artificiale possa fare è sembrare umana", hanno fatto registrare importanti risultati in termini di visualizzazioni video, interazioni sui social e affluenza alle concessionarie. Inoltre, l'MBUX ha ricevuto anche un importante riconoscimento, il "Q Global Tech Award 2019", come migliore innovazione tecnologica nel settore automotive. Lo studio è stato condotto nel periodo Dicembre 2018-Marzo 2019, garantendo la triangolazione dei dati primari e secondari (Flick, 2007): interviste semi-strutturate (in prevalenza face-to-face), documenti pubblici reperiti online (es., sito web Mercedes, report di settore) e documenti interni testuali/video forniti dagli intervistati. All'interno di Mercedes, le interviste hanno coinvolto quattro manager rappresentanti delle seguenti aree/sedi: prodotto (Roma), relazioni esterne (Roma), marketing e comunicazione (Roma), R&S (Stoccarda). Al fine di comprendere il funzionamento software e la capacità di comprensione, apprendimento e adattamento continui, è stato intervistato anche un partner tecnologico (Nuance), coinvolto nello sviluppo software e fornitore dei dati di comando vocale del "Linguatronic". Le interviste, della durata media di circa 90 minuti, sono state registrate e trascritte interamente. L'analisi del corpus così raccolto ha seguito una logica iterativa, tipica dell'approccio abduttivo (Blaikie, 2009). L'applicazione della thematic content analysis (King e Horrocks, 2010) ha consentito di far emergere alcune tematiche rilevanti per la risposta alle nostre domande di ricerca, come di seguito illustrato.*

**Risultati.** *In linea con le domande di ricerca, i risultati dell'analisi qualitativa del contenuto si articolano in tre aree tematiche: 1) i criteri strategici alla base della progettazione della voce abilitata dall'assistente vocale di marca (RQ1); 2) i driver strategici della progettazione della brand experience basata sull'assistente vocale di marca (RQ2); 3) gli obiettivi in termini CBE perseguibili attraverso la brand experience generata dagli assistenti vocali di marca (RQ3). Questi macro-temi sono stati poi articolati in tematiche più specifiche.*

*Con riferimento al macro-tema relativo alla RQ1 (criteri strategici alla base della progettazione della voce abilitata dall'assistente vocale di marca), l'analisi del contenuto ha condotto all'identificazione di due fondamentali criteri (sotto-temi): 1) profilo antropomorfo della marca; 2) tratti della personalità di marca.*

*1) Profilo antropomorfo della marca. La voce dell'AV di marca è stata progettata adottando una strategia di umanizzazione del brand, la quale è volta a favorire la percezione dello stesso come "human being" con un particolare profilo antropomorfo che sia coerente con il posizionamento della marca e la brand value proposition. Tale profilo si definisce come risultante di un processo percettivo del consumatore e si articola sulla base delle dimensioni umane di "warmth" (es., affidabilità, simpatia) e "competence" (es., capacità, intelligenza), alle quali vengono assegnati diversi*

pesi e connotazioni in funzione del posizionamento di marca e della brand value proposition. Nel caso di studio analizzato, in virtù del processo di riposizionamento in atto (rendere il brand più giovanile e innovativo, senza rinunciare alle caratteristiche di pregio che da sempre lo hanno contraddistinto), le caratteristiche vocali sono state progettate favorendo la percezione di tratti legati sia alla dimensione di “warmth”, come l’essere amichevole e simpatico, sia alla dimensione di “competence”, come l’intelligenza.

“Si parla con il voice assistant di Mercedes non come se fosse una macchina, macchina intesa come computer, ma come se fosse una persona a bordo” [...] “Il concetto alla base dell’MBUX è l’intelligenza artificiale però umana e la cosa straordinaria che un’intelligenza artificiale può fare è sembrare umana” [...] “Questa voce così giovane, informale, affabile, molto vicina, sta spostando il posizionamento del brand da un brand, diciamo, molto alto, che incuteva anche un certo timore reverenziale, ad un brand che invece, pur mantenendo le sue caratteristiche di pregio, è molto vicino, è più friendly” (Intervistato 1, Mercedes-Benz Italia).

2) *Tratti della personalità di marca.* Nel caso studiato, la voce della marca abilitata dall’assistente vocale è stata progettata per favorire un’attribuzione da parte dell’utente alla marca stessa di particolari tratti della personalità in modo molto diretto e dinamico, in quanto derivante dal dialogo con il brand. Pertanto, la selezione delle caratteristiche vocali (es., genere e tono) è stata effettuata concentrando l’attenzione sugli specifici tratti della personalità di marca che l’impresa ha deciso di cercare di far percepire all’utente attraverso l’interazione vocale.

“Per il dialogo e per la selezione della voce ci siamo concentrati sulle caratteristiche del “personaggio” che vorremmo rappresentare con il nostro assistente vocale: intelligente, attento, brillante, serio, ma non rigido, non monotono, elegante, coscienzioso, orientato alla soluzione. La voce scelta ha prevalso contro gli altri candidati, che sembravano ad esempio troppo ingenui (troppi picchi di voce...)” (Intervistato 4, Mercedes-Benz).

Con riferimento al tema relativo alla RQ2 (driver strategici di progettazione della brand experience basata sugli assistenti vocali di marca), l’analisi del contenuto ha condotto all’identificazione di tre sotto-temi: 1) coerenza con la corporate identity; 2) personalizzazione dell’esperienza di marca; 3) connettività.

1) *Coerenza con la corporate identity.* Uno dei tre driver strategici seguiti per la progettazione della brand experience basata sul touchpoint assistente vocale di marca è la coerenza della stessa esperienza con la corporate identity, che nel caso in specie è stata recentemente ridefinita dall’impresa. Pertanto, l’esperienza generata dalla voce, in virtù del cambiamento in corso, è stata disegnata in modo tale da favorire nella mente del consumatore la formazione delle “giuste” associazioni di marca (brand giovanile, innovativo e più “umano”).

“L’esperienza con l’assistente vocale è un driver di rinnovamento di quella che è la corporate identity... siamo passati da una marca alla quale davi del lei a una marca alla quale dai del tu!” (Intervistato 1, Mercedes-Benz Italia).

2) *Personalizzazione dell’esperienza di marca.* La possibilità di raggiungere forme di personalizzazione dell’esperienza più profonde e dinamiche rispetto al passato è un ulteriore driver strategico per il disegno della brand experience basata sugli assistenti vocali di marca. Infatti, i processi di apprendimento e adattamento continui, che sono alla base dell’interazione tra utente e assistente vocale, consentono una personalizzazione dell’esperienza di marca, che continua ad affinarsi con il tempo.

“[L’assistente vocale] È una tecnologia che si evolve e che si adatta al guidatore... è come nelle relazioni tra umani, più ci si conosce e più ci si comprende e la stessa cosa è l’MBUX. Nel senso che si affina il rapporto con il tempo. Il rapporto che si ha [con MBUX] ritirando la vettura dal concessionario non è lo stesso rapporto che si ha dopo due mesi e non è lo stesso rapporto che si ha dopo due anni, perché l’MBUX impara a leggere i codici di linguaggio del guidatore e diventa sempre più efficiente, veloce...” (Intervistato 1, Mercedes-Benz Italia).

“Se chiamiamo una persona frequentemente a quell’ora uscendo dall’ufficio, se è la fidanzata, [l’assistente vocale] ti dice “Vuoi chiamare la tua fidanzata?”” (Intervistato 3, Mercedes-Benz Italia).

3) *Connettività.* Infine, la brand experience è stata progettata seguendo il driver strategico della connettività all’interno e al di fuori dell’abitacolo di guida e tra più touchpoint (es., smartphone, smartwatch), al fine di consentire all’utente una transizione continua da un touchpoint all’altro, ponendo al centro di tale sistema connettivo l’utente nella sua interazione con l’assistente vocale di marca. Inoltre, la brand experience è stata progettata in modo tale da consentire l’integrazione anche tra ambienti online e offline (es., consigli vocali sul percorso e sul parcheggio).

“Questo sicuramente è un ponte con l’IoT, quindi la connessione con le infrastrutture, con le altre vetture, ma anche con la domotica. Infatti, già tramite il nostro MBUX si parla con Alexa e Google Home e tu da casa puoi comandare la tua macchina e viceversa puoi comandare la casa. Quindi, puoi dire ‘Hey Mercedes, sto tornando a casa accendi il riscaldamento!’” (Intervistato 2, Mercedes-Benz Italia).

Con riferimento alla RQ3, relativa gli obiettivi in termini CBE perseguibili attraverso la brand experience generata dagli assistenti vocali di marca, l’analisi del contenuto ha condotto all’identificazione di quattro sotto-temi illustrati di seguito: 1) dimensione interattiva diadica; 2) dimensione identificativa; 3) dimensione cognitiva; 4) dimensione esperienziale.

1) *Dimensione interattiva diadica.* Tra gli obiettivi in termini di CBE perseguibili attraverso la brand experience generata dagli assistenti vocali di marca vi è l’interazione one-to-one tra utente e brand. Il touchpoint assistente vocale di marca consente all’utente di instaurare un dialogo verbale, diretto e bidirezionale, con il brand andando a ridefinire l’interazione uomo-macchina, che tradizionalmente avveniva attraverso comandi touch o attraverso semplici comandi vocali. Questo dialogo, inoltre, si basa su forme verbali più evolute (naturali) rispetto a quelle

tradizionali, basate su schemi piuttosto rigidi.

“L’MBUX ridefinisce quella che è l’interazione uomo-macchina e questo è un passaggio importantissimo, perché da una comunicazione diciamo manuale, con un pulsante o una manopola o il touchscreen, si è passati a una comunicazione verbale [...] Basta dire ‘Ho caldo!’, ‘Hey Mercedes, ho caldo!’ e la macchina ti chiede se vuoi abbassare la temperatura e quindi non glielo devi chiedere direttamente, così come tante altre cose. Qui, è proprio una dinamica di relazione che si innesta su forme verbali differenti e più evolute rispetto al passato” (Intervistato 1, Mercedes-Benz Italia).

- 2) *Dimensione identificativa.* Un altro obiettivo in termini di CBE perseguibile attraverso la brand experience generata dall’assistente vocale di marca è la riduzione delle distanze tra il valori dell’identità del brand e i valori dell’utente, fino ad un overlapping tra questi, in quanto l’esperienza con il touchpoint assistente vocale di marca consente all’individuo di comunicare verbalmente in modo sempre più intimo con lo stesso, in quanto l’AV si adatta nel tempo alle sue specifiche abitudini (es., percorsi abituali, persone sentite frequentemente).  
 “‘Hey Mercedes!’ scardina completamente anche il rapporto che si ha con la marca perché avvicina enormemente la marca alla persona, che si riconosce nel valore dell’innovazione digitale” (Intervistato 1, Mercedes-Benz Italia).
- 3) *Dimensione cognitiva.* Un altro obiettivo perseguibile dalle imprese è riconducibile alla dimensione cognitiva del CBE, poiché la brand experience basata sugli assistenti vocali di marca può andare a stimolare l’interesse, l’attenzione e la curiosità nei confronti del brand.  
 “Il risultato che abbiamo ottenuto è quello che volevamo: il pubblico interessato a questo tipo di tecnologia non è solo il cliente tipico Mercedes, ma anche gente a cui di Mercedes non interessa nulla, soprattutto giovani, millennials, che sono interessati alla tecnologia, a questo aspetto dell’MBUX e quindi si avvicina al mondo Mercedes già da oggi” (Intervistato 2, Mercedes-Benz Italia).
- 4) *Dimensione esperienziale.* Infine, tra gli obiettivi perseguibili ritroviamo la dimensione esperienziale del CBE. In questo senso, la brand experience basata sull’assistente vocale è stata progettata al fine di stimolare aspetti edonistici, quali lo stupore, l’intrattenimento e il divertimento.  
 “C’è sicuramente il tema dell’edonismo, che è quello di stupire magari i propri amici, che è quello di chiedere in macchina una cosa e Mercedes ti risponde... nell’edonismo c’è anche una parte d’intrattenimento sicuramente. Ecco ripeto, sei in macchina magari con degli amici e ti metti anche a scherzare, a giocare, a fare delle prove” (Intervistato 1, Mercedes-Benz Italia).

**Limiti della ricerca.** La natura esplorativa del lavoro, che è basato sull’analisi qualitativa di un singolo caso di studio, non consente una generalizzazione dei risultati. A partire da queste prime evidenze empiriche, future linee di ricerca potrebbero non solo seguire l’evoluzione nel tempo dell’AV di Mercedes e le sue implicazioni per il branding, ma anche approfondire nuovi casi di AV di marca che saranno presto lanciati nel settore dell’automotive e non.

**Implicazioni pratiche.** I risultati empirici emersi possono rappresentare un riferimento concettuale utile nella progettazione della voce dell’AV di marca (“voce della marca”) anche al di fuori del settore automotive in ottica di strategie di branding. Un primo riferimento strategico per la creazione della voce della marca è quello relativo al profilo antropomorfo del brand in termini di warmth e competence, che dovrebbe essere coerentemente legato al posizionamento di marca. Un secondo riferimento, più puntuale, è connesso agli specifici tratti della personalità di marca che il management intende comunicare in modo diretto e dinamico tramite la voce della marca. La progettazione della voce è solo un primo passo, al quale dovrebbe seguire il disegno dell’esperienza con l’AV di marca. Sotto questo profilo, l’analisi del caso Mercedes fornisce utili insight al management, suggerendo quali possono essere i driver strategici a cui prestare particolare attenzione, ossia la coerenza con la corporate brand identity, la personalizzazione dell’esperienza di marca e la connettività. Infine, il lavoro chiarisce quali potrebbero essere gli obiettivi specifici di CBE verso il raggiungimento dei quali l’impresa può decidere di orientare l’esperienza generata dall’AV di marca, e in particolare: l’interazione diadica tra il consumatore e il brand; l’identificazione del consumatore nel brand; attenzione, interesse, attenzione e curiosità; stupore, intrattenimento e divertimento.

**Originalità del lavoro.** La presente ricerca è il primo contributo empirico che, spostando il focus dal punto di vista del consumatore a quello del management, presenta evidenze a sostegno del ruolo chiave della voce della marca all’interno della strategia di antropomorfizzazione della marca stessa (Vernuccio et al., 2018, 2019), in quanto, attraverso la progettazione della voce dell’AV, il management può cercare di stimolare la percezione dei tratti umani legati alle dimensioni di warmth e competence. Inoltre, i risultati dell’analisi del caso si inseriscono nella letteratura sul sonic branding, evidenziando per la prima volta come le caratteristiche della voce di marca possono essere selezionate e combinate dall’impresa in modo tale da favorire nel consumatore la percezione di determinati tratti della personalità della marca, in modo più diretto e dinamico. Inoltre, il presente lavoro mette in luce gli specifici driver strategici di progettazione della brand experience abilitata dall’AV di marca, un ambito esperienziale finora non analizzato in letteratura (Homburg et al., 2017), consentendo altresì di esplorare empiricamente quanto teorizzato da Sotolongo & Copulsky (2019) circa la rilevanza che gli assistenti vocali di marca possono avere nella progettazione di una brand experience interattiva e caratterizzata da una personalizzazione sempre più dinamica (Accenture, 2017). Infine, i risultati dello studio contribuiscono ad arricchire la scarsa letteratura empirica sulle relazioni tra esperienza di marca ed engagement con il brand (Ahn & Back, 2018), esplorando per la prima volta le principali dimensioni del

*CBE (interattiva diadica, di identificazione, cognitiva ed esperienziale), che possono essere positivamente influenzate dalla brand experience generata dall'AV di marca.*

**Parole chiave:** *voice assistant; brand voice; brand personality; brand experience; customer brand engagement; case study*

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# ViviSmart.

## Comportamento alimentare e stile di vita dei bambini italiani

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**Obiettivi.** Il paper presenta i risultati di un progetto di ricerca commissionato agli autori da alleanza aBCD - Barilla, Coop e Danone. Le tre aziende, con le rispettive fondazioni, Fondazione Barilla Center for Food & Nutrition, Associazione Nazionale Cooperative Consumatori - Coop e Fondazione Istituto Danone, con l'endorsement del Ministero della Salute italiano, hanno dato vita ad un progetto denominato ViviSmart con lo scopo di promuovere stili di vita e alimentari sani e corretti, che possano essere efficaci per lottare contro il problema del sovrappeso e dell'obesità nella popolazione italiana. Avviato nell'ottobre del 2017, la sua prima edizione si è conclusa maggio 2018. Visti i traguardi raggiunti, il progetto viene replicato nell'anno accademico 2018-19, prevedendo la realizzazione di diverse iniziative informative rivolte alla popolazione italiana. Come l'anno passato, include l'implementazione di una campagna educativa relativa a un corretto stile alimentare e di vita realizzato presso molteplici scuole elementari campionate in quattro città italiane, Bari, Genova, Milano e Parma.

Negli ultimi trent'anni, nei paesi occidentali, sono stati realizzati molteplici interventi finalizzati a migliorare lo stile di vita (alimentazione e/o attività fisica) di bambini e adolescenti attraverso campagne educative realizzate all'interno delle scuole (si veda in proposito: Gortmaker et al., 1999; Birnbaum et al., 2002; Jansen et al., 2008). Alcune di queste iniziative, che hanno coinvolto anche i familiari, si sono concentrate sulle abitudini alimentari, altre sull'attività fisica, altre ancora sulla conoscenza dei più piccoli circa la salute e i corretti comportamenti da adottare relativamente al cibo e al movimento (Salmoirago-Blotcher et al.).

L'adozione di un corretto stile di vita e una sana alimentazione, specialmente nei bambini, vengono ritenuti fattori estremamente rilevanti per ridurre i problemi di sovrappeso e obesità infantile che rappresentano un'enorme sfida per i sistemi sanitari di tutto il mondo (Wang e Lobstein, 2006; de Onis et al., 2010). È stato provato infatti che sovrappeso e obesità nell'infanzia comportano rilevanti conseguenze negative sia sulla salute fisica, sia su quella mentale dei bambini e possono condurre nell'età adulta a un aumento di disturbi metabolici alla base di un maggior tasso di morbilità e mortalità degli individui (O'Neil et al., 2014).

Per quanto concerne l'Italia, nonostante i risultati di un recente studio realizzato dal Sistema di Sorveglianza Okkio alla Salute, promosso dal Ministero della Salute/CCM (Centro per il Controllo e la prevenzione delle Malattie) dimostrino che nel nostro paese stia lentamente diminuendo il fenomeno dell'eccesso di peso nei bambini, in base alla "Childhood Obesity Surveillance Initiative - COSI" della Regione europea dell'Organizzazione Mondiale della Sanità (OMS), la nazione figura ancora tra quelle con i più elevati livelli di sovrappeso e obesità infantile (Ministero della Salute, 2017). È dunque prioritario intervenire per educare la popolazione sul corretto consumo dei cibi e l'adozione di uno stile di vita sano, specialmente nell'età infantile. Per quanto riguarda l'educazione alimentare nelle scuole, precedenti ricerche (Hawkes et al., 2015) hanno dimostrato che interventi ben concepiti possono effettivamente migliorare le conoscenze dei bambini relativamente al cibo e sono in grado di modificarne i comportamenti di consumo alimentare. Tuttavia, si evidenzia che interventi esclusivamente di carattere educativo hanno effetti minimi nel caso in cui i bambini appartengano a famiglie a basso reddito. L'educazione alimentare sembra essere più efficace quando mira a stimolare l'apprendimento, la cosiddetta food literacy, le competenze e le skill, piuttosto che semplicemente fornire conoscenza. Tra i fattori di moderazione in grado di influenzare l'efficacia di campagne educative in campo alimentare sono state individuate le preferenze preesistenti rispetto al cibo, gli atteggiamenti, la conoscenza, il genere, la "forza" delle abitudini e i fattori sociodemografici (Hughner, 2007; Al-Swidi, 2014). I dibattiti pubblici rivolgono sempre più attenzione all'importanza e all'utilità della valutazione, in particolare a quella valutazione che mira a misurare e a interpretare provvedimenti attuati in contesti caratterizzati da problematiche di tipo sociale.

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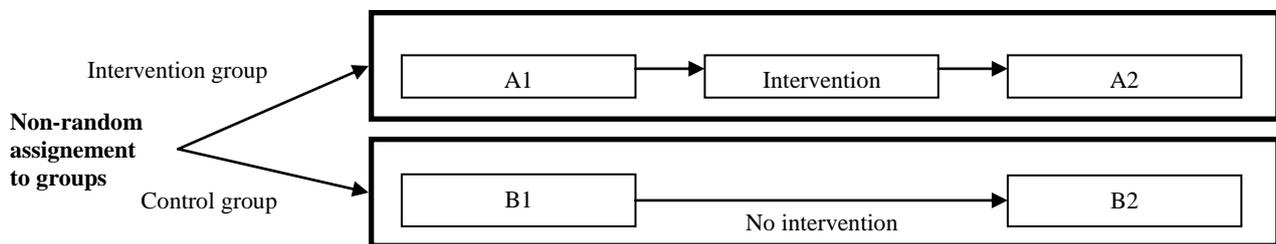
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Il progetto di ricerca qui descritto dunque ha come principale obiettivo quello di valutare l'efficacia della campagna educativa *ViviSmart* presso gli istituti campionati sul miglioramento dei comportamenti di consumo alimentare, gli stili di vita e le conoscenze relative a una corretta alimentazione da parte dei bambini delle scuole primarie. In particolare, attraverso l'effettuazione di due rilevazioni consecutive, prima e dopo che i bambini abbiano partecipato all'iniziativa educativa, si è verificato se i bambini abbiano effettivamente modificato i propri comportamenti alimentari e lo stile di vita, nonché la loro conoscenza oggettiva.

**Metodologia.** La metodologia di ricerca adottata nello studio consiste nella realizzazione di un disegno quasi-sperimentale (Shadish et al., 2002; Stake, 2013). L'uso di disegni di ricerca quasi-sperimentali è un esempio di cosa si può fare e si fa quando non ci sono le condizioni "perfette" per l'implementazione di un disegno puramente sperimentale, che elimina tutte le possibili fonti di confusione che potrebbero portare lo sperimentatore a valutazioni erranee. Un metodo di disegno quasi-sperimentale è un disegno con gruppi di controllo non equivalenti che consiste in un disegno pre/post trattamento in cui il gruppo di controllo viene costruito in modo che sia il più simile possibile a quello sperimentale (Campbell e Stanley, 1963). Tale metodo è molto utilizzato in psicologia così come nelle scienze sociali (Giovannini e Marcuccio, 2012) e vi si ricorre quando si vuole indagare l'efficacia di un fenomeno (nel nostro caso la campagna educativa *ViviSmart*), ma non è possibile assegnare casualmente i soggetti alle varie condizioni sperimentali perché sono selezionati in base a raggruppamenti già esistenti (nel nostro caso le scuole in cui viene realizzata la campagna e le classi). In questo contesto, è necessario implementare un disegno quasi-sperimentale con un gruppo di controllo detto "non equivalente". Ovvero confrontare i cambiamenti che avvengono nei gruppi di bambini sottoposti alla campagna con altri gruppi di bambini che non partecipano alla campagna, che non sono "identici", ma più simili possibile a quelli sottoposti al trattamento.

L'implementazione di tale disegno ha previsto la suddivisione della popolazione osservata (i bambini che frequentano la terza e la quarta elementare nelle scuole in cui è stata realizzata la campagna educativa) in due gruppi: un gruppo sperimentale che ha ricevuto il trattamento - *intervention group* (ha partecipato alla campagna educativa) e uno che non lo ha ricevuto - *control group* (non ha partecipato e che viene detto gruppo di controllo). Nonostante la mancanza dell'assegnazione casuale delle unità statistiche, il gruppo di controllo (ovvero una classe in ogni scuola campionata) è stato scelto in modo tale da essere il più simile possibile al gruppo sperimentale. Tale valutazione è stata implementata *ex post* attraverso apposite metodologie consolidate in letteratura e nella prassi della ricerca (Giovannini e Marcuccio, 2012) secondo lo schema illustrato in Figura 1.

Fig. 1: Schema del disegno sperimentale



A1, B1 = pre-intervention data collection points  
A2, B2 = post-intervention data collection points

Fonte: nostra elaborazione

Pertanto, le informazioni sono state raccolte in due occasioni distinte tramite la somministrazione di un questionario a entrambi i gruppi, ovvero prima e dopo la realizzazione della campagna educativa. Tale disegno ha permesso di fornire una valutazione dell'efficacia della campagna *ViviSmart* previa l'assunzione di considerare i due gruppi (sperimentale e controllo) come se fossero equivalenti. Empiricamente, i due pre-test (la misurazione prima del trattamento) sono risultati molto simili, e i due post-test (la misurazione dopo il trattamento) molto diversi, consentendo di assumere l'equivalenza dei due gruppi e quindi di imputare la differenza finale alla campagna *ViviSmart*.

Il questionario è stato somministrato adottando la metodologia dell'auto-compilazione assistita. Per tutelare la privacy dei bambini, la procedura di rilevazione ha garantito la anonimizzazione completa dei dati. Il disegno di ricerca e lo strumento di rilevazione sono stati approvati dal Comitato Etico per la Ricerca Scientifica (CERS) della LUMSA. Lo strumento utilizzato per la raccolta dati consiste in un questionario strutturato (multiple choice) utilizzato a livello internazionale, SPAN - School Physical Activity and Nutrition (Booth et al., 2005; Perez et al., 2010), adattato al contesto italiano, calibrato sulla piramide alimentare che viene utilizzata dagli animatori nell'ambito della campagna, nonché arricchito di quesiti che potevano essere utili per valutare l'efficacia della campagna *ViviSmart*. Una prima sezione del questionario includeva domande necessarie per una profilazione sociodemografica dei rispondenti, la seconda indagava i comportamenti alimentari, la terza l'attività fisica e il movimento, la quarta ed ultima rilevava la conoscenza oggettiva e soggettiva dei bambini relativamente all'alimentazione e all'adozione di un corretto stile di vita. La maggior parte delle domande del questionario era basato su una metodologia largamente utilizzata a livello internazionale per indagare i comportamenti alimentari delle persone, bambini e adolescenti inclusi,

cosiddetta 24H recall (Dietary Assessment Primer, 2017). In sostanza, si pongono dei quesiti relativi al giorno precedente in cui viene somministrata l'indagine, chiedendo agli intervistati cosa hanno mangiato, bevuto, fatto, ecc. I questionari somministrati prima e dopo la campagna di educazione erano identici relativamente alle quattro sezioni sopra descritte.

Il campione indagato comprende 47 classi, di 13 plessi scolastici. Complessivamente hanno partecipato allo studio 920 bambini, 676 sottoposti a trattamento e 244 nel gruppo di controllo. Le statistiche descrittive del campione sono riportate in Tabella 1. L'età media dei bambini è di 10 anni (SD = 0,60). Il campione è composto da maschi (51%) e femmine (49%). La maggior parte degli alunni parla italiano a casa (92%), il che significa che il numero di figli di immigrati nel campione rispecchia sostanzialmente i dati nazionali, dove la percentuale di cittadini stranieri rappresenta l'8,3% della popolazione del paese (Colombo, 2018). La maggior parte di essi vive con entrambi i genitori (88%). Il 20% degli scolari sono figli unici, il 20% ha due o più fratelli e il resto un fratello o una sorella.

Tab. 1: Statistiche descrittive del campione

	Control group	Treatment group	Totale
<b>Sesso</b>			
Maschio	49,8	51,1	50,8
Femmina	50,2	48,9	49,2
<b>Vive con entrambe genitori</b>			
Sì	90,6	87,2	88,2
No	9,4	12,8	11,8
<b>Fratelli/sorelle (n)</b>			
0	17,0	21,3	20,2
1	63,0	58,1	59,4
2 o più	20,0	20,5	20,4
<b>Lingua parlata a casa</b>			
Italiano	93,2	91,7	92,1
Altro	6,8	8,3	7,9
<b>Bambini (n)</b>	676	244	920

Fonte: nostra elaborazione

**Risultati.** I dati sono stati elaborati utilizzando due test statistici non parametrici, il Wilcoxon matched-pairs signed-rank test (Wilcoxon, 1945) e il McNemar's chi-square test per dati accoppiati (McNemar, 1947) (Tabella 1).

Tab. 2: Risultati dei test

Items	Treatment group	Control group
<b>Nutrizione</b>	<b>p-value</b>	
	Wilcoxon test	
Carne	n.s.	n.s.
Salumi	0.033	n.s.
Formaggi	n.s.	n.s.
Pesce	n.s.	n.s.
Acqua	<0.0001	n.s.
Latte	n.s.	n.s.
Yogurt	n.s.	n.s.
Cereali	.0186	n.s.
Pane	n.s.	n.s.
Patatine	n.s.	n.s.
Verdura	<0.0001	n.s.
Legumi	n.s.	n.s.
Frutta	<0.0001	.042 (left test)
Bibite gassate	n.s.	n.s.
Dolci	<0.0001	0.036
<b>Screen viewing e attività fisica</b>		
Ore trascorse alla TV	.0044	n.s.
Ore trascorse al PC	n.s.	n.s.
Ore trascorse a giocare ai videogame	.0201	.04783636
Sport (numero volte)	<.0001	n.s.
<b>Conoscenza oggettiva</b>		
	Wilcoxon test	
Porzioni di frutta e verdura da mangiare al dì	.0005	n.s.
Attività fisica da fare per stare in salute	.0002	n.s.
	McNemar's test	
Alimenti da mangiare di più*	<0.0001	n.s.
Alimenti da mangiare meno**	0.0021	n.s.

\* L'indicatore è uguale a 1 se la risposta è frutta, verdura o legumi

\*\* L'indicatore è uguale a 1 se la risposta è carne, dolci o snack

Fonte: nostra elaborazione

Come si evince da Tabella 1, mentre la distribuzione di ciascun indicatore misurato rimane sostanzialmente invariata nel gruppo di controllo per il periodo di riferimento e per il periodo successivo all'intervento, emergono differenze in molteplici indicatori del gruppo trattato. In particolare, i bambini trattati migliorano i propri comportamenti alimentari relativamente a salumi, acqua, cereali, verdura, frutta e dolci, riducono il tempo trascorso davanti alla TV e a giocare ai videogame e incrementano l'attività sportiva, migliorano la propria conoscenza oggettiva su tutti gli item indagati nel questionario. È dunque possibile affermare che la campagna educativa è stata largamente efficace.

**Limiti della ricerca.** La ricerca ha previsto soltanto due rilevazioni e non è quindi possibile affermare che i bambini stiano mantenendo nel tempo abitudini alimentari e stili di vita migliori rispetto al periodo pre-campagna. A questo proposito sarebbe opportuno fare uno studio longitudinale. Inoltre, siamo consapevoli che i comportamenti alimentari dei bambini potrebbero in parte non essersi modificati dopo la campagna perché i responsabili degli acquisti di cibo e bevande sono i genitori. Ulteriori indagini future dovrebbero includere uno studio più ampio che coinvolga i bambini e che, al contempo, preveda una ricerca approfondita sui comportamenti di acquisto e di consumo dell'intera famiglia.

**Implicazioni pratiche.** L'esito della valutazione dell'efficacia della campagna educativa fornisce utili indicazioni di policy sull'implementazione di iniziative future nel campo dell'educazione alimentare dei bambini sia finanziate da imprese private, come in questo caso, sia realizzate da enti pubblici. Dato che la campagna si è rivelata efficace relativamente a molteplici degli aspetti indagati, il progetto ViviSmart può costituire un modello di riferimento replicabile in altri contesti geografici, sia a livello nazionale che all'estero.

**Originalità del lavoro.** L'originalità della ricerca risiede innanzitutto nella categoria di soggetti indagati. Specialmente in Italia, nell'ambito della disciplina del management, i comportamenti di consumo dei bambini sono studiati di rado nonostante costituiscano un rilevante segmento di mercato. È altresì piuttosto raro, spesso per limiti di budget, che si possano condurre studi complessi, come la realizzazione di un disegno quasi-sperimentale, che coinvolga un campione di dimensioni elevate come quello investigato nella presente ricerca.

**Parole chiave:** consumo alimentare; stile di vita; bambini; educazione alimentare; disegno quasi-sperimentale.

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# The evolution of adv from a single creative campaign on tv to a multiple dynamic creativities on the web

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**Objectives.** Nowadays every company knows it is time to innovate in the targeting approach and consequent media strategy, by leveraging the huge volume of data available on the web and through the several data managements platforms.

The big question mark is often where to start from. In this study we provide an analysis of the current status of a Brand, selling band-aids and similar products, compared with its main competitors and we reconsider its traditional target and consequent media approach.

The objective of this study is then to focus on the evolution of the advertising approach: at the beginning the main principle was to provide a consistent message to reinforce the impact on consumers thanks to the repetition of the same message and the consequent brand building. Nowadays, thanks to different channels and delivery methods, this principle has been undertaken to shift to personalised messages addressed to different targets, on different platforms and devices, but keeping the values of the Brand that are simply interpreted for the different targets by using their language and what is closer to them.

Researchers, marketers and communication experts have produced a lot of studies regarding the effectiveness of the Advertising repetition. However, there are different point of views and researches around this interesting topic.

On one side, according to the theory of Daniel Berlyne "message effectiveness is believed to increase at low levels of repetitions and then to decrease as message repetition increases".(Berlyne 1970, Cacioppo and Petty 1979).

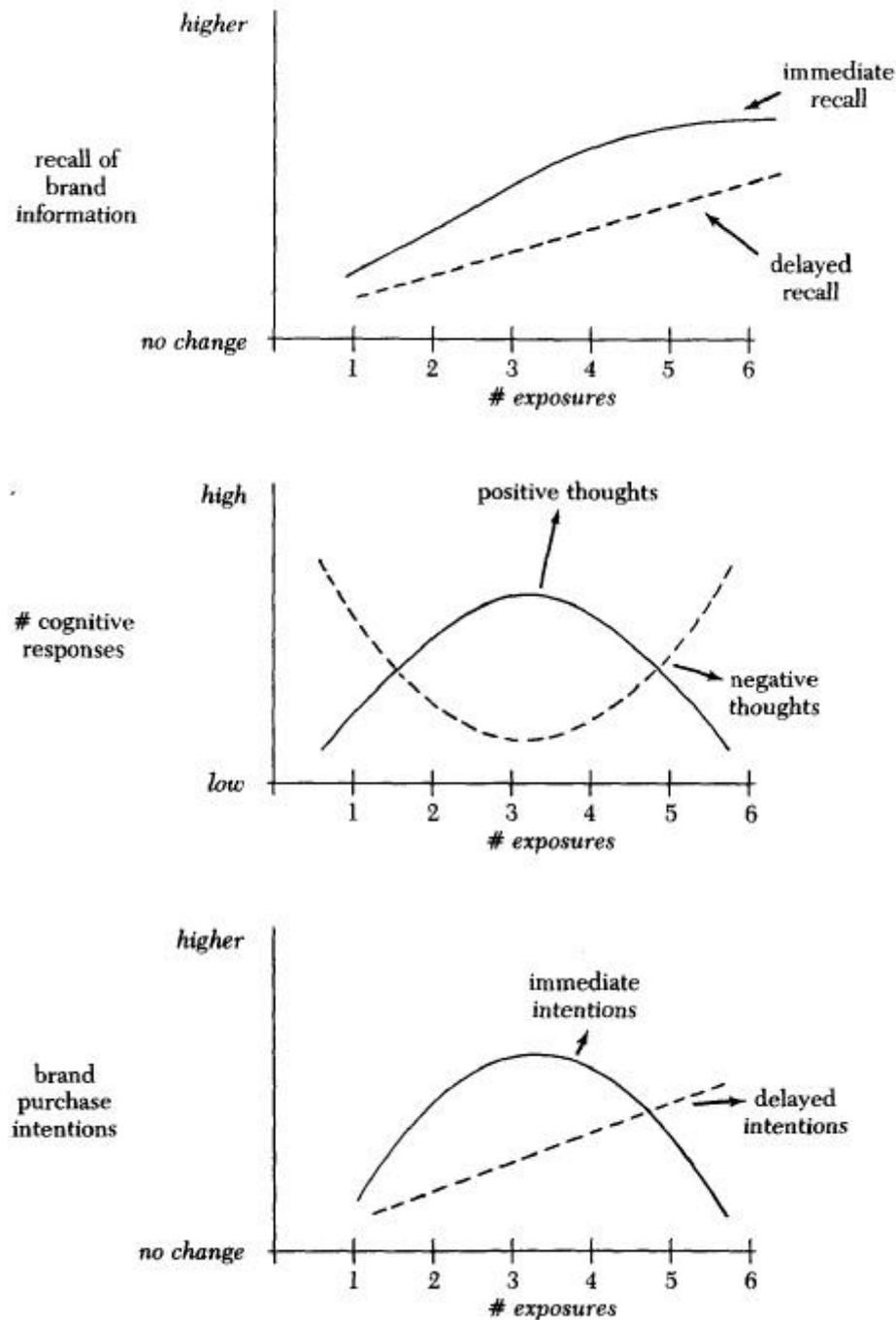
Such curvilinear relation has been treated by several other researchers as, out of them, Pechmann and Steward 1989, that summarised their belief in the following clear figure:

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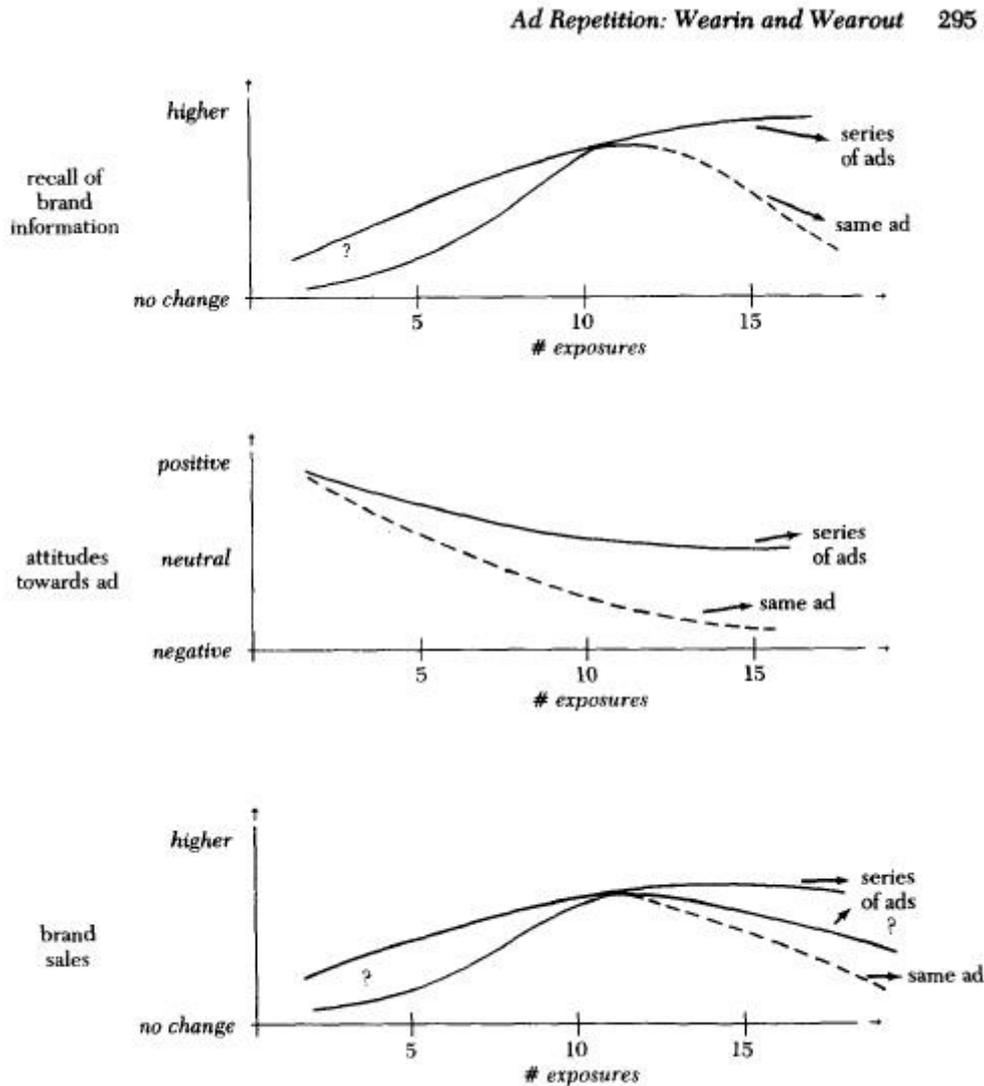
Fig. 1: Results of early lab studies: exposures required and massed



Whilst the brand recall has an increasing curve, if we consider the "cognitive responses" (positive or negative), the curve has been decreasing after a certain number of exposures. If we consider the Brand purchase intention, the curve is decreasing even more rapidly, as to witness the negative impact that repeating an advertising too many times can have on the final result that is also, of course, the main reason why exposure is meant! So it appears very important to establish when to stop exposure.

In addition to that, it appears interesting and relevant to highlight another study done by Grass and Wallace (1969), that compared the wear out of the adv campaigns in case of the same advertising or in case of a series of adv (a multisubject campaign). The results are higher in terms of recall of brand information, attitudes towards the adv and finally in terms of Brand sales.

Fig. 2: Results of early field studies: exposures voluntary and distributed



Note: exposure levels, attention gradually declines, i.e., the ad wears out. However, a relatively high level of attention can be maintained if the ad campaign consists of a series of ads (Grass and Wallace 1969)

**Methodology.** *The method of this study starts from the analysis of the status of a Brand in terms of visibility, media exposure and reached contacts during its advertising campaign. This brand sells band-aids for the back and in general for articular pains. We will call this brand “Brand A”.*

*The analysis will touch the media used to promote the products, the effectiveness of the communication, the results of the current communications crosschecked with sales data, whilst the second part of the study will propose a different solution to be applied to a possible future campaign in order to reach different “targets” with different messages, with the aim of being more effective in catching the attention of the customers thus having more chances to sell the products. However, the proposal will not be only about the segmentation of the targets and dedicated message delivery, but also on how more effectively to use the same amount of budget of the year.*

*Analysis: Communication plan*

*The “Brand A” sells band-aids, with a market share in terms of volumes of the 11% and with an increase of the 4% compared with the previous year. The distribution system is the one of the mass market that has a value of 7,5 millions of pieces, whilst the pharmacies network sells 100 millions of units.*

*However, the mass market is experiencing an increase of the 30% whilst the consolidated market of the pharmacies has no increase compared with last year. In terms of communication plan, the “Brand A” spends his media budget on tv at the end of the year, right after Christmas, when the tariffs are lower. The “Brand A” uses two different subjects during the flights, one with a man as character and the other with a woman.*

*Apart from the presence in tv, “Brand A” made also adv investments on magazines during the summer time. The media mix is then 71% tv and 29% magazines.*

*The main competitors “Brand B” is doing 100% tv investments spending 4 times Brand A and “Brand C” media allocation is made up of 97% of tv investments and 3% of magazines for a total expenditure that is 20 times more than Brand A.*

The Social Media activity of Brand A is not an asset; the web contribution is also very poor; in fact the number of visits on the website is very low: 5.000 in one year compared with the “Brand B” that has a double number of visit and Brand C that has more than 83.000 visits per year.

Fig. 3: Number of visits to the websites of Brand A, b and C in one year.

	website visits
Brand A	5000
Brand B	9885
Brand C	83207

Source: Starcom elaboration on Google data

Communication results: with the abovementioned media plan, Brand A has reached 7,1 millions of contacts ( \* Source: Starcom elaboration on MCS Online – Auditel data on target base: RA 25-54 y.o. 2017), concentrated in the two weeks done in the end of the year.

After this analysis the question is: is there a way to invest the same amount of budget in a more effective way? Which are the weaknesses of this media plan, considering all the available media, tools and channels today?

### 3.2 Weaknesses

The RELEVANCE of the communication is really low, since the results of the tv flights are good in terms of total number of contacts, but not necessarily relevant as message. They are in fact addressed to a huge public that only in a minimum percentage might be affected by backache in those two weeks of tv flights and when they eventually will need such kind of product they will have forgotten Brand A, either they will not be reached by any message on the web, due to the lack of investments on the net.

As mentioned right above, not only the relevance of the message, since we are referring to a specific product and not to a product you can buy for impulse, but also the media COVERAGE appears to be a weakness of this plan. The two weeks tv coverage in fact are only “one shot”, so it is relying on the effect it can have on those people who have the need of the product in those two weeks, but it cannot work on building Brand Awareness among public, even on those people who in that moment don’t need the product but they might consider it in the future in case of necessity.

The LEVEL OF INVESTMENT by Brand A is much lower than its two competitors that are investing respectively around 4 times and 20 times more.

The LACK of any activity on the WEB and on SOCIAL media is then furthermore penalising the Brand A thus leaving space to the other Brands.

For the abovementioned reasons it appears interesting to evaluate a different way to invest the budget of Brand A.

Who needs a aid-band for the back or similar products for other articular pains?

The first question to be answered is which is the target we should reach. There are 8.3 millions of people who suffer from this kind of disease.

The 57% of these people look at Internet for solutions and remedies. The researches on the web in average monthly are: 4, 2 milions. (Source: Performics elaboration on «The diagnosis on internet: all people who ask to Doctor Google», 2018; Google - Keyword Planner. January-December 2018. “Italians who look for information about health on internet”).

The 85% of these people are internet users, the 70% are smartphone users and the 71% is light tv viewer.

The second step is to understand what exactly they research on the web. We have identified 125 keywords, such as “backache”, “postural exercises..”, “arthritis”, “cervical pain” and so on...

So, there are people that all over the year, in different moments, are suffering from backache and they actively look on the web to find a diagnosis, remedies and various solutions.

“Brand A” is present only two weeks out of the 52 of the year, it means Brand A is not visible when a person needs a band-aid or another product of the brand A range except two weeks per year.

**Findings.** The media plan counterproposal is to use the same budget but to invest it on the web, in order to be continuously present when the need occurs for people. Different complementary solutions to be more effective on the web, either to be “found” when people need (“pull communication”) and to deliver the message on purpose (“push communication”).

Pull communication.

a) the optimization of the web page through:

- Improvement of the page in order to have a higher position during the users researches: maximizing the relevance of each page of destination through contents close to the interests of the audience making the researches on the web and through a better website indexing of each page.
- Introducing new pages with new contents referred to the most interesting topics for the audience (for example: therapy, back pain...)

b) maximising the coverage on the 125 most relevant keywords.

*This coverage has two different levels: the unbranded keywords that are researched in the phase of “awareness” and “interest” of the audience and the branded keywords, that play a role in the last phase of the customer journey, i.e. in the phase of “consideration”.*

*Push communication*

a) *“Native contents” addressed to specific targets.*

*Whilst the tv communication reaches a wide range of people, with and without any potential back pain; there are digital solutions able to “speak” directly to certain targets that have a higher possibility to present back problems.*

*So, the process has been to:*

- 1) *Identifying the needs of users by analysing the web conversations and the most researched keywords*
- 2) *Sub-grouping our broad target into sub targets based on the abovementioned analysis*
- 3) *Studying specific creativities based on the sub-targets and their needs*
- 4) *Optimising the performance through the landing rate and consequent analysis of the effectiveness of the single creativity and the look alike model, to address the message to similar audience.*

*In case of “Brand A” and its products, in fact, we have identified three sub-groups belonging to the broad target of who potentially can be interested in a back pain remedy:*

- *Target group a) who works at the office, thus keeping a wrong posture of the back*
- *Target group b) who practices certain sports where the back is often stressed.*
- *Target group c) pregnant women, who temporary have to carry a heavy weight.*

*The delivery method of these customised advertising creativities is the programmatic:*

*“It provides a single view of the consumer and single point of media planning and buying across all digital media channels, and allows marketers to leverage their own data, media, and technology” as described by Dawson P., Lamb M. (2016) in “the Programmatic Advertising Principle”.*

**Research limits.** *This analysis and process approach have been elaborated after having analysed the current marketing and advertising activities of Brand A, B and C. The suggested solution is at proposal level and we do not know yet if the company will follow the suggestion, thus innovating the media and method approach to the target and advertising. In case of positive feedback, it will be possible to “measure” the real effectiveness of the approach, by monitoring the several KPI and campaign results. However, the work is still in progress because if the company will not change the traditional approach, we will not be able to measure and compare the current media planning with the new proposed one.*

*Apart from the campaign KPI's that are related to short term achievements, it will be interesting to measure also the “brand awareness” and the level of engagement of Brand “A” in the following years, thanks to the new strategic approach.*

**Practical implications.** *By following the abovementioned process, customised creativities and digital channels, we forecast to reach these results:*

- *8, 9 millions of contacts*
- *38% of reach as campaign*
- *0,07% - 0,08% conversion rate*

*(Source: Starcom elaboration, target 25-54 y.o. with medium and over income)*

*In addition to these numbers, most importantly, we will work in order to build the “brand awareness” of Brand “A” and to be present and especially relevant throughout the year.*

*In case of validity of this proposal, it will be interesting to consider it as a “case” of a media innovation newly introduced into a sector, that can track how to approach also other sectors traditionally characterized by a media plan mainly based on tv and usual media (such as radio, magazines, ...). The biggest effort is to explain and demonstrate to an elderly management class the effectiveness of this change and the need to change nowadays. Both in terms of target segmentation and media solutions.*

**Originality of the study.** *This study has the interesting aim of proposing a different approach to a brand whose media plan is very traditional and whose sector and main competitors are also conservative in the media approach.*

*Following a new media and communication approach will reach different targets and will provide a better relevance in the delivered messages. The originality of this study is made up of the introduction of dynamic creativities in a sector that hasn't experienced them yet. Moreover it has to be considered “original” also because, if the company will approve this new proposal and put it into practice, there is the aim of measuring the new approach. In this way we will be able to really check and then hopefully demonstrate the validity of the proposal through several KPI.*

*Moreover, if it will be feasible to start with this new approach, we will be able to evaluate if the new segmentation is valid and how eventually change the different clusters, basing our analysis on the results of the different dynamic creative messages. It will be either a test of the effectiveness of the adv message and also on the sub-target who will be reached by a personalized message.*

**Key words:** *Custom targeting; custom audience; on line advertising; media approach; digital media approach; programmatic advertising.*

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# Investigating current challenges, strategic issues and future trends of strategic communication in Italian organizations

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**Objectives.** *The concept of strategic communication introduces a significant change within the field of Corporate Communication. According to different authors (Hallahan et al., 2007; Tench et al., 2017), it represents a new paradigm useful to interpret the development of communication and the evolution of its role within complex organizations. More and more strategic communication provides a relevant contribution to the other corporate functions and to the top management for achieving strategic aims. More specifically, strategic communication deals with the planned and evolving use of communication for supporting organizations in enhancing their overall performance (Tench et al., 2017). Strategic communication can be defined as “the purposeful use of communication by an entity to engage in conversations of strategic significance to its goals” (Zerfass et al., 2018, p. 487). In doing so, strategic communication professionals help top management in redefining organizational aims and positioning, effectively implementing initiatives and managing crucial resources.*

*The strategic role of communication as a crucial component of complex organizations for their management and governance has been highlighted in 1938 by Chester Barnard. The author put on evidence the role of communication in shaping internal form and economy of organizations. Additionally, he underlined its central position in defining structure, dimensions, activities of organizations themselves (Barnard, 1938). However, the new paradigm of strategic communication has been recognized at the beginning of this century. According to such approach, the most relevant feature of strategic communication is represented by its proactive attitude in defining the management activity. Strategic communication focuses its attention on how organization presents and promotes itself by the means of intentional activities, initiatives and behaviours implemented by leaders, managers and communication professionals (Hallahan et al., 2007). To this regard, one of the aim of communicators is to help organization in acquiring legitimacy amongst stakeholders, as they support in developing trust by the means of relationships and in increasing organizational credibility (Cornelissen, 2004).*

*Communication has progressively developed its strategic role within organizations. Strategic communication “also faces a challenge in truly embracing processes of meaning-making beyond the transmission of messages and in bringing about and measuring behavioural outcomes that are aligned with the strategic goals of the communicative entity and the public interest” (Holtzhausen, Zerfass, 2013, p. 15). The digital revolution has also added complexity to the strategic role of communicators, who are becoming not only process-owners within the organizations but also data managers, content creators and distributors (Forbes Communication Council, 2018).*

*Based on such premises, the aim of the following study is to investigate the evolution of strategic communication in Italy and to explore current challenges and trends for Italian strategic communication professionals concerning the strategic issues of trust development and content management.*

*More specifically, the research intends to answer the following research questions:*

- *RQ1: What are the most important strategic issue for Communication Management in the near future in Italy?*
- *RQ2: What are the practices and challenges of trust-building communication in Italy?*
- *RQ3: What are the main sources of content creation and distribution in Italy?*

**Methodology.** *The following research is based on the online questionnaire used for the European Communication Monitor 2019 that consisted of 34 questions. Dichotomous, nominal and ordinal response scales have been used for analysing the collected data. The survey has been pre-tested with 67 communication professionals in 20 European countries and then has been sent to more than 80000 European communication professionals in February/March 2019.*

*Supplementary invitation has been sent via research collaborators and professional associations. 5815 professionals began to fill in the survey and 2883 of them completed it. A stricter selection of respondents has been implemented by deleting from the dataset those who could not clearly be identified as coherent part of the population.*

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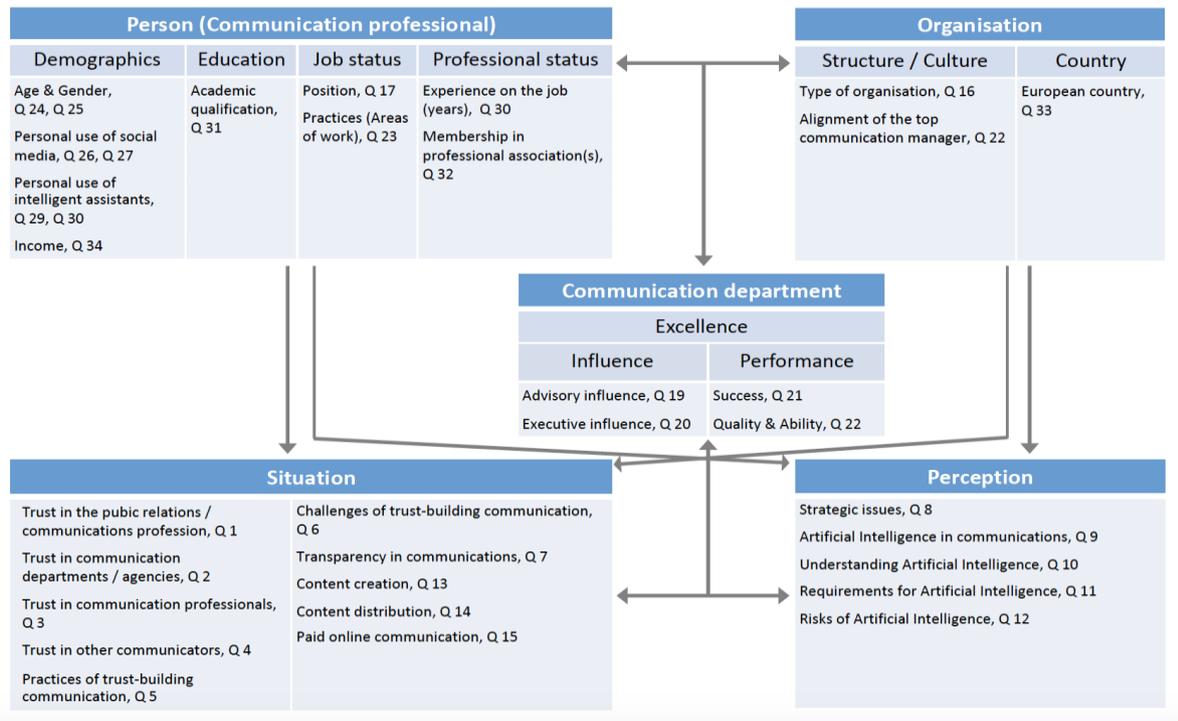
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For data analysis the Statistical Package for the Social Sciences (SPSS) has been used. Cluster analysis, regression analyses and different test (Chi<sup>2</sup>, ANOVA/Scheffe Post-hoc-Test, independent samples T-Test, Pearson correlation and Kendall rank correlation) have been applied depending on the variable type.

The following graph summarizes the research framework characterizing the ECM survey.

Fig. 1: ECM 2019 Research framework



Source: ECM 2019

As illustrated in the figure the attention is focused on five clusters of information: Situation, Perception, Communication Department, Person and Organization.

The situation cluster includes answers to all those questions addressed to investigate the current challenges emerged from the professional practice, such as for instance the role of trust in strategic communication (Q1, Q2, Q3, Q4, Q5, Q6), the challenge of transparency in communication (Q7) and the practice of content creation and distribution by the means of offline and online tools (Q13, Q14, Q15).

The perception cluster is related to the perceptions expressed by strategic communication professionals concerning extant trends in the field such as strategic issues for communication (Q8) and the impact of Artificial Intelligence (Q9, Q10, Q11, Q12).

The Communication Department cluster investigates the features of the excellent departments according to the opinions of respondents. The excellent is measured in terms of influence (Q19, Q20) and in terms of performance (Q21, Q22).

The last two clusters, Person and Organization ones, are related to better know the characteristics of respondents and of their organizations. Questions included in these two clusters are addressed to analyse demographics (Q24, Q25, Q26, Q27, Q29, Q30, Q34), education level (Q31), the job status (Q17, Q23), the professional status (Q30, Q32) of communication professionals as well as the structure/culture (Q16, Q22) and eventual linked to the country of origin (Q33).

In this study we decided to focus on the first two clusters (situation and perception ones) which allow us to investigate the latest trends occurring in strategic communication fields as illustrated previously.

**Findings.** The European Communication Monitor 2019 has collected a total amount of 2689 answers from 48 European countries. Italian respondents represent the 6,2% of the sample (N= 168).

The following table summarizes the features of Italian professional respondents in terms of organizational role and alignment of communication function with the top management of their organization. Alignment is measured by asking respondents if within their organization, the top communication manager or the chief communication officer is a member of the executive board (strong alignment), if he/she reports directly to the CEO or highest decision maker on the executive board (alignment), or if he/she does not report directly to the CEO or highest decision maker (weak alignment).

Tab. 1: Background of Italian respondents

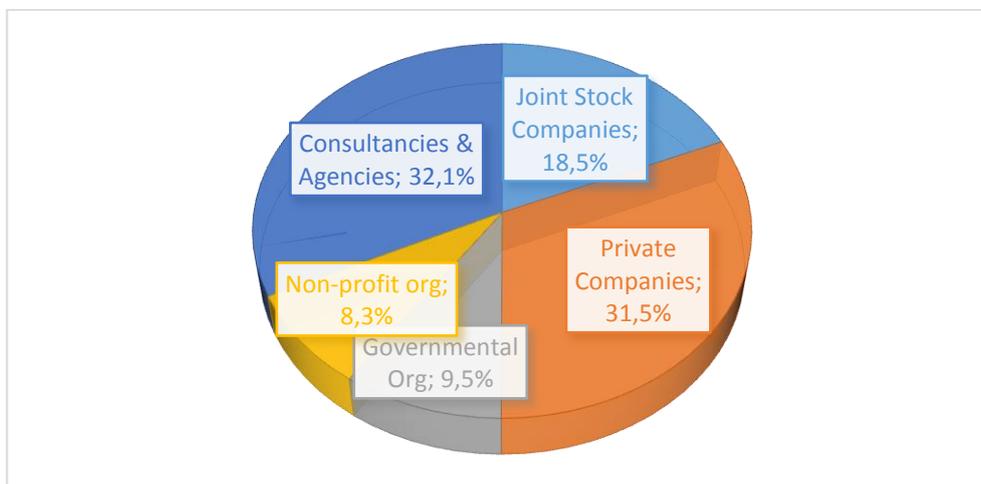
<b>Organizational Role</b>	<b>%</b>
Head of Communication	47,3
Team/Unit leader	32,7
Team member/Consultant	20
<b>Alignment of communication function</b>	<b>%</b>
Strongly aligned communication function	22,8
Aligned Communication function	69,3
Weakly aligned communication function	7,9

Source: ECM 2019

Most of respondents are head of communication (47,3%). The 32,7% is represented by team or unit leader while the 20% is constituted by team member or consultants. The majority of respondents declares that the communication function is strongly or in any case aligned with the top management (92,1%).

The following graph summarizes the type of organizations where Italian respondents work.

Graf. 1: Italian organizations types



Source: ECM 2019

As illustrated in the graph 1 most of respondents are from consultancies and agencies (32,1%) and from private companies (31,5%). Then, 18,5% of respondents are professionals from joint stock companies, while 9,5% operates in governmental organizations and 8,3% in non-profit organizations.

What are the most important strategic issue for Communication Management in the near future in Italy? (RQ1)

Concerning the current challenges emerged from the professional practice, the role of trust in strategic communication has attracted quite attention. As illustrated in the following table, until 2022, one of the most important strategic issues will be related to building and maintaining trust (42,3%), similarly to what responded at European level (37,9%).

Tab. 2: Strategic issues for communication professionals until 2022

<b>Strategic Issues</b>	<b>% Ita</b>	<b>% Eu</b>
Building and maintaining trust	42,3	37,9
Exploring new ways of creating and distributing content	35,1	31,6
Matching the need to address more audiences and channels with limited resources	32,1	30,3
Dealing with the speed and volume of information flow	29,8	32,5
Strengthening the role of the communication function in supporting top-management decision making	28,0	26,5
Dealing with sustainable development and social responsibility	27,4	21,9
Coping with the digital evolution and the social web	26,2	29,8
Linking business strategy and communication	26,2	23,6
Using big data and/or algorithms for communication	23,8	28,3
Transforming the communication function to be more agile and flexible	15,5	18,6
Dealing with the demand for more transparency and active audiences	13,7	19,0

Source: ECM 2019

A second relevant issue is represented by the need of exploring new ways for creating and distributing content (35,1%), while European communicators (32,5%) have underlined that dealing with the speed and volume of information flow could be considered more relevant.

Trust development and content creation and distribution management represent the two main strategic issues for Italian respondents that need to be analysed in depth.

*What are the practices and challenges of trust-building communication in Italy? (RQ2)*

As underlined by the last results from Edelman Trust Barometer (2019), media system as well as journalists are increasingly distrusted. It is expected that this might be similar and true also for other communicators such as practitioners who manage communication on behalf of different organisations (public, private, or non-profit). ECM 2019 survey has investigated how much different groups of stakeholders (top executives, influencers and bloggers, journalists and ordinary people) trust strategic communication/public relations at different levels: macro-level (profession), meso-level (communication departments) and micro-level (practitioners). Additionally, the survey explored how the general public trusts other advocates of organizations, such as external experts, supports, other employees or activists.

As illustrated by the following figure, at a macro-level the perceived trust in the public relations/communication profession by ordinary people is low (M= 2,79). Only the 24,7% of them have declare to highly trust the profession (frequency based on Likert scale point 4-5).

Fig. 2: Perceived trust in the public relations/communication profession by different clusters of stakeholders

	Top executives	Influencers and bloggers	Journalists	Ordinary people (general public)		Top executives	Influencers and bloggers	Journalists	Ordinary people (general public)
Germany	74.2%	38.3%	40.1%	17.2%	Spain	65.1%	49.6%	53.1%	30.6%
Austria	62.0%	39.7%	42.2%	33.3%	Portugal	60.5%	65.3%	37.5%	36.8%
Switzerland	77.4%	37.8%	43.8%	30.8%	Italy	66.1%	53.4%	44.2%	24.7%
France	70.8%	38.5%	40.9%	17.5%	Slovenia	61.1%	42.4%	31.9%	28.9%
Belgium	65.3%	44.5%	43.1%	26.6%	Croatia	54.5%	53.7%	25.4%	24.1%
Netherlands	76.9%	41.6%	37.9%	27.9%	Serbia	55.2%	52.7%	30.2%	35.3%
United Kingdom	71.1%	41.8%	36.1%	14.3%	Turkey	52.3%	44.1%	29.9%	28.4%
Ireland	73.1%	52.9%	48.1%	15.7%	Poland	58.9%	36.5%	20.0%	29.6%
Sweden	75.0%	53.6%	31.1%	31.0%	Czech Republic	66.0%	52.3%	41.3%	27.7%
Norway	85.4%	50.7%	30.1%	26.8%	Romania	59.9%	57.6%	44.2%	35.1%
Finland	78.7%	59.1%	53.1%	41.9%	Bulgaria	51.0%	40.8%	36.7%	25.5%

Source: ECM 2019

The perceived trust seems to increase among journalists (M= 3,28; 4-5 scale point frequency: 44,2%), influencers and bloggers (M=3,40; 4-5 scale point frequency: 53,4%) and finally top executive (M=3,76; 4-5 scale point frequency: 66,1%).

Concerning the meso-level, the perceived trust towards communication departments has higher value among internal and external stakeholders as illustrated in the following figure.

Fig. 3: Perceived trust in the public relations/communication departments by different clusters of stakeholders

	Top executives and (internal) clients for whom we work	Journalists with whom we interact	Publics and people who use our media, channels, events, etc.	Influencers and bloggers with whom we interact		Top executives and (internal) clients for whom we work	Journalists with whom we interact	Publics and people who use our media, channels, events, etc.	Influencers and bloggers with whom we interact
Germany	88.0%	77.2%	66.9%	61.3%	Spain	84.7%	79.7%	68.2%	63.4%
Austria	88.1%	86.3%	76.9%	72.5%	Portugal	83.5%	69.7%	67.5%	70.6%
Switzerland	90.7%	72.6%	79.8%	62.0%	Italy	77.8%	72.4%	66.9%	74.5%
France	83.3%	73.8%	65.2%	62.1%	Slovenia	83.1%	77.8%	67.8%	65.4%
Belgium	86.2%	75.6%	65.3%	65.2%	Croatia	75.7%	73.0%	62.7%	66.3%
Netherlands	90.2%	70.8%	75.8%	61.4%	Serbia	79.3%	72.1%	64.7%	71.4%
United Kingdom	92.2%	76.7%	73.5%	71.2%	Turkey	78.8%	58.2%	66.2%	68.8%
Ireland	90.2%	84.6%	84.3%	73.9%	Poland	85.7%	74.5%	69.8%	69.6%
Sweden	88.0%	63.0%	77.7%	71.7%	Czech Republic	84.1%	83.3%	61.7%	71.4%
Norway	94.0%	78.8%	81.5%	80.4%	Romania	75.1%	60.6%	67.0%	69.6%
Finland	90.2%	83.7%	77.3%	84.4%	Bulgaria	83.3%	69.4%	61.2%	55.8%

Source ECM 2019

Based on a frequency of 4-5 scale point, 77.8% of top executives highly trust communication departments (M=4,12); similarly, also 74,5% of influencers and bloggers (M=3,98) and 72,4% of journalists (M=3,97) share the same feelings. Lower perceived trust is showed by ordinary public (66,9%; M=3,77).

At micro-level (figure 4), 86,7% of Italian communication practitioners feel to be trusted more by peers(M=4,29). 84,0% of them feel to be trusted by people and publics they talk to (M=4,17); 82,1% by journalists (M=4,17) and 73,1% by influencers (M=3,94).

Fig. 4: Perceived trust in the public relations/communication professionals by different clusters of stakeholders

	(Internal) clients I'm working for	Publics and people I talk to directly	Journalists I work with	Influencers and bloggers I work with		(Internal) clients I'm working for	Publics and people I talk to directly	Journalists I work with	Influencers and bloggers I work with
Germany	93.3%	78.8%	89.3%	74.3%	Spain	87.6%	86.7%	84.6%	72.8%
Austria	92.9%	90.4%	93.8%	78.0%	Portugal	88.6%	86.1%	72.1%	82.5%
Switzerland	92.6%	82.8%	77.8%	73.9%	Italy	86.7%	84.0%	82.1%	73.1%
France	84.8%	81.5%	75.4%	62.3%	Slovenia	90.7%	83.9%	85.9%	80.3%
Belgium	90.0%	81.0%	86.2%	71.2%	Croatia	90.7%	74.8%	81.3%	78.3%
Netherlands	94.7%	87.2%	78.0%	74.7%	Serbia	92.9%	85.5%	81.5%	74.7%
United Kingdom	97.0%	78.8%	84.9%	75.4%	Turkey	84.1%	76.9%	81.5%	79.0%
Ireland	92.0%	92.0%	90.0%	78.9%	Poland	89.3%	86.5%	87.0%	78.6%
Sweden	89.0%	86.7%	73.4%	66.7%	Czech Republic	79.1%	72.3%	88.9%	85.3%
Norway	95.1%	92.8%	86.1%	80.6%	Romania	80.9%	73.4%	68.9%	75.0%
Finland	90.4%	84.1%	83.7%	76.9%	Bulgaria	92.0%	91.7%	80.9%	76.3%

Source ECM 2019

In addition to communication professionals, there are several others who can speak on behalf of an organisation: top managers, marketing professionals, employees, external experts, or external customers/clients (please see table 3).

Tab. 3: Perceived trust towards other advocates

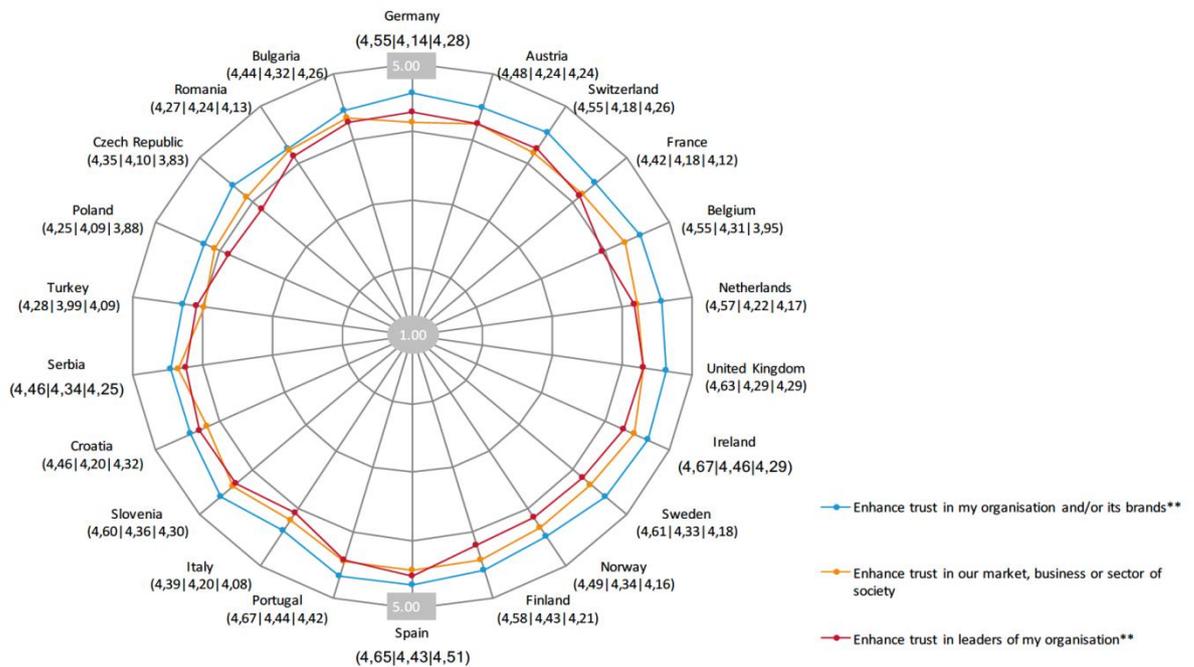
External advocates	Mean
Leaders of my organisation	3,71
External experts in the field	3,69
External supporters	3,69
Com & PR practitioners of my organization	3,61
Other employees of my organizations	3,51
Marketing and sales representatives of my organization	3,26
Activists and other external organizations	3,20

Source: ECM 2019)

Leaders (M=3,71), external experts (M=3,69) and external supporters (M=3,69) are the most trusted advocates of an organization according to the Italian practitioners. Marketing and sales representatives (M=3,26) and activists are the less trusted.

For Italian Communication managers enhancing trust in the organization and its brands represents a crucial goal in the daily work of communication professionals (M= 4,39), as the following graph illustrates.

Fig. 5: Goals in daily work of communication professionals



Source: ECM 2019

Less relevance is attributed to enhancing trust in markets, business or sector of the society (M=4,20) and to enhancing trust in leaders of the organization (M= 4,08).

What are the main sources of content creation and distribution in Italy? (RQ3)

ECM 2019 survey has explored source of informations and channels for distribution used in Italy, Concerning the content creation, Italian Communication practitioners refer mostly to internal inspiration and requirements; external input and discourses are less relevant.

Tab. 4: Source of content

Source of content	Mean
Strategy of our organization	4,21
Products and services of our organization	4,15
Input from members of our organizations or clients	4,02
Topics discussed in mass media	3,61
Input from users of our media/channels or products/services	3,58
Topics discussed in social media	3,53

Source: ECM 2019

As described in the table, strategy of the organizations (M=4,21), their products and services (M=4,15) are considered as key content sources. Inputs from users of media/channels or products/services (M=3,58) as well as topics discussed in social media (M=3,53) are less taken into account as content sources.

Concerning the content distribution, 67,9% of respondents declare that higher value is attributed to shared media (M=3,96); 53,6% of Italian respondents take into account also the earned media (M=3,62). Less importance is addressed to owned media (M=3,45) by 49,4% of respondents and to paid media (M=3,12) by 38,1%, of Italian practitioners, as shown in the following figure.

Fig. 6: Content distribution across Europe

	Shared media	Earned media	Owned media	Paid media **		Shared media	Earned media	Owned media	Paid media **
Germany	75.5%	54.8%	60.0%	44.5%	Spain	79.7%	71.4%	69.2%	39.1%
Austria	81.6%	56.6%	64.0%	31.6%	Portugal	76.5%	60.5%	48.1%	38.3%
Switzerland	79.6%	46.9%	60.2%	42.9%	Italy	67.9%	53.6%	49.4%	38.1%
France	86.4%	60.6%	39.4%	30.3%	Slovenia	75.8%	45.1%	51.6%	26.4%
Belgium	83.0%	63.1%	53.4%	40.9%	Croatia	75.4%	56.1%	41.2%	40.4%
Netherlands	80.1%	66.2%	51.5%	22.1%	Serbia	74.8%	66.4%	45.4%	45.4%
United Kingdom	80.7%	63.2%	51.5%	26.9%	Turkey	88.2%	63.2%	51.5%	39.7%
Ireland	69.2%	63.5%	57.7%	40.4%	Poland	87.5%	42.9%	50.0%	26.8%
Sweden	79.8%	68.3%	51.9%	29.8%	Czech Republic	85.4%	50.0%	45.8%	52.1%
Norway	70.6%	41.2%	61.2%	30.6%	Romania	64.1%	56.7%	54.8%	51.6%
Finland	81.3%	55.2%	61.5%	30.2%	Bulgaria	84.0%	66.0%	62.0%	54.0%

Source: ECM 2019

**Research limits.** The quantitative analysis doesn't allow us to explore more in details specific issues that could be considered strategic for communication professionals. In order to overcome this limit, it could be useful to organize interview with professionals or focus groups addressed to analyse in depth topics of relevance for the strategic communication function.

**Practical implications.** The survey provides Italian communication researchers and practitioners with useful insights concerning the perception of professionals about the extant challenges in strategic communication field. Additionally, it illustrates current and future trends about the role of communication within complex organizations. Finally, it illustrates specific features of excellent communication departments by providing stimuli for developing internal and external communication strategies.

**Originality of the study.** The European Communication Monitor is the largest transnational study on strategic communication at a worldwide level. It has been conducted since 2007 and this allows to implement longitudinal analyses concerning specific dynamics and strategic issue within the communication field.

**Keywords:** Strategic Communication; Communication trends; Trust; Artificial Intelligence; Excellent communication

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# From profit to prosperity? The role of corporate communication in sustainability\*

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**Objectives.** For many years the triple bottom line, while speaking about corporations success, can be said to be summarized in three words: people, planet and profit. We are, as you may easily understand, speaking about what is in general cited in manuals as questions concerning the social, environmental and economical sustainability of organizations. In recent years and we'd say not alien to the proposition from United Nations for 2030, the Sustainable Development Goals (SDG), due to worries that concern the climate change and the future of humanity, new focus concerning questions of "sustainability" seem to have emerged. We could even say that this is the new word to use when speaking about Corporate Social Responsibility (CSR).

As with some other concepts the notion of Corporate Social Responsibility does not have either a consensual definition or unanimous empirical applications. In the last decade a set of concepts has emerged as umbrella concepts for a series of policies and practices that organizations tend to promote and that can be seen as going beyond the strictly legal aspects, and envisage the public good. The authors are thinking about concepts as those of philanthropy, enterprise responsibility (much more common in French speaking organizations) corporate responsibility, corporate social responsibility, that for many scholars are interchangeable with that of corporate citizenship (Broom and Sha, 2013). In this paper, and even if the authors disagree with the perspective that considers all the concepts as equivalent ones, this will not be an issue under discussion. The concept of Corporate Social Responsibility (CSR) will be the one used here due to the fact that the organizations under analysis belong to a Portuguese non-for profit association that has as its mission to promote corporate social responsibility as well as to enhance the reflection on these issues (GRACE) this will be the core designation used in this paper. It might be important to note too that CSR is the designation cited by the great majority of the organizations interviewed as naming these kind of policies or practices or as the departments designation when existing.

The concept of CSR must be understood however as a very broad notion and in a quite wittgensteinian way, that is, in the sense of family resemblance (Wittgenstein, 1953). Maybe as in no other context this is a proficuous idea. No one seems to be able to offer an univocal definition of these policies or practices, many organizations understand their responsibilities towards society in quite divergent ways but all the tentatives to clarify or even regulamentar these approaches don't seem to have had great success, or at least don't seem to be able to cover all the spectrum of interpretations and initiatives. The international certifications and regulations, as the GRI (global reporting initiative) even if very useful in enabling global indicators to compare the work of different organizations towards economic, environmental and social impacts don't mirror the diversity of approaches and understanding of these issues. Curiously however even the GRI is promoting a much more inclusive use of the concept of "sustainability" as can be well visible by its adoption of the phrase "empowering sustainable decisions" as the GRI signature, the motto that summarizes its mission.

And this was precisely one of the main goals of this research. How do organizations that consider themselves worried with these questions tend to understand them? How do they interpret their responsibilities towards the public good and the planet? What is the main role of communication professionals in the development and implementation of better and more responsible policies, practices and it goes without saying reporting them? Is the concept of sustainability replacing the concept of corporate social responsibility as an umbrella concept?

The data and the discussion being presented here reflect just the first part of an ongoing investigation being conducted by the authors concerning the role of the strategic communication practitioners in shaping, promoting and reporting CSR / Sustainability in the Portuguese corporations.

*From Corporate Social Responsibility to sustainability: the role of the Public Relations (Strategic Communication) practitioner*

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In 1999 the United Nations (UN) Secretary-General, at that moment, Koffi Annan, urged the business leaders to join the United Nations in global efforts “to give a human face to the global market”. The 2000 Millennium Development Goals declaration stressed the need for a global partnership to reduce extreme poverty. Twenty years later, the UN Secretary-General, António Guterres, considers that the 2030 agenda and the Sustainable Development Goals (SDS) are our collective response to building a fair globalization, to building prosperity. In 2015 while the launch of the SDS three main words emerged, precisely, as gathering and summarizing the 2030 agenda: people, planet and prosperity. When speaking about prosperity we are, it goes without saying, speaking about what have been coined as sustainable prosperity. To discuss its implications and endeavours (Ranzoni, 2019) goes however greatly beyond the scope of this approach.

The best and the simplest approach to try to define CSR, and the one the researchers have adopted here, is the one summarized by Moon (2007) that considered CSR as all the policies and practices that reflect and address the social imperatives for business success as well as the social consequences of business activity. In the author's proposal the concept included already the idea of the corporation contribution to the sustainable development and went a long way beyond some interpretations that tend to consider the question of sustainability, in this context, just as a synonym for environmental responsibility (Rasche et al., 2017).

On one of the most well-known works on the Public Relations (corporate communications, strategic communications) as we will use the concepts in an interchangeable way for the purposes of this paper (Eiró-Gomes and Nunes, 2013), it is stated that all the issues concerning CSR seem to be not only improving in importance in the realm of the corporations but emerging as a quite relevant area of expertise for communication professionals. “A growing area of involvement for the practitioner in the corporate environment is active engagement in the organization's corporate social responsibility programs” (Broom and Sha, 2013, p.364). Other authors explicitly use the concept of CSR communication as a new field in strategic communications (Whelan, 2017).

Since the early days of the last decade of the former century the controversy concerning the roles of the strategic communication professionals in organizations has been under discussion. If it is more or less consensual that they perform technician and in some cases managerial tasks, the questions concerning if the senior communication professionals have strategic functions at the organization is not at all clear. The information gathering and boundary spanner as well as the autonomy in developing a corporate communication strategy and policy for the organization (cf. Dozier, 1992; Steyn and Puth, 2000, Broom and Sha, 2013) are some of the most relevant aspects under consideration in this kind of discussion and inform much of what is considered as the strategic level approach.

What seems to be emerging as a definition of CSR communication tends to reduce communication to report functions or as stated by Rasche, Morsing and Moon (2017, loc. 8149) it is “most often linked to the way the companies present their CSR activities to external audiences in advertising, marketing campaigns or CSR reports”. This is, we could say, what in the same book Whelan (2017) called an instrumental phase of CSR communication, even though he himself defends a more strategic, or at least managerial, approach under the designation of political and network phases. The instrumental understanding of the CSR communication does not even account for some of the main aspects of our contemporaneity where organizations are not any more the only sources of the messages. This view sees communication as a mere discursive and merely responsive function without capacity to research, plan or evaluate the impact of the programmes or to understand and manage the stakeholders dynamics.

**Methodology.** As there were no data concerning either the connection between CSR/Sustainability functions and Communication functions, or what enterprises in Portugal consider as belonging to the realm of their CSR strategies and practices, an exploratory study was developed starting with a quite special group of organizations those that were associated of GRACE, a non-for profit organization whose mission is to promote corporate citizenship as well as to enhance the reflection on these issues. The option can be objectionable as there are no specifications concerning sectors or fields of activity but our main concern was to get a first portrait of the situation and who better than those already concerned with these issues to lead the way? At the end however, as it will be detailed at the limitations to this research, things turned out to be a bit more difficult than first envisioned.

All the 158 organizations associated of GRACE, in September 2018, received an email inviting them to participate in the study in the first days of October. Afterwards all received the survey by questionnaire constituted by selected-response questions, and a few open ended ones, directed to the CSR director or, if non existent as a department or an explicit function in the organization structure, to the person in charge of this area or activities. As they all belonged to GRACE a non existence of this kind of activities was not a possibility. The same invitation was sent at least three times more, and always by email, in November and at least three phone calls were attempted to those that did not answer either positively or negatively before considering that those organizations were not available to answer the survey. Between the 1st October and 15th December, and in spite of all the efforts done, only 43 surveys were received.

Researchers took great care in trying that not only the selected responses ones but also the open ended questions were clear, short and used an easily understood language. As it is quite common to misunderstand and misinterpret this type of questions, a pilot study was developed and the instruments were tested in a small group of volunteers and all the corrections due necessities introduced. The cover letter, with the explanation of the study as well as the instructions for its fulfilment, was also tested.

Four main research questions (we'll formulate them here as hypothesis even if no statistical generalization is envisaged or possible) led the researchers work:

1: Corporations tend to understand CSR in quite a hands-out philanthropy way.

- 2: *The organization (good) reputation is the main reason beyond CSR concerns .*
- 3: *The PR practitioner has important responsibilities in the CSR design and implementation.*
- 4: *The concept of “Sustainability” tends to emerge as the most relevant one overlapping the concept of CSR as a tendency for the next years.*

*Nothing in what concerns methodology seems to have generated so much discussion and even antagonic comments and suggestions as the content analysis technique. If at a first impression it seems so easy and straightforward different authors, in different historic moments, have considered this technique as belonging both to the realm of qualitative as well as quantitative analysis. In the fifties one of its best known representatives considered it as quantitative (Berelson, 1952) but in the eighties authors as Wright (1986) pointed out that it should be considered as being a quite useful approach for both kinds of analysis. Using the definition proposed by Saldaña (2016), we consider content analysis as the systematic analysis of the contents of a data corpus, in this specific case, the answers provided by the respondents to the survey. The categorization was promoted by human readers and all the categories were concept-driven in accordance with the previous literature review on CSR and corporate communication, and floating analysis to the referred organizations websites. They were also intended to mirror the research questions. The subcategories that correspond to the “codes” used were data-driven. The unit of analysis were words, and if we accept the most common dichotomy found in this kind of analysis manifest and latent units, manifest units were used what’s the normal procedure in this general approach to content analysis. The subcategories were independent of each other and exhaustive. Following Michaelson and Stacks (2014) proposal concerning the type of possible content analysis we can say that a simple or basic content analysis was developed. To use the formulation proposed by Saldaña (2016) and from the point of view of the kind of coding used, a descriptive coding was the method chosen as it categorizes the data in quite an easy way that enables the researchers to grasp the general tendency of the data under evaluation. The system is more or less the “hashtag” system used in social media. In the case of this research a noun was used as the “topic” of what was being said. Each survey was read by both researchers and the specific pieces of information (words) were classified according to the codes under the subcategories.*

## **Findings**

### a) *Results presentation*

*First the data were divided into four main groups that correspond to the main research questions. Codes were used as hashtags and the data organized under subcategories:*

#### *1. CSR understanding and issues*

*Philanthropy - social contribute as voluntary work, donations, social role, contribute to society, responsibility towards the community*

*Environmental issues - reduce impact, sustainability as environmental issues*

*Government incentives - patronage law, legal recommendations*

*Governance - accountability, transparency, management, policies*

#### *2. CSR reasons and motivations*

*Reputation - image, consumer requirements*

*To act well - identity, DNA, shareholders interest*

*Employees motivation - team building, benefits*

*Development - social and environmental global questions*

#### *3. PR practitioner roles*

*Managerial - planning, communication and communication monitoring*

*Technician - report, implementation, actions and instruments, Global Report Initiative (GRI)*

#### *4. Future Challenges*

*Sustainability - sustainable prosperity - umbrella concept for Sustainable Development Goals (SDG) - SDG, impact evaluation*

*Process - reformulation, rethinking, planning, autonomous budget*

*Certifications - ISO 26000, work life balance, personal/familiar and professional conciliation*

*1. When focusing on the issues belonging to Corporate Social Responsibility, more than two thirds of the inquired organizations referred philanthropy actions as a priority of investment, making reference to “Volunteering Initiatives”, “Community Relations” or “Donations”. More than one third of the organizations under study highlighted environmental issues as an important issue for CSR. Relevant is the fact that, even though Government incentives was an almost non appointed issue, 25 out of the 43 organizations under study answered “Yes” when asked if they employ to Law Patronage. Finally, just few organizations introduce the concerns with governance, showing that there still is a long way to go regardless this relevant, but not seriously worked issue in CSR.*

*2. When questioned about what are the reasons and motivations to invest in Corporate Social Responsibility, the great majority appointed “Reputation” as the main cause to promote CSR actions using words that we can say expresses concerns directly related to the key stakeholders perception and evaluation. Just after, the respondents*

highlighted their own identity, as a reason to develop and incentivize CSR, making reference to organization “DNA”, or “investors’s concern”. Under this category, was quite surprising to find out the importance given to issues directly related to employees, namely: team building initiatives, benefits, work life balance, showing that those kinds of concerns are arising as a priority when exploring the CSR field in organizations. In the end, some organizations referred social and environmental global questions as the “common good”, “society development” or “diversity”.

3. Let's now focus on issues related to the PR practitioner roles. When questioned if the CSR issues are part of the global strategic plan of the organization the great majority answered “Yes” (38 out of 43). Even though, more than half of the inquired institutions declared to have a concrete strategic plan for Corporate Social Responsibility, the communication function seems to not have any responsibility on it. The respondents didn't make reference to advisory functions, research or impacts evaluation. As you know these are the main dimensions to be able to consider that communication has a strategic role in the organization. According to our respondents the great focus is on the technician roles. Moreover, two thirds of the organizations referred they had CSR reports or that ,at least, they felt the need to have CSR reports. Less than half had communication professionals among their staff or had some kind of outsourcing communication consultant. Only few organizations stated that had communication directors with managerial tasks. Summing up, the role of the communication professionals in the majority of the organizations is an instrumental/technical one, related to the CSR implementation and particularly reporting.

4. Ultimately, under the last category, the future challenges of CSR were contemplated. Among the organizations under study, the CSR issue seems to be facing a moment of reorganization and reconstruction, where the CSR evaluation and report, through Sustainability Reports is becoming a priority (process). Moreover, there is a willingness to rethink the way of understanding and managing the CSR. The notion of “Sustainability” tends to be used as an umbrella concept to make reference, not only to environmental, but also social and economic issues and the SDG integration in the CSR strategy (sustainable prosperity). Finally, the issue of certification processes emerged, not much associated to the well-known ISO 26000, but particularly to the recent family and work conciliation one. As said before, the work-life balance was pointed out as an important issue in terms of CSR and organizations are investing in processes to implement and have it recognized.

#### b) Discussion

The research showed that the social (philanthropic) area emerged as the most relevant one in all the organisations interviewed even though the field of CSR / Sustainability seems to be under strong reformulations. Communication professionals however, have fewer responsibilities that those the researchers expected to find out at least at a strategic or managerial level. It they don't seem to have a great importance in the definition of CSR policies they seem to have a pivotal role however in communicating those activities and in assuring that all the considered relevant stakeholders know how CSR is important for the 43 organizations respondents. If we wanted to try to understand this question it might be relevant to get a wider view of what has been both the organizational practices and the way scholars in applied communications have positioned the CSR communication dimension.

Since the 2007/08 financial crisis the civil society in our western societies has great doubts about how corporations, how the great global holdings, how financial institutions, work. Questions of transparency, or better say opacity, have made heads in every newspaper from Germany to the UK, or from USA to Portugal. But the trust crisis seems to encompass both private enterprises and public institutions, or public/private consortiums, and even governments in democratic countries. After different NGO from Greenpeace to Oxfam (and NGO are not themselves exempt from corruption or bad management) have exposed the great problems concerning human rights or CO2 emissions in big corporations from Nike to Nestlé, not to speak about oil companies or financial institutions, concerns with a good name, or as generally used, reputation, seem to have become a real preoccupation for the organizations. The organizations questioned tend to be in accordance with this vision as in general “reputation” is the main motive to behave well and to be perceived as so. The question of how main stakeholders perceive these organizations as well as the relation between CSR policies, activities and communication cannot be dissociated from both the 2007 crisis as well as the advent of the so called social media. Nowadays conversations about corporations sometimes don't even include those corporations.

So many years of “greenwashing” and “windows dressing” while using the concept of CSR seem to have transformed the way people see, understand and trust or distrust CSR communication. Moreover the old co-relation of PR (or strategic communications) - many times correct and so many times incorrect - to precisely window dressing, or as it so common said “PR manoeuvres” hasn't helped to position either CSR communication or the communication practitioners as key actors in transforming for the better the organizations policies and practices. Moreover the idea there's a trench between doing and saying, and that communication belongs to the second part of the equation, has had a lot of pernicious effects both for the field of communications as for the society in general. It urge to start understanding communication as belonging to a theory of action (Austin, 1962) and not only as merely a discursive aspect of organizations. Some important empirical examples can be quoted, but we would say that this might be a quite interesting way to proceed in our future research. Maybe we should keep both these questions in mind in order to understand how it seems to be such an easy way to confine the role of the communication professionals to report functions with all the implications for the overall organizational policies.

**Research limits.** *Even if it can be seen in a certain sense as a limitation to the study, the possibility to question different organizations, that is, from all the three main sectors, private, public and the non for profit one, and in different areas of activity from tourism and restoration to the oil and financial industries, from small and midsize enterprises to big global corporations, offered a real interesting portrait of the situation in Portugal concerning both the question of CSR as well as the status of the communication professionals in the Portuguese market.*

*If it's true that no generalizations are possible it is also true that, as Maxwell has so well put it, "there is no obvious reason not to believe that the results apply more generally" (Maxwell, 2013, loc 2949). This study was clearly an exploratory one with merely a descriptive goal. Unfortunately it did not receive the expected support from the different organizations as the researchers expected. Even if some enterprises stated their understanding of CSR as also being open to the civil society organizations in general, and the academic community in particular, two thirds of those that by principle, as belonging to an organization that reflects upon CSR issues - GRACE, should have this kind of understanding didn't feel comfortable in answering a survey exclusively for research purposes with the certitude that the data were going to be treated in an anonymous way. We will not pursue this kind of reasoning here even though we think that these attitudes cannot be understood as completely separated from the CSR practices of these organizations. Moreover when questions of transparency and accountability seem to be central issues while speaking about CSR there seems that the Portuguese or the international corporations operating in Portugal still have a long way to go.*

**Originality of the study.** *There seems to be a shift from using CSR (in its multiple formulations without a doubt a still XIX century concept) as an umbrella concept, to the "sustainability" one. Beyond the more evident explanations that assume as the main cause the importance of the environmental issues we would like to believe that we were changing from the concept of "international development" to the much more accurate one of "global development" (Horner and Hulme, 2017a and 2017b). Even though the distinction North-South still exists the relevant issue for us here is precisely that unfortunately "the reduction in inequality between countries has coincided with growing inequalities within countries" (Horner and Hulme, 2017b, 23). The role of corporations in shaping innovation is urgent as it is the conception of new dialogues and new platforms where private, public and organizations from the civil society can meet in order to promote a common good, a common good in each and in all of our communities. No profession, as the one that assume dialogue (and relationships between organizations and stakeholders) as being its core business is so needed in this moment, since it is understood as more that "simple words". A new understanding of the communication notion is needed.*

*This shift in concepts might also enable organizations to understand the relevance to evaluate impacts. As it is well documented (Moon, 2014) and we found in our research, the evaluation of CSR programmes is just beginning. Organizations tend to evaluate the amount of donations and not to evaluate the results of their policies and practices. Beyond the strict empirical results it might be interesting to quote one of our respondents, a Portuguese enterprise, that equated CSR with the concept of happiness. We believe that this might be precisely the idea underlying the use by the UN secretary general of the word "prosperity". The great challenge for all the actors will be to find the best ways to fulfill these desiderato, a sustainable prosperity.*

**Key words:** *corporate social responsibility; sustainability; strategic communication; prosperity; public relations*

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# Different approaches to fake online reviews in tourism

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**Objectives.** *The spread of social networks and the Internet, in general, gives people unprecedented access to information and enables rapid interaction between users. This high-speed communication opens doors to inaccurate data with no time to verify the quality of the information received. People routinely encounter inaccurate information derived from fake reviews. It is now evident that flawed arguments, distorted news, incomplete citations, wrong or misleading reviews or interviews, and false accusations can strategically or unintentionally distort audience understandings and positioning over a brand or service. There is a second consequence of the daily interaction between people and fake information that can be identified as a reduction of confidence in the message given. Exposure to inaccurate reports leads to confusion about what is right, doubt about accurate understandings, and subsequent reliance on falsehoods. The research aims to study the fake reviews phenomenon from the consumer point of view, mapping different reactions to the asymmetric-information environment. The customer attitude and risk perception, as well as the capability to manage the asymmetric information, let to define different clusters of consumers that can have different approaches to a market dominated by uncertainty. This analysis focuses on the behavior of individuals presented with fake online reviews.*

**Methodology.** *To better understand the phenomenon from a user point of view, we perform a cluster analysis of the result of a survey specifically developed to measure the impact of fake reviews on people perception.*

*In statistical terms, in the division of the sample into clusters (segments) through cluster analysis, the N subjects are represented in a p-dimensional space (where “p” indicates the number of variables taken into account for discriminating) and are divided into “k” groups (or clusters) in such a way that the subjects belonging to each group are as homogeneous as possible and heterogeneous with the subjects of other groups. Internal homogeneity is defined as internal cohesion within a group, and external homogeneity is defined as an external separation between “k” groups (Bhatia and Vaswani, 2013; Kaufman and Rousseeuw, 2005). In the presented research, the non-hierarchical segmentation of k-averages is most suitable because the number of statistical units is high. Non-hierarchical methods involve the subdivision of the N statistical units into “k” groups, where “k” must be defined a priori. The algorithm provides the best partition of the N units in the defined “k” groups (i.e., with maximum internal cohesion and external separation). Among the non-hierarchical techniques included in the algorithm for k-averages; it is instrumental in research involving a large number of units in the analyzed population. This algorithm splits the statistical units in the best way possible into “k” groups through an iterative procedure; the N subjects are initially subdivided by arbitrarily identifying “k” points called centroids, and grouping is undertaken with consideration to the short distances between the different points and one of the centroids. Next, the average between the points of each group is calculated, and this represents a new centroid; a new grouping is carried out based on the distances between the different points. The process continues until the optimal subdivision is achieved (Kaufman and Rousseeuw, 2005; Nathiya et al., 2010)*

*In this study, the segments are further profiled by crossing the cluster membership with other known variables referring to respondents, both socio-demographic and behavioral.*

*In total, this study includes 151 Italian respondents. In socio-demographic terms, women represent 70% of the sample. The questionnaire is aimed at adults in four age groups: those 18-25 years old, those 26-35 years old, those 36-50 years old, and those over 50 years old. A high concentration of respondents between 18 and 25 years is noted; this group represents 68.9% of the sample. The percentage partition is more concentrated in the younger age group likely because younger adults are more confident with new technologies and, consequently, the main users of online sites and platforms dedicated to e-commerce. Further, most respondents (60.3%) are graduates (holding a bachelor's or a master's degree), while in terms of occupation, students held the majority (69.6%).*

*In the development of the survey, preliminary questions are included to evaluate the general attitudes of respondents towards online reviews. In particular, the following variables are analyzed: the frequency of Internet use*

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as a source of information, the ability to use reviews and participate in opinion-sharing, and the most frequently used review sites and platforms.

After establishing that the reference sample reported, almost universally, frequent use of the Internet for information about companies, products, and services, it is necessary to establish whether reviews are among the online sources used by the respondents. This facilitated an understanding of whether the sample is familiar with the phenomenon under investigation.

In the literature, it has been repeatedly reported that the credibility of a review is taken into consideration, although it is increasingly difficult to discern truth from fiction. The Internet is a fertile environment for deceitful behavior aimed at manipulating consumers in their choices, and it is under these conditions that the issue of fake reviews has arisen. This problem has drawn researchers' attention to the process by which consumers evaluate the credibility of online reviews before accepting their information, which has proven to be an antecedent more important than the adoption of e-WOM (Cheung et al., 2009). Generally, the consumer consciously or unconsciously adopts behaviors aimed at verifying the reliability of information found online to avoid making decisions based on distorted or false information (such as fake reviews). Among the factors that most influence consumers' perceptions of the credibility of online messages, those most investigated by the literature are the following: the credibility of the source, the information's consistency with other published reviews, the inclusion of both positive and negative elements, and the amount of detail in the review (Cheung and Thadani, 2012; Jiménez and Mendoza, 2013). Furthermore, an additional variable has been included in the questionnaire that facilitates an understanding of whether users compare reviews with information provided by the companies themselves, on their sites, for example, to verify the correctness of the information reported in reviews.

The questionnaire also addressed another important topic: trust. Specific questions were designed to evaluate how much trust each subject placed in online reviews on a scale of 1 to 5.

Six different specific questions related to attitudes and behavior are introduced. The questions are related to the following behaviors:

- Intention to check is intended to measure the attitude of a subject to study further the information found in a review and verify whether it is true or false. Credibility is a crucial element of online reviews that focus on customers' feelings and experiences (Schuckert et al., 2015);
- Perceived identification ability investigates how easy a consumer perceives it is to identify a fake review and clarifies whether consumer perception is in line with what is reported in the literature on the subject. Studies have proven that the identification of fake reviews is very complicated, as the writing methods of false reviewers have become increasingly sophisticated. Despite this, some consumers have a fair degree of confidence in their abilities to detect disingenuous reviews (Zahedi et al., 2015);
- Influence aims to assess the awareness of consumers regarding fake reviews (i.e., their awareness of the possibility that false reviews can influence their decisions). The literature shows that consumer choices can be influenced by the misleading content of fake reviews because powered by their visibility and the reputation of a product or a service, such reviews can cause the consumer to consider them on the basis of inauthentic classification processes (Lappas et al., 2016);
- Fear evaluates the perception of fake reviews as threats and, therefore, the attitudes that consumers have towards them. Attitudes can also depend on the ability of consumers to distinguish truth from fiction and whether they believe they have the necessary tools to understand it;
- Intention to report investigates the collaborative efforts of consumers in reducing the impact of fake reviews to support businesses and help others avoid misconceptions. Because review sites are moderated to filter out fake reviews and make their platforms as authentic as possible, assistance from consumers who have determined the fraudulent nature of certain reviews can be useful in limiting their spread;
- Intention to write fake reviews as they can also be disseminated by consumers, generally following an incentive proposed by the reviewed company itself. This variable, therefore, allows us to investigate the propensity of a consumer to agree to write a fake review in order to obtain personal or social benefits (which may or may not be monetary). Such behavior damages other consumers, affects the review platforms' credibility and increases information asymmetry.

**Findings.** Confirming reports in the literature and from previous studies (Cova, 2007; Mudambi and Schuff, 2010), the use of the Internet and online reviews to obtain useful information in the pre-purchase phase was found to be frequent in the analyzed sample. In fact, 56% of respondents reported using online reviews weekly (more precisely, 33% reported using it several times a week, and 23% reported using it every week). These results indicate that the digital world has become essential to the modern consumer and that online reviews are a type of information that consumers deeply rely upon for their purchasing decisions.

Reviews are widely used by the subjects included in the research for both products and tourism services. We note a high concentration of subjects reporting that they often (41.72% and 27.81%, respectively, for products and tourism services) or always (23.18% and 49.67%, respectively, for tourism products and services) use reviews. Only 2.65% (8 of 151) of the subjects reported never using reviews to assess products or services. Consumers' frequent use of reviews is confirmed by many other studies, such as that conducted by the Nielsen Institute (2015). It identified online reviews as the second most-used consumer information source following the word-of-mouth reports of friends, family, and acquaintances.

Moreover, the use of service-related reviews is higher than the use of product reviews. This supports prior findings in the literature, namely that in service reviews (in this case, in the tourism sector), word-of-mouth plays a more important role than do online reviews. This is because services are purchased for the experience they offer and evaluating experiences can be difficult, given the intangibility of their characteristics.

Although online reviews are widely used in the sample, different use patterns were noted in those under 35 years of age and those with more experience using information on the Internet. In the youngest age group, the highest concentration of subjects responded that they always use reviews in tourism services and frequently use them for tourism products, demonstrating the importance that online reviews hold in their purchasing routines. However, those over 35 years of age also showed a high propensity to use this information source regarding tourism services, showing a significant often response rate, but a significant proportion indicated a low or inexistent use of online reviews, especially those over 50 years of age. The propensity of respondents this age to use reviews for products was much weaker than in younger consumers; in fact, the largest concentration of respondents in this age group reported only sometimes or rarely using online services.

Confirming previous findings in the literature, most subjects (48.34%) stated that negative reviews have a more significant influence on their purchasing decisions than do positive reviews, while only 25.17% reported assigning a higher value to positive reviews. The remaining respondents declared that they are either not influenced by reviews or are not inclined to use them (11.92%, or 18 respondents out of 151) or that they attribute little importance to this type of information in the product/service selection process, instead of assigning other factors higher priority (14.57%). This minority (26.49% in total) is consistent with the results of the questions previously analyzed; in fact, only a small portion of the respondents declared that they use very few to zero reviews to verify that the products or services they are investigating are worth purchasing. Based upon previous considerations on the value of a review, it follows that negative messages are perceived as more credible than those that are positive, so negative reviews are more likely to be considered during the decision-making process (Cheung et al., 2009). This finding highlights another fundamental aspect of the WOM analyzed in this study: its credibility.

As can be noted through the results, consumers tend to solidify the reliability of reviews through the proposed modalities with a rather high frequency. More precisely, the verification of a review's consistency with other reviews appears to be the most frequently used method; only 3% of respondents reported that they never perform consistency comparisons, and 73% reported that they often or always perform such comparisons. In fact, 55% of respondents reported that they read around 6-10 reviews before trusting a review's general judgment of the product or service. Respondents tended to compare the information contained in a review with information from the company's site less frequently. This is probably because the information provided by the company is considered less reliable than consumer reviews as it is prepared for marketing purposes.

In terms of the active behavior of a consumer reading or writing reviews, a tendency opposite to the previous situation was noted. As expected, user participation in review writing is less common than the consultation of the same. It was found that respondents tend to share their experiences less frequently than they read about those of other consumers. Although this trend is confirmed in review use for both products and tourism services, greater respondent participation was marked in the tourism sector than in the retail market.

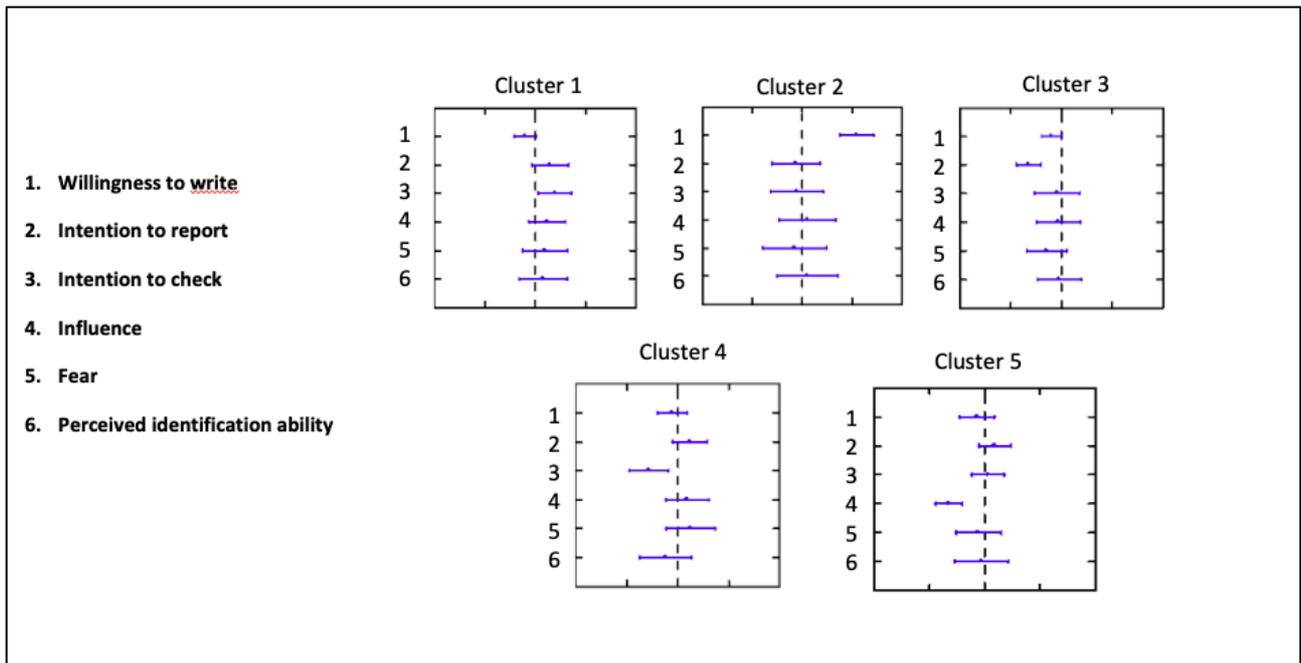
Based on the characteristics that emerge, it is possible to identify different behavioral profiles concerning the phenomenon of fake reviews and attribute labels to each cluster that best represents it.

To perform the labeling, SYSTAT provides tools for the interpretation of each cluster. Among them, the so-called cluster profile plot chart is useful in visually demonstrating the movements of the variables within each cluster, facilitating their definition. It is also possible to identify a name to separate the various behavioral models of the subjects in each cluster and enable their comparison. This name is generally determined according to the variables that undergo a greater displacement within the cluster profile plot; the more variables that are assumed to be different values to those reported by a sample, the more value they take on in the group's characterization. In the evaluation phase, we consider the goodness of the segmentation defined by Pearson's correlation index, the increase of this coefficient, the number of statistical units within each cluster and the interpretability of the groups based on the variables. According to the analysis, 5 clusters were found (fig. 1).

#### *First cluster*

The first cluster has been labeled as "the honest careful" (or careful collaborators). Going to analyze each variable, we note a positive and collaborative behavior in relation to this phenomenon, since they are subjects willing to report a false review, but not willing to write it in exchange for personal benefits; these characteristics derive the "honest" label. Moreover, "attentive" derives from another variable that has assumed a significant deviation towards the right: intention to check (0.79). This indicates that they are well-prepared to seek the reliability of a review, more than the sample as a whole (in fact, this variable takes on values above the overall average of the sample). Their attention in verifying the reliability is also confirmed by a high frequency of tool use; more importantly, the use is more significant than for the sample as a whole but maintains the same trend. The most used mode refers to the comparison with other reviews. This cluster is also characterized, albeit slightly, by the variables fear and influence, which are also above average. These deviations indicate that the subjects are fearful of the phenomenon and believe that it can influence consumer decisions more than the sample. These last two deviations make us think of subjects as sensitive to the phenomenon, and for this reason, they take active and positive behaviors to reduce their impact.

Fig. 1: Cluster Profile Plots



Source: our elaboration

#### Second cluster

The second cluster can be labeled as “dishonest” (or non-collaborative). The variable that most differentiates the subjects of this cluster is the variable intention to write, presenting a positive variance of about two points with respect to the sample average. This result indicates that the subjects in the second group are more likely to write false reviews in exchange for personal benefits. To reinforce this profile, there is also a gap to the left of the dotted line, albeit milder, of the intention to report variable. This indicates that these subjects, in addition to willingly contributing to the diffusion of fake reviews, are less likely to report false reviews compared to the sample as a whole.

Both of these behavioral tendencies denote the lack of interest in helping other consumers, preferring their own personal gain, albeit incorrectly. The other variables considered for cluster analysis tend to be on average, and therefore do not characterize the profile of these users. However, it is possible to notice a slight deviation of the fear variable towards the left, which assumes values below the average, denoting that these subjects are less fearful than the other respondents. This may depend on the fact that the respondents in this cluster would be willing to be the authors of this deception and do not even fear the consequences that they may entail. The cluster described above is made up of fewer components than the others, which highlights a different behavioral profile regarding the collaboration aimed at reducing the impact of fake reviews.

#### Third cluster

The third cluster; “the indifferent”. Those who do not participate in the phenomenon in any way (i.e., writing positive or negative reports) have variable values below the general average. Furthermore, they do not appear to be fearful of what happens for the general sample. This behavior may depend on whether these subjects are aware of the problem in a superficial way, or they use the reviews less than the other respondents. The variables intention to check, perceived identification ability, and influence are almost average and do not contribute to the cluster’s characterization. However, small deviations below average can be observed. We will try to better delineate the profile of these subjects with subsequent analyses.

#### Fourth cluster

The fourth cluster has similar characteristics to the first cluster, but with an opposite pattern in the intention to check variable. The variables that show similar behavior are intention to report and intention to write (even if the latter has a less significant variance), which confirms the honest and collaborative behavior to reduce the spread of fake reviews. They also seem to be sensitive to the problem, as they appear more fearful than the general average and recognize the ability of false reviews to influence consumer choices (with a less obvious variance compared to the first cluster, but still indicative of a similar trend). Notwithstanding, they are the subjects that would not seek additional information to validate the reliability of a review; this shows an inactive behavior, less directed towards defending oneself from digital deceptions.

A further peculiarity of this group is the variable perceived identification ability, which presents a negative deviation from the general average, thus expressing a greater difficulty in identifying a fake review than expressed by the entire sample. This peculiarity could also derive the subjects’ motivation for not trying to find the reliability of what

they read: since it is difficult being for them to identify false reviews, they are not even inclined to verify the information. This little propensity to deepen could also derive from the fact that they do not have or think they have valid tools to ascertain the reliability. This cluster has been labeled as “honest inactive” (or inattentive collaborators).

#### *Fifth cluster*

The final cluster assumes an entirely different behavior compared to the others. The variable that distinguishes it the most from the sample is influence, which is aimed at testing the subjects' awareness of the influence that fake reviews can have on a consumer's decision-making process. Unlike all the other clusters, in which this parameter assumed values on average or above average, this cluster groups those who think that fake reviews have little effect on the consumer's decision-making process, and therefore do not recognize the distortive power. Previous studies in the literature recognize the phenomenon of fake reviews as a problem to that needs to be faced to protect consumers from wrong choices or choices made based on manipulated information; for these reasons, the subjects of this cluster have been defined as “the not aware”. There are no other particular deviations that can better profile these individuals, except for a slight positive variance for the variable intention to report, which shows a willingness to collaborate, and a lower than average fear, which is consistent with their belief that they cannot be influenced by such deceptions.

**Practical implications.** The cluster analysis highlighted five different clusters. Cluster one is characterized as composed of honest and collaborative subjects working to reduce the impact of fake reviews; being aware of the influence of reviews, this is the only cluster that researches reliability to verify what they read and defend themselves from digital deception.

The second cluster is composed of less collaborative subjects, as they have a strong propensity to be willing to write false news in exchange for personal advantages, and are less willing to report any fake reviews in relation to the general sample. The third cluster shows a behavior of indifference towards the phenomenon since the subjects are not willing to collaborate and are not afraid. Furthermore, this cluster is composed of subjects that on average use the tool of online reviews less often than the sample, and a third of subjects who are over 36 years old and trust less this source and its composition.

The fourth cluster is similar to the first; it also seems sensitive and aware of the problem because it is afraid and recognizes the persuasive force of fake reviews above the general average, and takes a collaborative attitude aimed at reducing the spread of the phenomenon. However, it assumes a diametrically opposite behavior in terms of the search for the reliability of what has been read. This can be explained by another variable included in the clustering analysis: the identification. These subjects believe that the identification of fake reviews is even more difficult and this conviction triggers a vicious circle where the subject does not even try to verify the credibility of a review, despite being aware of the influence that they can suffer from fake reviews. The fifth cluster presents an entirely different behavior compared to those described above. If the first four are more or less aware of the influence that a fake review can have on consumer choices (presented as an average response of around four out of five points), this cluster groups subjects that recognize the power in a more limited way of fake reviews to influence consumer choices.

Therefore, the clustering analysis showed that only the first cluster take a positive attitude towards this problem because, in addition to recognizing the problem, they demonstrate a careful and collaborative attitude to defend themselves. The subjects which apply this behavioral model account for about 30% of the sample. In the remaining clusters, there are negative behaviors of various kinds: those who try to take advantage of this phenomenon for personal benefits (cluster two), those who take passive attitudes, those who are almost indifferent to the problem (cluster three), and those who do nothing to defend themselves despite being sensitive to this phenomenon (cluster four). The last cluster is less aware of the influence that a fake review can have on consumer choices.

If it is true that the study population has always proved to be more connected to the Internet, it cannot be said that users are always informed or prepared to face unpleasant phenomena, such as dealing with fake reviews. Therefore, it is necessary to sensitize the subjects about these situations, to exploit the opportunities of the digital market in the best way. Providing consumers with more tools to verify the veracity of reviews' content could be useful. Additionally, since the source is one of the main elements that influences the reliability of word of mouth, it could be helpful to make the auditor identity more transparent and identifiable, which to date is almost anonymous. One possibility could be to turn the review site into a social network or link it to an existing social network to gather more information about the person, as well as facilitate the monitoring of false identities for the platform. All this, accompanied by the continuous commitment of the platforms to the interception and filtering of the fake reviews

**Research limits.** The work also presents some limitations, primarily related to empirical analysis. In particular, the survey was carried out on only Italian subjects: it would be extremely interesting to extend the sample internationally, to obtain more representative results and to eliminate the risks of a cultural bias. Future studies are therefore desirable to further deepen the aspects dealt with and, more generally, the theme of actions to be taken to help consumers to behave correctly with respect to fake news.

**Originality of the study.** One of the risks of the spread of misleading information is the development of a “lemons market.” According to economist George Akerlof, a lemons market can arise when information asymmetries between the buyer and seller exist, leading to buyers discounting the price they are prepared to pay for a product or a service because of the perceived risk of buying a “lemon” (a defective or inferior product) (Akerlof, 1970).

For this reason, we study the customer attitude and risk perception as well as the capability to manage the asymmetric information described by Akerlof in order to define different clusters and groups of consumers that can have different approaches to a market dominated by uncertainty. We identified a lack in the literature on the study of the self-perception and behaviors in relation to fake news exposure by the users, elements that are fundamental in a complete analysis of the phenomenon.

The significant use of reviews as sources of information, both in tourism and other sectors, the distrust that subjects have towards them, and the strong influence that fake reviews can have on consumer decisions make the reactions and approaches of people regarding fake reviews worth investigating in detail. We carried out a cluster analysis in order to identify various consumer profiles and their potentially different behaviors while dealing with fake reviews.

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# Institutionalization of CSR in controversial and non-controversial industries

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**Objectives.** *In many industries, companies are facing pressures to engage in sustainable practices, in order to obtain social legitimation in the eye of stakeholders and society. In light of this, corporate social responsibility (CSR) has increasingly become a “real” institution permeating modern society, beyond nation-state boundaries (Bondy et al., 2012). This ongoing quest for legitimation encourages the adoption of CSR practices by organizations, thus making CSR a standard taken for granted by different social groups, even irrespectively of rational-driven arguments on effectiveness (Tolbert and Zucker, 1999; Shabana et al., 2016; Risi and Wickert, 2017). This social climate has been driving changes in both the structures of companies and their willingness to communicate their commitment to sustainability (Gamerschlag et al., 2011).*

*Along the institutionalization process, it is likely that differentiated patterns of adoption of CSR emerge, because of different contextual variables, such as the industry sector in which the organizations belong to. In this study, we focus on the degree of “controversy” raised from specific business activities, and compare controversial and non-controversial industries, considering them as two institutionalized environments in which companies are plunged. We argue that these two contexts are institutionalized to a different extent with regards to the sustainability myth, mainly because of being involved or not in activities disputed for their impact on human health, society or environment.*

*To this end, we examine how companies in controversial sectors differ from non-controversial ones in communicating their CSR practices. In spite of some common standards, in fact, each company internalizes the sustainability myth within its structures in different ways and to different extents (Morsing and Schultz, 2006; Etter, 2014). By exploring the modes companies use to communicate their CSR efforts, we are able to identify substantive compliance with the social responsibility myth and possible departures from actual compliance (i.e. decoupling; Siano et al., 2017). Analyzing CSR communication to infer coupling vs. decoupling of CSR policies is the only way to inspect highly opaque institutional fields, such as the social responsibility field, which are characterized by high behavioral invisibility (Wijen, 2014). Despite some studies on the use of CSR actions by controversial industries (Palazzo and Richter, 2005; Byrne, 2010; Banerjee and Bonnefous, 2011), empirical contributions that deepen CSR communication on corporate websites as a fundamental vehicle of institutionalization within these companies are limited so far.*

*In our empirical study, we assess how companies of DJSI 2016 divided in controversial and non-controversial industries differ in terms of CSR institutionalization, by considering specific institutional variables related to CSR. In particular, we take into account explicit sustainability goals, sustainability-driven governance mechanisms, transparency tools and CSR language. These elements are deemed to be the most representative cues of the unquestioned acceptance of the sustainability myth by organizations, typical of all the institutionalization processes (Tolbert and Zucker, 1999).*

**Methodology.** *In this study, the corporate websites of the companies belonging to the Dow Jones Sustainability World Index (DJSWI) 2016 constitute the unit of analysis (311 companies). DJSWI is adopted in many studies about CSR strategic management, as it is one of the oldest and most prominent sustainability indexes and considers companies that are leaders in sustainability in their respective activity sector (Siano et al., 2016).*

*DJSWI companies have been categorized in industry sectors based on the Industry Classification Benchmark (ICB). Then we assigned companies to either the non-controversial or controversial group, using the criteria described above (i.e., 173 companies in controversial and 138 in non-controversial). The companies were included in the controversial group according to two kinds of considerations, drawn from relevant literature. Firstly, we considered as controversial the companies perceived as somehow sinful and in contrast with public moral or social norms (Lindorff et al., 2012), because of the products or services they provide (like tobacco, alcohol, gambling) or because of the business practices, such as morally corrupt or unethical behaviors, that they are embroiled in. In recent years, following the financial*

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crisis, banks and financial services are also included in this category (Branco and Rodrigues, 2006; Hinson et al., 2010). Secondly, industries can be controversial because they potentially expose to danger the health of the environment or the individual (Cai et al., 2012; Kilian and Hennigs, 2014). In this perspective, controversial industries encompass biotechnology/pharmaceutical (Günther and Hüske, 2015), energy/oil (Du and Vieira, 2012), mining (Perez and Sanchez, 2009; Rodrigo, et al., 2016), transport (including automobile and airline) food and resource industries (Kilian and Hennigs, 2014).

Conversely, non-controversial sectors includes industries with a low impact on environmental and social concerns, such as consumer goods, manufacturing, telecommunication, media and entertainment (Kilian and Hennigs, 2014).

These two broad categories (i.e., controversial and non-controversial industries) constitute two different institutionalized contexts, whose constituents - e.g. companies - rely on the behaviour of others categorized and perceived as similar to them. In the past, it was generally assumed that controversial industries are not allowed to engage in CSR practices, since they harm consumers (Smith and Rupp, 2005). However, it is perfectly reasonable for companies in controversial industries to commit to CSR. Firstly, these companies, despite being controversial, are lawful and unquestionably legitimate to strive for meeting the needs of society. Secondly, and more importantly in our view, an institution's appeal is irrespective of the good standing of its adopters.

Controversial industries give more attention to the increased pressure by different stakeholders toward sustainable behavior (Cai et al., 2012; Kilian and Hennigs, 2014). They feel a greater urgency to increase their legitimacy in the eye of the public and institutionalize CSR practices, resulting in a greater development of CSR-related structures. In addition, managers of companies whose social and/or environmental behaviour is considered doubtful should be more likely to observe others' attempts to implement and communicate CSR efforts and, consequently, to be exposed to a mimetic pressure. Furthermore, increasing empowerment of stakeholders is likely to exert a strong normative pressure, especially on controversial industries, by advocating effective responsibility practices and penalizing deviant or misleading behaviors. Greater isomorphism to the CSR myth by controversial organizations should be reflected, in the first place, in the values expressed by the orientation statement of the firms, i.e. the mission and vision statements. In general, the organization's institutional values addressed to sustainability are made explicit in the corporate mission and vision, thus evoking a real commitment of the organization in front of society (Schultz and Wehmeier, 2010). It can be supposed that the adoption of corporate institutional values instilled by CSR motives is particularly felt by controversial industries, due to the critical nature of their products/services. Thus, these companies seek a more explicit cohesion with what they perceive to be an enduring institution dominating the environment. Therefore:

*H1 - Controversial industries are likely to be more active in promoting explicit CSR goals in organization's values than non-controversial industries.*

In addition, the development of values towards CSR frequently involves setting up structural organizational tools. Institutionalization entails designing structural forms and/or processes subordinated on organizational units (Scott, 1987; Mason and Simmons, 2014). Thus, organizations need to clearly define CSR governance systems, as well as decision-making processes, organization charts and self-regulation mechanisms (like Code of Ethics and Code of Behavior), to achieve organizational purposes. The expectations of stakeholders related to the formalized accounting of tangible elements are likely to be higher in controversial industries, so we expect that:

*H2 - Controversial industries are more likely to develop CSR governance tools than non-controversial industries*

An important role in the institutionalization of CSR is attributed to the transparent disclosure, reporting and measurement of the actual activities implemented by the companies. Indeed, transparency tools may facilitate the "externalization" of institutional practices (Wuthnow et al., 1984). Sustainability activities are widely reported both in official documents such as CSR reports and on corporate websites. The discourse of CSR permeates organizations with a rationalized form of accountability (Meyer and Bromley, 2013; Lock and Seele, 2016). In fact, rationalized measures and tools able to support the credibility and the transparency of the information conveyed to stakeholders can be assumed to more adopted by controversial industries. Thus, it is hypothesized that:

*H3 - Controversial industries tend to be more active in implementing transparency tools than non-controversial industries*

A crucial aspect of isomorphism with environmental institutions is the evolution of organizational language that represents one of the "institutional effects" (Scott, 2008). The institutionalization of CSR includes, in fact, the use of legitimated verbal and visual vocabulary (Meyer and Rowan, 1977), in which new labels are created and new approaches to communication are incorporated. It can be supposed that controversial industries tend to adopt a more institutionalized language of CSR, due to the critical nature of their business activities that presupposes a more intense process of legitimization (Du and Vieira, 2012). Thus, it is hypothesized that:

*H4 - Controversial industries are likely to be more active in CSR language than uncontroversial industries.*

The relevant institutional indicators - explicit goals, governance arrangements, transparency tools and CSR language - are obtained through a coding scheme recognizing different indicators within corporate websites. Each of these indicators is operationalized as a dummy variable, revealing presence vs. absence of a specific feature.

Each of the overarching measure is then calculated by cumulating the values of the related dummy variables and normalizing by the numbers of dummies constituting the measure (ranging from 0 to 1).

We performed a one-way analysis of covariance (ANCOVA) to detect statistical differences between the groups of controversial and non-controversial industries and test the hypotheses, while controlling for firms' number of employees and annual turnover. Both control variables were log-transformed to reduce skewness in distributions.

**Findings.** The process of institutionalization appears differentiated between controversial and non-controversial industries. In fact, the institutionalization of CSR seems to be paradoxically more deeply rooted among companies of controversial industries, that are significantly more focused on promoting explicit CSR goals, and more active in developing transparency tools and employing CSR language in their corporate website.

However, controversial organizations are similar to other companies in implementing CSR governance departments and offices. In other words, controversial organizations do not match their efforts in CSR visible structures with comparable commitment to developing internal structures specialized in promoting and organizing corporate sustainability actions. This suggests that some forms of "between-structures" decoupling is at work in these sectors.

**Research limits.** Although this study goes deeper in analyzing CSR communication practices through corporate websites, it is limited by the narrowness of the scope of this type of analysis. Future researches could integrate the inputs coming from corporate websites with those of traditional sustainability reports and with an analysis of social media (Reilly and Hynan, 2014).

**Practical implications.** The findings draw the attention of managers of controversial companies on a possible weakness in the organizational structures devoted to CSR. In fact, the reputational risk of these organizations is higher and they not only risk to be unmasked faster, but also to be more penalized from public opinion. Therefore, structuring a Sustainability Board and operational functions would certainly help to switch from a mindset of sporadic provision of information, to a long-term strategic approach that assumes strong relations with stakeholders (Porter and Kramer, 2006, 2011). In addition, the implementation of formal governance mechanisms is assumed to be the most effective way to coordinate and control CSR activities and gives companies competitive advantages over competitors (Scott, 1975).

**Originality of the study.** This research explores the dynamics of institutionalization process of CSR comparing controversial and non-controversial industries, and providing empirical evidence about the different level reached by this process within these two environments. Our analysis enriches the previous debate about CSR, by studying sustainability as an institutional myth, and by focusing on corporate websites as a fundamental vehicle of information purportedly used by companies to present their commitment to this institution. Moreover, we contribute to the literature on institutional theory, by recognizing and formalizing a new form of decoupling, namely between-structures decoupling. This type of decoupling entails a mismatch between visible structures and internal structures.

**Key words:** Corporate social responsibility; CSR institutionalization; controversial industries; between-structures decoupling

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