Digital Transformation in B2B SMEs

Federica Pascucci, Valerio Temperini, Luca Marinelli and Maria Rosaria Marcone

Abstract Nowadays digital transformation has a large impact on economy and business; the use of digital technologies can represent an important driver for companies in traditional and new markets. Many authors noticed that "digital is not an option" and the majority of the companies need to face this challenge. However different studies afford the topic for large enterprise in business to consumer context but at the same time, digital transformation is a relevant issue also for SME's in Business to Business context. SMEs can benefit from digitalization in facing the intense global competition, finding market opportunities, developing profitable relationships or transforming their business models. In this area many topics emerge from the literature and some of these seem to be particularly relevant: how social media could represent fruitful instruments for marketing and sales in b2b context; how digitalization can represent a sensible shortcut for the development of small businesses in foreign markets; how the use of e-learning tool could be a new way for marketing in SME's. The aim of the paper is to describe the role of digital transformation in SME's in business marketing and analyze challenges and opportunities for marketer and researchers.

F. Pascucci · V. Temperini · L. Marinelli (✉) · M. R. Marcone
Dipartimento di Management, Università Politecnica delle Marche, Ancona, Italy
e-mail: l.marinelli@univpm.it

F. Pascucci
e-mail: f.pascucci@univpm.it

V. Temperini
e-mail: v.temperini@univpm.it

M. R. Marcone
e-mail: m.r.marcone@univpm.it

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1 Introduction

The role of digital technologies in businesses is one of the most debated issues both in the academic field and among practitioners and policymakers. In particular, the focus is on how digital tools can effectively contribute to the creation of market opportunities, to the improvement of business management and ultimately to the firms' competitiveness. The transformation of digital technologies potential, in reality, is an interesting topic in particular with reference to the SMEs, for which the solutions offered by digitalization appear extremely important to support their development and the survival on the market too.

However, studies that address the relationship between small and medium enterprises (SMEs) and digital technologies, show a significant delay in the digitalization process and the potential seems not fully exploited yet. This gap can be traced back to the structural, but also cultural, characteristics of this type of companies.

Digital technologies include a very broad number of tools, which offer different opportunities and present different challenges for firms. These tools range from social media to the Industry 4.0 technologies, such as robotics, 3D printing, Internet of things, etc. Some of these technologies, such as social media, have been approached more diffusely by companies operating in business-to-consumer contexts and BtoB firms seem to lag behind in the digital transformation process.

In this regard, our objective is to provide some insights on the main drivers of the B2B SMEs digital transformation, starting from the main results of past studies produced by our research group. In particular, we deal with three topics: (1) the growing role of social media in the social selling and business relationships practices; (2) the adoption of a joint vision of the internationalization and digitalization trends, and finally (3) the e-learning as a marketing tool.

The methodological approach used has often provided for the integration of theoretical research with field research. In the last decade, in-depth corporate cases have been analyzed, meetings and direct interviews with managers and entrepreneurs were carried out. Furthermore, knowledge on these issues has also been gained thanks to the collaboration with entrepreneurial associations, which have allowed the creation of various empirical surveys, as well as the interaction with numerous companies that have begun to approach the "digital world" or in need of in-depth analysis on specific issues about the use of specific digital tools. In some cases, the members of the research group also had the opportunity to contribute to the development of strategic plans for businesses, aimed at improving web communication, and to the implementation of digital solutions and the performance analysis. This allowed the development of a relevant knowledge about the operational aspects that are faced by the SMEs.

The chapter is structured in two main parts. The first part highlights the main evolutionary aspects of digital transformation; moreover, the relationship between SMEs and digital technologies is analyzed. A focus is made on BtoB contexts. In the second part, the examination of three above-mentioned directions of the digital

transformation is proposed: (a) online sales through social media; (b) digital internationalization, that is, the promotion and sale of foreign merchandise using Web tools; (c) the use of e-learning as a marketing tool.

The chapter concludes with some future perspectives of research.

2 The Digital Transformation

The ever-increasing impact that Information and Communication Technologies (ICTs) are having on organizations and society is contributing to what can be called a "digital revolution". The effects of these changes can be found in every area of human life, thus generating multiple and interrelated consequences. From a firm point of view, the implications of this revolution are pervasive and wide in scope, ranging from simple process innovations to business model innovations, with an increasingly convergence between products and services.[1] This is the reason why it seems quite difficult to give a definition of "digital transformation"; in general, we can refer to digital transformation as the changes in industrial and organizational processes and competencies, needed to grab the opportunities and face the challenges deriving from the new digital paradigm, which is enabled by different types of technologies, such as Internet of Things, Additive Manufacturing, Artificial Intelligence, etc. (Rindflesich et al. 2017). Most part of this transformation is tied to the phenomenon of "Industry 4.0", which, according to some authors, gave rise to the "fourth industrial revolution" (Schwab 2017).

The basis of these concepts is the application of digital technologies to the manufacturing sector in order to enable strategic, organizational, process and product innovations, with the aim to increase the competitiveness of both individual companies and economic system in general. The consulting firm Roland Berger defines the Industry 4.0 as "the set of technologies that will accompany the so-called fourth industrial revolution, based on the digitization and interconnection of all the production units present within an economic system". Two main components characterized this revolution: the digitalization and the connectivity (Bellagamba et al. 2018).

The path towards digitalization is not only linked to the understanding and adoption of technology by companies but it is the result of attitudes and managerial approaches focused on the ability to integrate these technologies in order to transform their business and their processes (Kane et al. 2015). It should, therefore, be stressed that it is the strategy, rather than technology that drives the digital transformation processes of companies (Pascucci and Temperini 2017).

[1] Analyzing the context of manufacturing companies, Rullani (2014) described a scenario in which "alongside the mass industry that continues to be such and becomes a low-cost global commodity industry, a new industry that instead seeks quality and therefore begins to offer the customer personalization, variety, meanings, experiences and guarantees that were once typical of services. Likewise, in the opposite direction but without passing through a material product—industrialized in production—and while guaranteeing a certain degree of flexibility—they provide users with standard services with virtually no production and transfer costs".

From this perspective, three macro trends are identified that are useful for understanding the "perimeter" of this evolution.

1. The first aspect is linked to the personalization of products and services made possible today thanks to the enabling technologies called the Internet of Things (IoT). These technologies are able to generate and make available in real time a large amount of data and information for example on customers, how to use and use of products-services, consumption and purchase behavior, but also biometric data, etc. These new forms of data-driven knowledge enable companies to design both new value propositions and new product-service solutions. IoT technologies can play an important role also in the post-purchase phases and in the management of customer relations; the high level of customization can indeed guarantee high customer satisfaction and customer loyalty performances.
2. Internet of Things and sensors applied to production machinery are giving life to the definition of new business models based on the offer of complex solutions, also the result of the reprogramming and reconfiguration of products that can be carried out remotely and in real-time.
3. Finally, the possibility of exchanging data and information between a large number of subjects is defining new business scenarios that will have wider opportunities for collaboration both inside and outside the production chain. The implications deriving from these assets are manifold: it is possible to identify new partners or to integrate more with existing partners, creating new sectors but also real business ecosystems (Iansiti and Euchner 2018).

As stated previously, digital transformation impacts on multiple dimensions of the enterprise. In the supply chain management, we can discuss three main points:

First. The automation of processes will be driven by 'Artificial Intelligence' and 'Big data' mutually supporting the requirement for sensor technologies as hardware on the one hand, as well as software on the other hand to collect, control, and process the enormous amount of available data.
Second. Interconnectivity is linked to internet technology and beyond the direct collaboration of supply chain partners by including real-time market developments, to include customer feedback from social media activities and share, monitor, and manage follow-up activities and decisions in real time. The change in supply chain design due to the influence of integrative technologies like (Big Data, IoT) and the opportunities for organisation to create synergies lead to the combination of 'normal' production and 'customer specific' production (additive manufacturing).
Third. Intelligent is related to simulations of supply chain events and supported by technologies. It is possible to create various scenarios in advance depending on future situations that result in a more efficient and effective supply chain control and the possibility to evaluate and eliminate risks before they occur (Bienhaus and Haddud 2017).

Marketing is one of the most affected areas: digital technologies are reshaping the marketing processes and the strategies, along with the following three main directions (Leeflang et al. 2014).

1. The ability to generate and strategically use insights on customers; digital technologies make the company able to draw on a large amount of data (often unstructured) defined as *big data* (McKinsey et al. 2011) which, if properly collected, analsyzed and interpreted, provide the company with valuable knowledge on customer preferences and behaviors, along all the customer journey (Court et al. 2009).
2. The growing importance of brand and firm reputation, as fundamental assets which require specific attention and skills, because of the explosion of user-generated contents in the context of social media and web 2.0 in general.
3. The measurement of digital marketing performance, with specific reference to the effects of this performance on the firm's economic-financial results. Although digital marketing tools have evolved very rapidly, this has not been the case in the web metrics, whose diffusion in the practice is very limited yet. The inability to measure results may cause a sort of "skepticism" in managers and entrepreneurs perceptions that contributes to further delaying the digitalization process (Bughin et al. 2008).

3 The SMEs in the Digital Scenario

In this changing context, the SMEs are among the realities whose digitalization process presents the greatest complexities.

Currently, SMEs tend to concentrate their investments mainly on projects aimed at digitizing basic processes, such as accounting and financial management, in order to reduce costs and improve efficiency (Pascucci and Temperini 2017).

According to data provided by the European Commission (2017), more than 77% of European SMEs with 10–249 employees have their own website, 57% of them have on their websites more "advanced" features, such as a price list and content customization. Still, the percentage of European SMEs from 10 to 249 present on at least one social media is about 44%, while the companies that have practiced B2C e-Commerce are around 7%.

In light of these data, there is a growing interest in the study of digital transformation processes in SMEs, also considering the economic relevance of SMEs worldwide.

There are numerous contributions that identify the presence of a delay by small businesses in the use of digital technologies (Morgan-Thomas 2015; Jones et al. 2014). This gap is generally due to a lack of financial resources and technical skills.

Moreover, since technological solutions are often designed and conceived having in mind large organizations, it is not uncommon for SMEs to show little confidence in the investments that go in this direction. It is therefore evident that the SMEs need specific solutions and approaches, based on their structurasl, cultural and organizational peculiarities since the mere transfer of solutions designed for large companies can rarely be effective.

Digital is still perceived as "one of the possible options" and not as the path to growth. The biggest problem that slows down the digital transformation process is the cultural one (Pascucci and Temperini 2017): on the one hand, the limited awareness of the opportunities that the Net and digital technologies can provide; on the other hand, the lack of managerial and operational skills that are indispensable for an effective implementation of those technologies. Hence the need to invest in training to develop the digital skills of the staff within the company or to introduce external professionals, who are able to manage the complexity and specificity of the issues related to digitization.

In this regard, external subjects—such as institutions, competence centers, research centers, and Digital Innovation Hubs—may have a strategic role as "activators" of SMEs digitalization processes, (Lee et al. 2010). The relationships among adopting firms and these external subjects result in the creation of "digital ecosystems". The term "digital ecosystem" can refer to different meanings because it has been used in a variety of different contexts (knowledge management, ICT, engineering, etc.). Brohman and Negi (2015) identify the following three different points of view in defining digital ecosystems:

1. The economic perspective, that defines digital ecosystems as a "useful metaphor for understanding the dynamics of corporate networks at regional and sectoral level and their interaction with and through information and communication technologies";
2. The technical view, according to which digital ecosystems are the digital counterpart of biological ecosystems; they are robust, scalable and self-organizing architectures that can solve complex and dynamic problems;
3. The ecological view, which defines it as "a digital environment populated by digital species or digital components that can be software components, applications, services, knowledge, business processes, and modules, training modules, contractual frameworks, laws, etc.".

As stated by Iansiti and Lakhani (2018):

> The point is that the economy has become a giant network. One of the great analogies for understanding this highly connected network of people and things is to think about it as a biological ecosystem […] In economic as well as biologic systems, you want to have an ecosystem that is sustainable, something that works well in the long term, something that can scale.

4 B2B SMEs Digital Transformation's Trends

Despite the high volume of business generated by this type of companies, scholars' contributions to the study of the phenomenon of digitization in B2B still remain limited and a "B2B knowledge gap" exist (Lilien 2016). However, the B2B environment in recent years has been deeply marked "disruptive" in particular by the following factors (Grove et al. 2018):

1. The commoditization of quality. The technical and qualitative differences between competing offerings have been significantly reduced by the widespread adoption of total quality management methodologies, such as Six Sigma. As a result, the concept of quality assumes the meaning of commodity and in this regard, companies need to offer additional forms of value;
2. New technologies. In many industries, new technologies, such as cloud computing, mobile applications, and artificial intelligence, put certain business models at risk because they are able to offer less costly ways of achieving the same functionality;
3. The abundance of information related to the product. The current ease of access to information means that B2B customers are now able to conduct their own research before the formal sales process begins. Customers are less inclined to ask the supplier for general information on the characteristics of the product.

The majority of the studies focus on digital technologies and in particular on the new communication tools (such as social media) in the B2C marketing context. However, it is interesting to note that, while the delay of the B2B SMEs is evident (Michaelidou et al. 2011; Jussila et al. 2014), the spread of digital technologies by industrial companies is a growing trend. We have identified three major trends of B2B digital transformation, and they have represented three relevant research topics of the Authors in the last ten years.

4.1 Social Selling

In analyzing the relationship between social media and B2B, with specific reference to the practice of social selling, it should be noted that among the factors that most significantly affect the use of social media in B2B, those "contextual" elements clearly emerge. related to the organizational environment (Pascucci et al. 2018).

The use of social media is in fact driven mainly by the level of organizational knowledge on social media and by the type of management attitudes. Guesalaga (2016) shows that the greater the organizational competence and the commitment towards social media, the more the sales department is willing to use these platforms in sales activities. If managers are aware and active in using social media, they are more willing to support social media initiatives within the sales organization.

Some studies also note that an imitative effect linked to the use of social media can occur along the entire supply chain (Rapp et al. 2013).

In practice, organizations within a network exchange information and communicate frequently, which can lead companies to adopt imitative behavior. For example, if vendors develop strategies to promote the brand, which involve social media marketing initiatives, retailers may try to imitate these strategies in the supply chain in order to increase their success. In particular, Rapp et al. (2013) state that the use of social media reinforces relations between suppliers and resellers, especially in cases where the former are ambidextrous (that is, the search for quality of service

and innovation for improvement) and when their brands they have a solid reputation. Furthermore, it is not just the comparison with customers and competitors that influences the use of social media by salespeople; the sense of belonging to specific virtual communities could play an important role (Wang et al. 2016).

In the literature, the phenomenon of B2B social selling has been addressed in particular by two perspectives: social selling at individual salesperson level (Moore et al. 2015; Schuldt and Totten 2015) and social selling at the organizational level (Agnihotri et al. 2012; Andzulis et al. 2012).

4.1.1 Social Selling at the Individual Person Level

According to Moore et al. (2015), B2B salespeople also use social media tools to a greater extent than sales personnel in the consumer sector.

In particular, some social platforms, such as professional networking tools and instant messaging applications, are more common among B2B salespeople (Moore et al. 2015). For example, studies show that B2B vendors tend to use blogs, professional networking sites (e.g., LinkedIn), interactive broadcasting, webinar tools, and presentation sharing sites (e.g. Slideshare) to a greater extent than their B2C colleagues.

With another approach, more aimed at understanding the degree of use of social media in sales practices; Rodriguez et al. (2016) for example measures the increase in the use of social media over time with the aim of identifying the presence of business opportunities and key decision makers.

Other studies investigate the usefulness of social media in carrying out sales work and its integration in daily work (Agnihotri et al. 2016, 2017; Itani et al. 2017). Rapp et al. (2013) measure the use of social media, including social networking activities and behaviors, such as monitoring competitors, providing information to customers, monitoring events and development in the sector.

In this way, this group of studies focuses primarily on the overall use of social media technologies in sales and provides limited information on how salespeople actually take advantage of social media in their work. Despite a growing tendency to measure the general degree of use of social media in sales (see Agnihotri et al. 2016, 2017; Itani et al. 2017), most studies still use different constructs, which means that measures with a strong theoretical basis are largely missing.

With a final analysis perspective of this dimension, the researchers provided some information on how salespeople use social media in sales practices and their social selling activities (Bocconcelli et al. 2017; Lacoste 2016; Rollins et al. 2014; Wang et al. 2016). Salespeople seem to use social media, in particular, to gather information and better understand customers (Lacoste 2016). Salespeople may use social media to search for the right contact and get various types of information about potential customers, such as the characteristics of their network, the degree of experience and interests, which can be useful for preparing the start of the relationship. Furthermore, social media allow salespeople to actively pursue networking opportunities with

targeted customers and relevant customer stakeholders (Bocconcelli et al. 2017; Lacoste 2016).

The development of a solid network through social media allows sellers to find potential customers through their existing connections, thus exploiting the credibility of the network. In fact, social media offers the possibility of collecting information even beyond the seller-customer relationship, exploiting both the internal (within the customer's organization) and external networking (i.e. with suppliers, competitors, etc.) (Lacoste 2016). In this regard, Bocconcelli et al. (2017) show that social media make it possible to establish the first contact with potential business partners, provide relevant information in a less formal way (e.g. YouTube videos), also by using word of mouth.

4.1.2 Social Selling at the Organizational Level

A significant amount of studies in this area of research focuses on organizational aspects related to social selling. In particular, this category includes all the jobs that specifically concern the implementation at the company level of sales that are enabled by social media.

The analysis of these studies reveals two important organizational aspects related to social selling, namely the social selling strategy and organizational activities consisting of tools, activities, and processes aimed at supporting the sales force of the sellers.

The literature has amply underlined the importance of developing and communicating a clear social selling strategy, i.e. a company-wide policy that provides indications on how to operate in the field of social selling (Agnihotri et al. 2012; Andzulis et al. 2012). In particular, the definition of a social selling strategy goes beyond establishing a mere presence on social media or implementing sales tactics conceived in a disjoint way. Furthermore, social media seem to influence the organization's sales capacity to create opportunities and manage relationships, so companies should think carefully about its systematic integration with more *traditional* consolidated sales processes. In fact, social media seem to have the potential to influence every traditional step of the sales process that goes from customer understanding, to client approach, and to discovery, presentation, closure, and follow-up (Andzulis et al. 2012; Marshall et al. 2012; Moncrief et al. 2015).

4.2 Digital Internationalization

Internationalization and digitalization represent two of the most studied and debated themes among researchers, practitioners and also policymakers of the last decades.

Their importance for the competitiveness of companies and of entire economic systems is such that each of them has generated numerous publications. Only recently,

however, the two topics have begun to be treated jointly, in order to understand what relationship there is between the two phenomena (Pascucci and Temperini 2017).

Studies in this regard can be divided into the following two categories.

The first one considers internationalization as an influential factor in digitalization. The effects of internationalization on the adoption of digital technologies can be explained by recourse to the theory of resource-based view, in the sense that companies operating in foreign markets need some types of resources and skills that technologies can help to develop so that internationalized companies would have a greater incentive to adopt such technologies. However, the analysis of these studies shows non-univocal results (Bayo-Mariones and Lera-Lòpez 2007; Zhu et al. 2003; Zhu and Kraemer 2005).

The second one considers digitalization as an influential factor on the firms' international performance, focusing on the benefits that Internet adoption can provide for the development of exports and penetration into foreign markets. This is the most nurtured research line, in which the studies agree on the positive influence of digitalization on the firms' export performance: the Internet is seen as a facilitator, or as an enabler of internationalization or as a driver of new international opportunities (Bell and Loane 2010).

The Web lowers the costs of marketing and promotional research, and allows greater visibility also in geographically distant markets, without having to be physically present (Karakaya and Karakaya 1998; Tiessen et al. 2001).

Several authors have placed particular attention on SMEs and the benefits they can derive from using the Internet (Hamill 1999; Sinkovics et al. 2013). The Web allows them to coordinate and maintain communication between different geographical areas in a simple and economical way, to develop and maintain relationships with customers, business partners, and foreign suppliers, as well as reducing barriers to internationalization (Hamill and Gregory 1997).

Considering the fact that the main advantages related to the use of digital technologies are the access and management of information, as well as communication, the contribution they can provide to reducing the barriers to exports is evident.

The use of the online channel for the collection of information and the use of innovative software for the processing and management of such information also allows smaller companies to acquire a deep knowledge of foreign markets, from a macro and a micro point of view, at relatively low costs, thus reducing the perceived risk and uncertainty typical of operating in unknown and distant markets (Mathews et al. 2016). Finally, the idea that digitalization and the advent of the Internet can favor the internationalization processes of B2B SMEs, by eliminating the physical distance between seller and customer, is now widely shared.

As previously stated, recent attention has shifted to the opportunities that, in this context, can provide social media (Marinelli 2017), as a direct channel of communication with the foreign customer (Broncanello and Tremiterra 2015).

With this in mind, it is important to underline that although the Internet has allowed the "geographical distance" and "temporal distance" to be reduced, shortening the distribution channels and favoring direct communication with the user from any part of the world, digital tools have not completely canceled that distance of a cultural

nature. The cultural differences between countries are also maintained on the Net, influencing the preferences, behaviors, and mechanisms of interaction with foreign customers (Gregori et al. 2016).

4.3 The Use of E-learning for Marketing Purposes

The growing interest that has long been encountered with regard to e-learning is motivated by the important advantages that this formative method allows to obtain. In fact, through the use of ICT, it is possible to considerably extend learning opportunities and increase the usability of *knowledge* responding to a widespread need for continuous learning that is felt by individuals and organizations.

With specific reference to companies, it is believed that e-learning can play a significant role for their development, even if different diffusion problems can be observed (Gregori and Temperini 2007, 2009). The high flexibility that distinguishes it can, first of all, allow access to training for companies, even those of a smaller size, allowing them to increase their internal skills and affect their competitiveness. Furthermore, e-learning can contribute to enhancing and increasing the organizational cognitive heritage, stimulating the creation and diffusion of new knowledge, starting from the existing ones; in this sense, the integration between e-learning and knowledge management systems (Wild et al. 2002; Capucci 2005; Maier and Schmidt 2007) is found in several cases.

In the scientific literature on management issues, e-learning has been considered mainly as a tool for human resources management and knowledge management, and has also been observed as a means of internal communication (Iacono 2001). On the other hand, little attention was paid to the use of this tool from a marketing point of view, although the potential for use appears particularly interesting, in light of the development and diffusion of digital technologies.

The contribution of our research team on the subject in question is characterized by an original approach, placing the main objective of observing the possible role of e-learning in business communication strategies, and also the contribution it can offer in initiatives branding aimed at developing relationships in the market.

To this end, the case of iGuzzini, a medium enterprise which produces lighting tools and is based in Marche region (Italy), has been analyzed. The company offer includes several product lines divided into the following main areas: (a) indoor lighting systems; (b) outdoor lighting systems; (c) light management systems; (d) special products (for example, direct light system for urban areas or professional fluorescent systems and suspensions). The solutions are aimed at lighting for urban furniture, the tertiary sector, museums, commercial spaces, and reception facilities. Its products are sold internationally through a sales network (also composed of exclusive distributors and some branches) that extends to over 60 countries.

iGuzzini has characterized its presence on the Web by implementing a technological platform (which is named Lightcampus) dedicated to offering online training services on topics related to the quality of light and lighting technology.

The examination of this case study allows observing the possible role that e-learning can play for communication and marketing purposes. In particular, the development of the e-learning platform aimed at satisfying a widespread need and desire for learning with regard to lighting issues allows the company to:

- Communicate the products with an innovative approach that favors high levels of interaction and informative detail;
- Promote brand awareness and strengthen the link to it, also making use of the creation of a virtual community;
- Get in touch and interact with important players in the market, in this case especially with the "influencers" or "prescribers" (architects and lighting engineers), with the possibility of obtaining important data and information on that players, useful for the implementation of policies of relational marketing based on the integration of e-learning and CRM systems.

It is evident that the observed model can be a valid reference for companies operating in other sectors, even for those that address the consumer markets. The challenge for companies lies in identifying the contents and e-learning methods that best meet the needs of users who correspond to the target to be achieved.

The prospect of the use of e-learning in terms of communication and marketing is particularly interesting in light of the potential that can be expressed through integration and convergence with other IT and Web technologies.

5 Some Future Research Directions

Digital transformation has attracted growing attention of both scholars and practitioners, given its enormous potential impact on products, services, processes and business models. Despite this fact, several gaps exist and further theoretical and empirical research is needed, in particular with regard to BtoB SMEs.

Digital technologies create a *potential* that firms have to transform in *reality* but this requires resources, skills, competencies that are often lacking especially in the context of smaller firms.

One of the most critical areas is digital analytics for two main reasons. First of all, proving the added value that digital tools bring to companies, showing the tangible impact on firm's performance, is a fundamental aspect in order to stimulate the adoption and the use of technological solutions and promote a better *digital culture* even in smaller companies. This appears even more relevant in the case of BtoB contexts. Second, digital tools can help to improve the competitiveness of SMEs increasing the data and the information needed to make efficient and effective decisions; data has been called *the oil* of the digital economy (Wedel and Kannan 2016). Digital transformation is a vehicle for new technologies which provide companies with the opportunity to generate, acquire, aggregate, analyze and monitor a huge volume of real-time data that can come from multiple sources. When adopted with a strategic approach, these data can be transformed into insights that allow companies to make

decisions in an increasingly complex scenario and optimize marketing spending. However, these data have to be transformed in actionable knowledge by firms and this requires completely new skills. According to a Gartner's study (Levy 2015), the difficulty to finding talent with these skills is the main barrier towards implementing marketing analytics and this also present a challenge for educators and for academia.

Moreover, the mere adoption of digital technologies by itself is not a sufficient condition for the improvement of company performance, since the effects depend on several factors: the type of technology considered, the observation period, the presence of complementary resources in the company, such as the organizational changes and human resource skills. According to recent research conducted by MIT Sloan Management Review in collaboration with Deloitte on more than 4800 managers of companies in different sectors and Countries, it has become clear that the advantages of digital technologies do not lie in the technologies themselves, but in the ways in which companies integrate these technologies to transform their business and processes (Kane et al. 2015). The conclusion reached by scholars is as follows: it is the strategy rather than technology that drives the digital transformation of companies. In fact, what distinguishes the most mature companies from the digital point of view is the implementation of a clear digital strategy, combined with an organizational culture and an entrepreneurial approach open to collaboration, risk, and experimentation (Quinton et al. 2017; Li et al. 2018).

Most parts of the skills and complementary resources needed in order to succeed in the digital transformation process are intangible: the role of "intangibles" within the digital transformation processes is another fruitful future research direction. It is argued that companies, in order to start successful digitization projects, must necessarily invest above all, in "soft factors", such as know-how, skills, relational capital, and experience (Caroli and Van Reene 2001). In particular, the role of external relationships seems to be very important for SMEs and for BtoB contexts. In the digital age BtoB relationships are changing and evolving in new forms but little is known on the nature and consequences of these transformations; how these technologies are changing the relationships a company has with its customers, its suppliers or with other actors remain still unclear (Pagani and Pardo 2017). In particular, the implications of digitalization on the "dark side" of BtoB relationships (Abosang et al. 2016) need to be studied because this area has received scarce attention.

It is worth nothing that managers need to work toward the development of an open-innovation capability, which comprises four value processes: value provision, value negotiation, value realization, and value partake (Appleyard and Chesbrough 2017; Chesbrough et al. 2018).

Firms can develop processes to seek out and transfer external knowledge into their own innovation activities. They can also create channels to move unutilized internal knowledge to other organizations in the surrounding environment.

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