Digitalization and SMEs’ Export Management: Impacts on Resources and Capabilities
Benjamin Dethine, Manon Enjolras, Davy Monticolo

“In a rapidly changing world, the only strategy that is guaranteed to fail is not to take risks.”
Mark Zuckerberg
Facebook CEO

Digitalization is becoming an increasingly central issue for companies. However, most companies, and in particular SMEs, are struggling to engage in a coherent global digital transformation process. Indeed, digitalization affects much of a company’s organizational strategy, including the development of market opportunities. Digitalization has been identified as an element that fosters the internationalization of SMEs. However, the integration of digital technology requires investments and changes in a company’s internal practices through the mobilization of new resources, as well as by implementing specific capabilities to manage them. The objective of this research work is therefore to examine the impact of SMEs’ digital transformation on their internationalization capability. Relying on an extensive exploratory literature review, digital facilitators were identified and classified into three categories: e-commerce, e-marketing, and e-business. Then, a cross-analysis between the identification of digital facilitators from the literature and a framework of SMEs’ export practices (the Potential Export Index, Enjolras et al., 2016) was conducted in order to highlight differentiated impacts that can be theoretically identified. The most impacted export practices are related to the strategic vision of the firm, the customization of its offerings, its network dynamic, and its internal organization. E-commerce facilitators concern the supply chain organization, e-marketing facilitators are related to communications and customer relations, and e-business facilitators impact the company as a whole.

Introduction

Over the past decade, the emergence of increasingly powerful digital technologies and digital infrastructures have transformed and continue to transform business processes, organizations, and corporate culture with new innovation processes, marketing models, and types of products/services (Tekic & Koroteev, 2019).

One field of literature in particular has further studied the implications of digitalization for improving the international capabilities of companies. International activities have been identified as one of the most important levers for economic growth (Bo kunow, 2019). They involve several advantages for companies’ development, but also imply certain challenges, especially for small and medium enterprises (SMEs) because of their size and limited resources (Bhatia & Thakur, 2018). In this specific context, digital tools and technologies can be considered as facilitators for mobilization in order to achieve SMEs’ international business objectives (Safar et al., 2018).

The objective of this paper is to examine the impact of SMEs’ digital transformation on their internationalization capability. Specifically, this research identifies digital facilitators, defined as tools, technologies, skills, or capabilities that a company can implement in order to improve its internationalization process. Taking as a methodological basis the Potential Export Index, as a framework for good export practices (Enjolras et al. 2016), the impact of digital facilitators on these practices is assessed through a bibliographical review. This theoretical analysis highlights potential contributions in the digital age as a way of potentially answering to international challenges faced by SMEs. This research is therefore based on an explorative approach that aims at building a theoretical research object in view of later empirical work to follow.
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**Literature Review**

*SMEs and Internationalism*

Internationalization can be defined as a process of increasing company commitment to international markets. It can occur in several modes: exporting, importing, foreign investment, opening of subsidiaries, and other things. In the scientific literature, the particular case of SMEs remains the subject of numerous publications that use different approaches to explain the processes of international commitments.

A widely used approach is the step-by-step process. Internationalization is then considered as a linear, sequential, and progressive process (Coviello & McAuley, 1999). Within this step-by-step approach, two paths coexist: The Uppsala model (Johanson & Vahlne, 1992) emphasizes the notions of a learning process and psychological distance. The innovation model (I-Model) (Bilkey & Tesar, 1977) considers internationalization as a process comparable to the adoption stages of a new product. However, there is a large body of literature that questions the step-by-step approach to internationalization and, in particular, criticizes the idea that firms (especially SMEs) must follow a specific gradual path to internationalize (Anderson & Narus 1990; Coviello & McAuley, 1999). Some studies highlight that the several stages of an SME’s internationalization process are not always gradual. They are instead characterized by rapid increasing, decreasing, and re-increasing commitment to foreign markets (Domínguez & Mayrhofer 2017). Moreover, the concept of necessary “stages” is also refuted by the immediate internationalization process of the so-called "born-global firms," which involve international activities from the company’s creation (Knight & Cavusgil 2004). This phenomenon could be explained, among other ways, by the development of digital technologies that allow SMEs to enter the international market more quickly and easily (Loane et al., 2004).

The second approach for mobilization is the network approach, which sees internationalization as a network that develops through trade relations with other countries (Johanson & Mattsson, 2015). The emphasis in this case is put on the relational capacities of the company.

Finally, the so-called economic approach, as supported by Penrose (1959) and in line with a resources-based view (Barney, 1991), suggests that certain resources are critical. These resources are crucial in influencing the growth of the company and therefore its ability to penetrate new markets. A lack of these resources (financial, human, time) can thus limit companies’ international activities. In this approach, the focus is rather on organizational capacities (production capacities, financial capacities).

Thus, several models of internationalization coexist within the literature. The economic approach highlights the importance of firms’ organizational capacities, and more particularly, their capacity to mobilize strategic resources. The network approach considers that internationalization requires the development and mobilization of the relational capacities of a firm. And finally, the step-by-step approach highlights the importance of the learning capacity to overcome psychological distance specific to the internationalization process. These various points of view refer to aspects that an SME must consider in order to develop beyond its national territory (Laghzaoui, 2009).

The internationalization process is therefore complex and involves major disruptions within companies. This is why most SMEs face difficulties in developing an effective international strategy. For example, most SMEs adopt a short-term strategy in comparison with larger companies (Moeuf et al., 2018). Moreover, they face internal obstacles related mainly to their small structure and limited resources (Cerrato & Piva 2012). Leonioudou (2004) considers that SMEs’ difficulties are either external, and therefore related to the business environment (domestic or foreign market), or internal, and therefore related to the resources, organizational capacities, and vision of the company. Indeed, the main internal constraints for SMEs are lack of financial resources (Bellone et al. 2010; Paul et al. 2017), lack of time and/or skills (Freeman et al. 2012; Paul et al. 2017), and lack of knowledge about foreign markets (Bianchi & Wickramasekera, 2013). In the same vein, Costa et al. (2020) consider that SMEs face two particular difficulties in their internationalization processes: to establish a customers’ network as a way of gaining competitive advantages in foreign markets, and to identify and manage the right information.

On the other hand, SMEs have a flatter and less bureaucratic structure than larger companies since they have a simpler internal organization that usually allows them to adapt quickly to change (Wang et al., 2017). Despite their limited size, SMEs often have active...
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relationships with their networks, which are one of their most important sources of knowledge in an international context (Hsieh et al., 2019).

These sources of knowledge and the quantity of data to handle have increased with the arrival and growth of digitalization. In the next section we will explore issues of digitalization for the SMEs.

SMEs and Digitalization

Academics and industry are used to the term "digital transformation" as a key term to express organizational changes influenced by digital technologies. However, while a clear definition has not been widely adopted, all the scientific articles are nevertheless unanimous in expressing the fact that digital transformation induces a radical change in organizations (Burki, 2018). According to Lucas et al. (2013), these changes concern adjusting business processes, creating new organizations, changes in organization/customer relationships, markets, user experiences, and the number of customers, and finally, the impact of disruptive technologies. In addition, the acceleration of digital technological development, combined with the increasing globalization of associated economies, is accelerating the innovation cycles of products and services, and generating new business models, while also changing the operational and organizational environment for businesses and consumers.

Thus, companies from all business sectors are exploring and experimenting with new ways of using digital tools and technologies within their organizations. New digital technologies, such as data analysis, digital communication, connected objects, intelligent systems, and user experience through digital technology, are being applied in all sectors of activity, including many traditional industries (Pagani et al., 2017). Moreover, some researchers have observed the advantages of digital technology in companies (von Leipzig et al., 2017; Rojo Abollado et al., 2017; Bedell-Pearce, 2018; Subramaniam et al., 2019), and that companies which have started their digital transformation are more competitive and thus able to more easily adapt to changing ecosystem conditions.

However, despite the importance attached to this phenomenon, most companies, in particular SMEs, are struggling to engage in a coherent global digital transformation process. Indeed, the integration of digital technology requires investments and changes in a company’s internal practices as a whole, which sometimes requires the implementation of new internal organizational strategies as well as the development of new skills. SMEs generally invest in digital technologies on an ad hoc basis, operating in an opportunistic manner, yet without following any real global digital transformation strategy. This approach, which focuses on a short-term vision, sometimes results in investment errors, and often in incremental development rather than in the development of a profound transformation that maximizes value creation associated with digital transformation of the entire company.

Financial barrier to internationalization are common for SMEs, along with the risk of losing investments. Von Leipzig et al. (2017) show that, in addition to financial obstacles, a lack of technology and skills related to digitalization, as well as a poorly structured strategy, can also constitute a missed opportunity for digital transformation. As Goerzig and Bauernhansl (2018) explain, the human side must always be considered. They define “digitalization” as the interconnection between a company, its product or service, and human beings. In SMEs, organizational development is driven by their employees. This is reflected in the strategy that a SME takes involving the human factor as being of primary importance, since it will directly influence the digitalization actions by staff.

In this context, SMEs need to be prepared to adapt to their new technological environment in order to remain competitive or even to engage with new markets (Safar et al., 2018). SMEs need guidance in developing their digitalization strategy in order to keep pace with technological developments. This can happen by prioritizing actions to enable an effective and efficient digital transition (Goerzig et al., 2018). Digital transformation therefore represents a new type of challenge for SMEs, requiring a global digital transformation strategy that impacts the entire company organization. What results from this approach will be not only a specific product or new service, but also the development of a capacity to adapt to changes induced by technological innovations related to digitalization. In the next section, we will describe the consequences of digitalization in the internationalization process of SMEs.

Internationalization and Digitalization: towards a joint resource/capability perspective

Digitalization and internationalization are both well-documented research areas. However, the relationship between these two themes remains relatively fuzzy,
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particularly in the specific context of SMEs. Even with a growing trend among SMEs of utilizing the Internet for internationalization (Jean & Kim, 2019), there is still a lack of studies addressing the influence of digitalization on the internationalization management of SMEs (Costa et al., 2020).

Studies addressing this topic highlight that firms may consider digitalization as a means of enhancing their international capabilities (Lee & Falahat, 2019), even if the effects might be indirect. Regarding the impact on internationalization processes, Dutot et al. (2014) observed that SMEs adopting a more complex form of internationalization often have more developed IT capabilities. Moreover, digital tools could specifically benefit SMEs by improving an SME’s ability to compete with larger organizations through operating on an international scale (Louw & Nieuwenhuizen, 2019), thus compensating for a weaker physical presence in foreign markets.

However, these studies generally focus on the importance of digital technologies in support of SMEs’ international activities (Brotherson et al., 2016). In particular, these studies acknowledge the resource-based view, for which digital technologies constitute a strategic resource in Barney’s sense (1991), and which can give a company a competitive advantage (Lee and Falahat, 2019). Thus, digital resources are strategic if they are valuable (value creation), scarce, not easily transferable or imitable, and not substitutable (Barney, 1991). From this point of view, the relationship between digitalization and international activity is regularly considered from a techno/process point of view, but its operational implementation is often little explored.

According to Cassetta et al. (2019), the internal context in which digital tools/resources are adopted within SMEs is often ignored. Thus, companies fail to consider digital technology decisions as an integral part of their business practices (Chatzoglou & Chatzoudes, 2016). However, the organizational impact of digitalization on SMEs is crucial, and must be reflected in a combination of tools/resources, skills, and capabilities. Digital resources can therefore be considered strategic only if good implementation or exploitation of them within the company is considered. The identification and exploitation of strategic resources still requires the implementation of specific capacities.

As an example, Guidici and Blackburn (2013) explore the digital/international relationship from a dynamic capability perspective (Teece et al. 1997), through the specific topic of digitally-enabled network intermediation as factor for a SME’s internationalization facilitator. Resources may directly be related to capability, putting forward the benefits of a combination between the resource-based view and the capability view.

Based on these statements, it seems interesting to explore the relationship between digitalization and internationalization of SMEs, not just in terms of facilitating resources but also in terms of capabilities. This way the impacts of digitalization on the internal practices of companies may be considered, as well as the changes induced in their internationalization process.

Methodology

Research Design
Based on theoretical statements in the previous section, the research question of this work aims to answer the following question: how can digitalization potentially impact SMEs’ international practices? Relying on a joint resources/capability-related vision, this analysis proposes considering digitalization as leverage for the internationalization of SMEs, through facilitators defined as a combination of digital resources and associated capabilities. We believe facilitators should make it possible to implement resources and capabilities in a company’s internal practices. Based on the definition of Teece et al. (1997), we define an associated capability as a firm’s ability to integrate, build, and reconfigure internal and external digital resources to address changes related to its international development.

Because of the large scope of literature in the international field, and the various entry modes into international markets, the scope of this study was reduced to a specific internationalization mode: export. Exporting is indeed one of the most common ways to enter a foreign market in the early stages of SME internationalization (Jones 2001; Majocchi et al. 2005). This refers to companies that position their products and services outside the geographical borders of their country of origin. The internationalization mode for export-oriented companies is preferred because it requires the lowest level of commitment and risk (Laufs & Schwens, 2014). In view that SMEs have a predominantly centralized method of functioning (Torrê & Julien 2005), it seems less risky and challenging
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for a small business to export themselves than, for example, to set up a subsidiary abroad.

Finally, this study follows a joint perspective that combines resources and capacities. Thus, the evaluation of the impact of digital facilitators on SMEs’ internationalization is based on an analysis at the internal company level. The study’s objective is first of all to identify how digital facilitators (resources and capabilities) both strengthen the export practices of companies and support internal changes (Figure 1). The impact on export performance is beyond the scope of this study.

Methodological Background: The Potential Export Index (PEI)

This research work relies on an empirically based diagnosis tool for SMEs’ export capabilities: a Potential Export Index (PEI) (Enjolras et al., 2016; Enjolras 2017). This index measures a company’s maturity regarding six dimensions (strategy, openness, adaptation of the offer, organization, human resources, and management) spread across 22 export management practices (Figure 2).

Based on a maturity grid, the diagnosis describes a company’s behaviour in terms of export-related internal practices. It provides a diagnosis of a company’s current situation by identifying its strengths and weaknesses. The PEI relies on a robust empirical base (Enjolras et al., 2016) that has been tested with SMEs at the international level (Enjolras, 2017). This diagnostic tool does not evaluate export maturity on the basis of performance indicators (for example, export turnover, or number of foreign markets); instead it measures the degree of maturity of internal practices within a company. Indeed, while many export performance diagnostic tools exist (Alaoui, 2013; Marzouk and Bouslama, 2016), few attempt to identify organizational practices that promote exports. Attention to metrological positioning allows for identifying the potential impacts of digital facilitators on the maturity of a SME’s export practices

**Figure 1.** Research design

**Figure 2.** The Potential Exportation Index (PEI) framework and practices and sub-practices
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and likewise enables the proposition of a joint resources/capabilities-related vision of the digitalization/internationalization relationship.

Methodological approach
This research is based on an exploratory deductive approach. The objective is to build a theoretical research object in view of later empirical work to follow. Indeed, according to Saunders et al. (2003), an exploratory research approach can either be a goal in itself, or constitute part of the research upstream of a subsequent testing process. Thus, our methodological approach aims at identifying and clarifying the relations that exist between digitalization and internationalization within SMEs, from a joint resource/capability point of view, based on a theoretically exploratory study.

Therefore, we define a four-step method:

1) Extensive bibliographic research: A bibliometric analysis was conducted using a keyword research algorithm: “SME* AND digital* AND (international* OR export*)”. Only “article” document types were considered and only papers written in English between 2000 and 2020 were used. This first bibliographic analysis was performed on the Web-of-Sciences database and provided a total of 40 corresponding papers. Next, the relevance of each paper was checked, according to its research area. This refining process resulted in the exclusion of papers from unrelated areas of research such as medicine, biology, and law. 21 papers were then retained for the next step.

2) Exploratory keyword analysis: identification of keyword clusters defining thematic dimensions addressed by literature analyzing the digitalization/internationalization relationship within SMEs.

3) Systematic literature review: A deep analysis of each considered paper was performed in order to identify digital facilitators favoring the international development of SMEs.

4) Cross analysis of the digital facilitators and the SMEs’ export practices: Each facilitator was analyzed according to the PEI (Potential Export Index) practices framework. A systematic comparison of facilitators with all export practices was undertaken to identify potential impacts, for which we then sought validation through bibliographic support.

Results

Explorative keyword analysis
The literature review led to the identification of 21 relevant articles that analyse the relationship between digitalization and internationalization of SMEs. A keyword analysis was first carried out in order to identify dimensions according to which the digitalization/internationalization relationship is addressed. Thus, an occurrence map made with VoS Viewer software that allowed us to highlight the most common keywords within the 21 selected articles (Figure 3).

Our analysis of this map highlights different dimensions. First of all, some keywords are related to the research design of publications: mobilized theories (resource-based view and capability approach, as identified in the previous theoretical section) and methodological positioning (model, action research). The second dimension refers to performance-related keywords: benefits, impact, competitiveness. This dimension confirms the challenge of digitalization and internationalization for SMEs as a growth factor.

The third dimension concerns the structural and contextual factors addressed in the publications: specific business sectors (aviation, services) and the economic or contextual particularities of companies (export entry mode, emerging economies). This dimension highlights focus on the digital/international relationship from a contingent perspective in the sense of Mintzberg (1979). Certain external and structural factors make this relationship specific to the context in which companies operate, where differentiation could be envisaged.

The fourth dimension concerns keywords relating to the types of digital tools that can be used, supporting a technology-oriented point of view: digital marketing, e-commerce, and big data. The fifth dimension, meanwhile, highlights keywords relating to the functioning of companies and their organizational practices: management, innovation, knowledge, strategy, collaboration. These keywords are connected to the notion of capabilities and address changes induced by digitalization and internationalization within companies.

The coexistence of these last two dimensions highlights
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the interest of combining resources (tools) and capabilities (practices) for the study of the digital/international relationship within SMEs.

**literature review and cross analysis**

Based on the explorative keyword analysis, a systematic literature review was performed within the 21 selected publications, in order to identify relevant facilitators acting on the export management of SMEs. Then, each facilitator was confronted with our export-theoretical framework, in order to identify its impact on the internal practices of companies’ export management.

Based on this systematic literature review, Table 1 puts forward the potential impact of digital facilitators on the export practices of SMEs. Each correspondence is based on (a) bibliographical source(s) enabling it to be validated theoretically. To propose a clarified vision of the potential impacts of digital facilitators on export management practices, Table 1 is structured through a three-type categorization of the digital facilitators considered (Mazzarol 2015):

- e-commerce facilitators generally refer to the use of digital platforms to undertake transactions consisting of selling goods and services via the internet.
- e-marketing facilitators refer to the use of digital

![Figure 3. keyword occurrence map](image-url)
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channels to undertake marketing and promotion.  
e-business facilitators refer to the use of digital analytics tools to enhance production processes and internal management.

Each facilitator is represented in Table 1 with a specific color, indicating the category it belongs to. Some facilitators can be classified in one specific category, while others show a multidimensional impact. This explains why some facilitators can belong to several categories. The numbers indicated in Table 1 refer to a bibliographic source justifying the impact of the digital facilitator on the export practice considered. All references considered in Table 1 are listed in Table 2.

Discussion

The cross-analysis between digital facilitators and export management practices puts forward several findings. First, Table 1 shows that digital facilitators impact the export management practices in a global way.

The most impacted practices are related to:

- the relationship with value chain stakeholders: suppliers, distributors, partners
- adapting the offer: product, communication, business model
- business intelligence: commercial, technological, competitive watch
- the strategic vision
- operational adaptation
- knowledge management and capitalization

However, some practices are not impacted or only very slightly impacted by the digitalization facilitators identified. Financial agility seems not to be connected with the digitalization of companies. Intellectual property is also not a determining factor, along with influence or lobbying practices. Finally, operational practices related to language skills and administrative preparation seem also not to be heavily impacted by digital facilitators.

Thus, the impact of SMEs’ digitalization on their export management practices seems global, while our analysis put forward a focus on strategic and organizational practices. Operational and structuring practices, such as human resources management or administrative processes, are significantly less impacted.

This analysis highlights a differentiated impact according to the facilitators’ orientation. Relying on a three-type categorization—e-business, e-commerce, and e-marketing facilitators— it was possible to identify several dimensions where digitalization fosters SMEs’ export management practices in a differentiated way.

First, the e-commerce facilitators, aiming at carrying out functions such as business to business (B2B) and business to consumer (B2C) transactions, mostly impact practices related to supply chain management (supplier/distributor relationships), networking (partnership and influence), communication, as well as business model definition through the implementation of a specific price policy (Table 1). These are particularly related to the export practices of an organization and the development of a company’s offerings. Thus, e-commerce facilitators seem to act as levers to overcome or reduce operational difficulties encountered by SMEs in foreign markets by acting on the order of selling and distribution processes, as well as structuring commercial offerings through online transactions.

Based on the findings from our systematic literature review, e-commerce facilitators notably contribute to reducing the distance and entry costs related to involvement in international markets by providing an additional channel for sales. In a general way, e-commerce digital tools improve supply chain efficiency by enabling the automation of internal related processes, along with providing real-time information about inventory, production, sales, and distribution issues (Astuti & Nasution, 2014). E-commerce adoption also has a direct impact on a firm’s business model, more particularly, on its pricing policy definition (Cassetta et al., 2019). By decreasing costs associated with spatial distance and export intermediaries (Arenius et al., 2005), e-commerce provides a business model optimization opportunity as well as a close and direct connection with clients (Astuti & Nasution, 2014).

However, e-commerce adoption also represents a risk-taking decision because of potential damages to technical systems and data files, financial loss, reputation threats, loss of productivity, and loss of confidential customer information (M. Rahman & Lackey, 2013). This is why, among other things, SMEs are less engaged in e-commerce initiatives than their larger counterparts.

Secondly, the e-marketing dimension refers to the use of digital facilitators to undertake marketing and
### Table 1. Cross-analysis facilitators/export practices

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Table 2. Bibliographic references from the cross-analysis

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Digitalization and SMEs’ Export Management: Impacts on Resources and Capabilities

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Promotion (Mazzarol, 2015). It leads to higher profits, enhanced market share, and growing brand equity (Eid & El-Gohary, 2013). According to the cross-analysis, e-marketing facilitators are numerous and impact more or less all export management practices. However, a bigger impact appears for export practices related to openness (networking and business intelligence), strategy (building of a strategic vision and intellectual property management), and developing the company’s offerings through adapting the traditional 4 Ps of the marketing mix: Product, Promotion, Price, and Place.
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Thus e-marketing facilitators can be used to reach several objectives. First, these facilitators foster the online communities of the firm’s customers, through the use of social media, among other things, to increase the strength and frequency of the firm’s interaction with customers (Roopchund, 2019; Eid et al., 2019; Pergelova et al., 2019). They also enable the collection and integration of customer information from various sources, as well as the usage of this information to assess customer value and engagement. Electronic interactions indeed enable firms to acquire new customers, to retain existing customers through improved customer satisfaction, and to up-sell their products through better and timely customer knowledge (Guidici & Blackburn, 2013).

However, Ghalandari (2013) shows that the positive relationship between e-marketing facilitators and a company’s export capabilities has a higher impact on international markets when digital tools are employed for communications development, instead of only for information search and sales activities. The ability to conduct online meetings or to speak directly to customers strongly reduces social and cultural distance. It also improves the company’s understanding of its customers’ views and needs, while disseminating a strong brand awareness (Eid et al., 2019). Nevertheless, it is widely believed that “remote” meetings cannot ever fully replace the “personal touch” (Tseng & Johnsen, 2011).

We find it interesting to note that e-marketing facilitators are able to lower technological barriers regardless of a firm’s size and resources. While large firms have been the early adopters and beneficiaries of most marketing innovations, an increasing number of SMEs are also rapidly adopting digital innovations to extend their market bases, and remain competitive (Kim et al., 2013). For example, a recent report revealed that the emergence of online platforms, such as Facebook and LinkedIn, offer low-cost options for SMEs to connect with foreign customers and facilitate their internationalization (Manyika & Lund, 2016). This is why a social approach to Customer Relationship Management (CRM), through website and social media, appears to be a relevant and productive strategy to engage customers in a collaborative conversation, in addition to monitoring traditional customer-business interactions.

However, viral network effects typical of more consumer-oriented social media do not seem to be validated in a B2B environment. In this specific context, a fear of losing control and an unwillingness to share valuable information appear to hold back SMEs. This reduces the use of online B2B platforms in particular (Guidici & Blackburn 2013; Costa et al., 2020). This can be explained by the fact that the end-customer context (B2C) is more emotionally reactionary, than the B2B market, where the interactions tend to be more rationally strategic. Thus, the B2B context involves co-creation and innovation from an industry- or process-specific point of view, whereas the B2C context concerns service- or design-oriented innovation in particular (Takova et al., 2019). This strongly modifies the way companies communicate and share information. However, e-marketing remains an impactful facilitator in the B2B context, because it allows a strong network strategy to facilitate communication processes, and effective brand and image promotion (Kim et al., 2013).

Finally, e-business tools are important for SMEs in order to keep track of impacts and implications, and to develop the distinct capabilities needed to reach international markets (Grandon & Pearson, 2004). According to our cross-analysis, e-business facilitators are the most representative and impact export practices in a global way. Relying on the definition of e-business facilitators above, the global impact factor makes sense because digital tools aim at supporting the global organization of firms (Mazzarol, 2015). Therefore, the impact of e-business facilitators on the export management of SMEs is spread across all internal components of a SME’s organization. If a stronger impact seems to appear for practices related to supply chain management (relationship with suppliers, distributors, operational adaptation, production adaptability) and to networking practices, nevertheless a strong impact also appears for knowledge management practices, through information capitalization and feedback.

Thus, digital e-business facilitators provide consistent support for information management, by providing better and easy acquisition of information about foreign markets through new channels of information (Cassetta et al., 2019; Traşcă et al., 2019; Costa et al., 2020). They also foster information sharing between companies’ internal stakeholders and potential partners, by enabling actors to make their own contents available using digital collaborative platforms (Costa et al., 2020). Entering into this collaborative approach, companies and their partners are involved in activities that require group coordination, behavioural adaptation, and alignment.
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between the objectives of the group and individual actors. Digital tools are strong facilitators to foster these kinds of practices. For example, Bahri Korbi et al. (2019) explain that the adoption of digital artifacts (common databases, videoconferencing, teleconferencing, screen sharing) by strategic partners leads not only to the establishment of a common working language, but also to a decrease in the degree of inter-organizational uncertainty, and improvement in mutual understanding. These elements are particularly relevant in an international context because they reduce the risk of conflict, mitigate cultural differences between partners, and even turn into an asset for the alliance (Trabelsi, 2016).

These findings are particularly true in the specific case of high-tech SMEs that are more used to supporting their internationalization process through intelligence gathering activities, to investigate and expand their connections across a worldwide business network (Loane, 2005). Digital technologies indeed play an increasingly important role in the search for complementary partners within the overall supply chain (Guidici & Blackburn, 2013).

Moreover, the use of digital channels such as social media enables a company to recruit employees (Traşcă et al., 2019). Employees are also users of and contributors to digital content provided by companies on the internet. So, it is crucial that they understand the impact of digitalization on business and undertake training for improved competences (Kim et al., 2013).

Digital tools also provide an additional channel for increasing knowledge of foreign markets and potential competitors (Cassetta et al., 2019) through a strong process of market, technology, and economic intelligence (Jardim-Goncalves et al., 2013; Wąsowska, 2017; Joensuu-Salo et al., 2018; Igartua et al, 2018). As an example, public e-procurement systems appear as a relevant channel for companies in terms of business intelligence. Policymakers generally pay little attention to dissemination procedures and formats. Consequently, information on awarded contracts is provided through various e-procurement and transparency portals. This may improve a company’s tendering capabilities and reduce difficulties faced by SMEs in winning public contracts.

Supply Chain Management (SCM), and Enterprise Resource Planning (ERP) applications, serve to enhance internal production processes (Cassetta et al., 2019). They foster companies’ capabilities to improve flexibility in manufacturers’ supply chains, reduce cycle time, and deliver products to customers in a timely manner (Jardim-Goncalves et al., 2013; Cook, 2015; Traşcă et al., 2019).

Thus, the role of e-business facilitators is rather different from e-commerce and e-marketing because they contribute to changing production and internal management processes, as well as to supporting partners’ integration in the supply chain.

Conclusion

This article aimed to study the relationship between digitalization and internationalization of SMEs. More specifically, this research work identified the theoretical impacts of digital facilitators on companies’ export practices. Adopting a joint vision between the integration of digital resources and their usage through specific capabilities, digital facilitators were identified in the literature and classified according to three categories: e-business facilitators, mainly concerning online transactions, e-marketing facilitators, that aim at promoting and communicating; and finally e-business facilitators, concerned with the modification of a company’s internal organization, as well as its supply chain. A cross-analysis of data collected was carried out using best export practices from the PEI framework as a basis for comparison. The objective of this cross-analysis was to identify potential impacts of facilitators on SME practices. The cross-analysis was carried out with the help of an extensive literature review.

This research highlighted various impacts according to the type of facilitators (e-commerce, e-marketing, and e-business) and export practice considered. Indeed, the most impacted export practices are those related to the strategic positioning of companies, the adaptation of their offerings, openness, and organization. Operational practices related to the export process are less impacted. Moreover, the facilitators with the most global impact are e-business facilitators, as they directly concern a company’s internal functioning and modify its processes as a whole. E-marketing facilitators also have a strong impact, but are more focused on practices related to communication and customer relations.

Thus, this study showed various impacts of digitalization
on SMEs’ export management. However, these results have some limitations and open the way to several different research perspectives. First of all, this research was based entirely on an exploratory review of the literature, which made it possible to construct a theoretical object of study, but which requires empirical validation. This work therefore represents a first theoretical step to be confirmed and confronted in the field. In addition, this study was carried out on the basis of a bibliography focused on SMEs, containing a rather limited number of scholarly articles. An analysis generalized across all companies could be a means of visualizing the differences between the digital practices of SMEs and those of larger companies. Indeed, some digital facilitators are easier than others to set up for small business structures and, in this context, the acceptability of the digital facilitators deployed, both in terms of the resources that can be mobilized and the skills that can be implemented, is an issue to be considered further with analyses of the impact of digital systems on export practices. Prioritization for such studies could be envisaged to limit the effort required while optimizing the impacts. Finally, we chose to focus our analysis on exports. However, digital technology is a valuable asset to be mobilized in the case of more advanced internationalization modes, for example, opening a subsidiary abroad or establishing a joint venture. It would be interesting to broaden the scope of this study, to also take into consideration these modes of internationalization. Finally, a study on “born-global” SMEs can also be envisaged.

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Keywords: SME, digitalization, export practices, facilitators, impacts