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Chapter 1: Business Models and Organizational Choices for SMEs in the Digital Single Market

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1. Introduction

Digital technologies have been offering small and medium-sized enterprises (SMEs) unparalleled opportunities for change and growth through the definition and implementation of a digital strategy. Digital technologies comprise a constantly expanding set of interconnected tools like 3-D printers, the Internet of Things, blockchain technology, augmented and virtual reality (Garzoni et al., 2020; Hervé, et al., 2020). While the possibility of resorting to new technologies paves the way for new markets, products, and services, the digital journey has not been devoid of difficulties for SMEs. A study by Becker and Schmidt (2020) showed, in fact, that most SMEs (63%) had no digital strategy and that they were mainly focused on the use of basic software solutions (47%) rather than the exploration of cutting-edge possibilities.

This chapter parses out digitalization pathways for SMEs and highlights their implications for internationalization and relationships along the value chain. It will then delve into business model innovation to sustain digital strategies and analyze the organizational factors that may enable or hamper such processes.

1.1 Digital Processes in SMEs

The digitalization process that SMEs use has been described in the literature as a multiple-stage approach. The most cited model proposes three phases (Eller et al., 2020; Verhoef et al., 2021): First, *digitization* implies turning analog signals into digital ones as a rationalization action aimed at improving overall efficiency. Second *digitalization* calls for an enhancement of coordination among information gathered and treated in different organizational areas, e.g., among procurement, production, and sales. Enterprise resource planning systems that are widely employed by companies to allow for joint operations across different units can be considered as instances of this stage. Third, *digital transformation* takes advantage of new technologies to dramatically revise products and services offered as well as markets served, thus modifying their business model and organizational structure. The literature on this topic has underlined how remarkably rare it is for SMEs to reach the digital transformation stage. Most of them remain stuck at the previous, less invasive phases. The difficulties that SMEs embrace along the digitalization pathway are discussed in this article.

Kane (2019) depicted a four-step model in which the four phases that a SME can go through may be interactive and recursive, rather than sequential. A firm begins by envisaging digitalization options (exploration), then implements the adopted solution (development), gains efficiency in its usage (maturity) to finally be truly digital (Garzoni et al., 2020). In this regard, Hervé et al. (2020) introduced a plainer distinction between *becoming digitized* and *becoming digital*: while the former addresses the improvement in the current business model that the digital technologies allow for, the latter calls for business model innovation in terms of value creation, proposition, delivery, and capture (Verhoef & Bijmolt, 2019). Regardless of the process or the proposed distinction, the SME's struggle to proceed along the digitalization pathway has been highlighted (e.g., OECD, 2017; Dethine et al., 2020). Faced with the evidence that becoming digital represents a bigger challenge for SMEs than for large companies, the outcomes and hindrances of digitalization processes need to be considered. SMEs that embark on the digitalization journey expect to change their relationships in the market and reshape the power distribution among companies of different sizes, thereby improving the SMEs' performance. Digitalization has, in fact, lessened an SMEs' dependence on large firms due to a variety of factors. Oliveira et al. (2021) addressed this aspect of SMEs that pursue a digital strategy to develop potential digital power.

One of the main points in the pursuit of digital power is innovation capacity, which is more easily accessible to SMEs (Ardito et al., 2021; Oliveira et al., 2021). Digital technologies enable small companies to avail themselves of both convergence of information previously spread across heterogeneous products, media, markets without coordination, and generativity, i.e., the possibility to identify an unforeseeable combination of resources, without depending on external providers.

A marked effect regards customers. Because most digital assets are modular, asset specificity diminishes. Modules can be directly arranged to satisfy different customers' requests in different markets without being part of the global value chains that are usually orchestrated by larger firms (Favoretto et al, 2021). Relatedly,

the need for market intermediation is also diminished because digital assets allow for straightforward contacts between SMEs and clients (Hervé et al., 2020). On top of that, digital technologies are enabled to add services to products that can make them more appealing (Ardito et al., 2021). Servitization—or product-service integration—tends to be hard for SMEs to implement in the absence of digital technology.

If, on one hand, digital technologies pave the way for a positive change in relationships with customers, on the other hand, these same relationships need to be nourished in a way that may not be familiar to SMEs. A hedonistic component must be injected into shopping experiences pre-purchase, and social presence must be kept post-purchase. This fills the overall interaction process with positive emotions (Matarazzo et al., 2021). While augmented reality is an example of digital technology that can help potential clients get a preview of the products and services they are interested in, it is the support conveyed by SMEs throughout the entire process by means of social media that can grant them long-term relationships with clients (Matarazzo et al., 2021).

For SMEs, a particularly relevant positive effect of digital technologies lies in the impetus yielded by the internationalization processes. Digital assets can offer SMEs the opportunity to fill different market expectations without the necessity of being physically present (Hervé et al., 2020; Dethine et al., 2020; Ardito et al., 2021). Small- and medium- sized enterprises have traditionally suffered from liability of foreignness. The costs of location specificity diminish when products and services are partly or totally made available through digital assets (Hervé et al., 2020). Along the line of reasoning argued above, the potential for setting up new relations that digital technologies endow SMEs with becomes especially relevant in international contexts. SMEs, in fact, faced a condition of outsidership when entering new markets because the difficulty of running operations locally due to the high costs required would prevent them from building a network of international relationships (Brouthers et al., 2016). Digital strategies can make up for a feeble tangible presence in the market, provided, here again, that the social valence of the digital assets is fully employed throughout the process. Digital assets must be integrated and supported by a digital strategy that comprises the possibility of practicing e-commerce (mainly digital platforms to manage online transactions), e-marketing (mostly social media to attract new customers and retain already acquired ones), and other e-business facilitators like digital analytics tools able to improve organizational processes.

When dealing with digital processes in SMEs, one cannot refrain from inquiring into the possibilities that popular digital platforms like eBay, Amazon, Etsy, or Alibaba have made available to them in terms of market expansion and internationalization. Platforms combine information and relationship management as core elements of digital strategies. They allow a large amount of information to be gathered, stored, retrieved, and shared among a plurality of actors, which overcomes the constraints posed by geographical boundaries (De Reuver et al., 2018; Kääriäinen et al., 2021). Technically, platforms are made of both core and replaceable modules that simultaneously enable scalability through the centralized design of a shared system architecture that cannot be changed and the ability to evolve through the adaptation of variable modules to firms' specific needs (Wareham et al., 2014). By creating a mix of fixed and modifiable modules, platforms favor SMEs' digitalization processes as well as their access to international markets.

While a link between digital platform capabilities and network capabilities has been acknowledged (e.g., Teece, 2018; Cenamor et al., 2019), the effect of network capability—intended as “coordination of groups and individuals that share a common structure and a common result, the internal communication of the external knowledge, the relational skills for handling diverse individuals and the partners' knowledge” (Cenamor et al., 2019, 198) on SMEs performance—appears to be moderated by the firm orientation toward exploration or exploitation. Exploration refers to the willingness to engage in new courses of action, targeting prospective markets, products, and services, while exploitation aims at gaining flexibility in extant processes. Network capabilities are maintained to positively affect the economic performance of SMEs that pursue exploitation, just as proficiency in establishing and cultivating relationships enhances experimentation with new opportunities, but negatively affects SMEs that aim at exploitation (Cenamor et al., 2019). This argument raises concerns about the possibility of attaining ambidexterity, i.e., the achievement of both exploration and exploitation, for SMEs that harness platforms. Wan et al. (2017) advanced the idea that this goal might be fulfilled through platforms because exploitation can be rooted in platforms' fixed modules, while exploration can exploit against adjustable modules. Conversely, Cenamor et al. (2019) questioned the feasibility of ambidexterity for SMEs even when platforms are employed.

Designing and implementing a digital strategy is replete with SME hindrances. The most relevant problems in this area can be traced back to financial resources and organizational processes. Financial resources represent a core problem in the path to digitalization (Bouwman et al., 2019; Favoretto et al. 2021; Becker and Schmidt,

2020): acquiring them is often too expensive for SMEs compared with large enterprises. According to Becker and Schmidt's (2020) study, most SMEs are used to resorting to sales revenues to fund their digital initiatives. They rarely use other sources like loans, unlike bigger companies. Consequently, SMEs are imbued with fewer opportunities for financing digital strategies than their larger counterparts.

On the organizational sides, difficulties are multifaceted. Literature has stressed the need for organizations to change their processes and structure to thrive in the digital market (OECD, 2017; Cenamor et al., 2019). Cenamor et al. (2019) referred specifically for the necessary search for organizational alignment. Misalignment can be primarily due to the lack, or weakness, of cultural values that are essential to foster digitalization: agility, innovativeness and analytical thinking are tenets of an organizational culture supportive of major changes like digital transformation that are argues to be mostly missing in SMEs (Eller et al., 2020; Ardito et al., 2021).

Besides, the human factor takes center stage in SMEs, as both management and employees tend to have a saying in strategic decisions, digitalization included (Dethine et al., 2020). A critical point addresses top management. Top managers are expected to communicate effectively throughout the organization the challenges and opportunities that a digital strategy can entail for the organization. Conversely, they often show weak commitment, overlooking the essential role of communication (Favoretto et al., 2021). Senior managers should openly express their trust in digital technologies and sponsor attention to relationships with customers who are managed online (Eller et al., 2020).

Moreover, a different mindset and updated competencies are required at all hierarchical levels in SMEs who pursue a digital strategy. Not only technological expertise, but also problem-solving skills have to be the basis for the selection of new personnel as well as need to be developed by seasoned workers (Eller et al., 2020; Matarazzo et al., 2021). Remarkably, the goal of enriching SMEs employees' experience in the digital domain is accomplished by means of external support provided by research centers and consulting companies (Kääriäinen et al., 2021).

Although the dramatic transformation in organizational processes required to fit a digital strategy might appear demanding and, in the end, discourage managerial effort, it must be noted that the flatter hierarchies and relatively unstructured procedures that underpin SMEs functioning make them more flexible and prone to change. Once the decision to become digital has been made, the related technological and marketing skills have been developed and financial resources have been acquired, SMEs might implement them more effectively than large companies (Becker and Schmidt, 2020; Ardito et al., 2021). The remainder of the chapter delves into the organizational processes and business models that can help SMEs elaborate and implement a digital strategy.

2. Processes and Organizational Factors for SME Digitalization

In the first part of the chapter, we discussed how the evolution of digital technologies offers SMEs unparalleled opportunities for change, growth and entry into new markets and products. We also discussed the difficulties of digitalization for SMEs compared with larger firms in the face of limited resources and know-how. We then explored some examples of business models for SMEs; diverse ways of organizing that might support SMEs through the phases of digitization, digitalization and effective digital transformation (Verhoef et al., 2019; Eller et al., 2020). In this section we first discuss in more detail the organizational processes required to sustain the digitalization of SMEs, and some of the constraints they face. We then analyze the key organizational factors that enable, and sometimes hinder, digitalization for SMEs.

2.1 Processes Required to Sustain SME Digitalization

The organizational processes required to sustain the digitalization of SMEs transcend the primary and support activities of the firm's value chain. Digitalization of the processes that support the primary and support activities in the organization's value chain in Figure 1.1 is a potential source of cost advantage and will help the organization improve its competitive advantage.

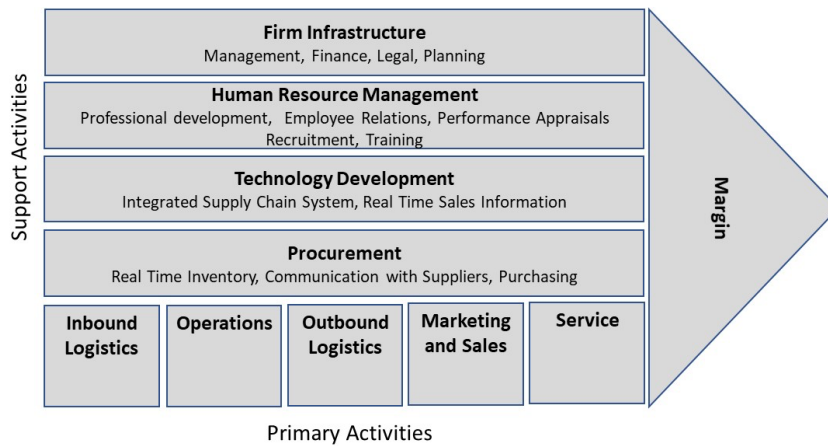


Figure 1.1: Value chain analysis (Adapted from Porter, 1985)

2.1.1 Operations and supply chain

SMEs able to digitalize operations and supply chain processes may benefit from the efficiency of real-time inventory, purchasing and sales data and improved communication with suppliers and customers (Kääriäinen et al., 2020). They may also be able to reduce their dependency on lead firms. Oliveira, Fleury and Fleury (2021) argue that, whereas SMEs are often portrayed as dependent suppliers operating in ancillary positions in value chains, digitalization can break that dependency and shift the power balance in favor of suppliers by making it easier for them to internalize new activities and valuable knowledge on their own. They claim the greater the degree of process automation, the greater the reduction in dependency. However, Oliveira, Fleury and Fleury (2021) found that although SMEs have the competency and experience of operating as suppliers of other firms along the value chain, their movement toward expansion or upgrading are often constrained by the lack of financial resources and sometimes appropriate legislation. Their failure to expand and upgrade may result in the loss of talented employees.

2.1.2 Marketing, sales, and service

Digitalization not only enables SMEs to strengthen their operational and supply chain processes, but it also helps them overcome the disadvantage of size and realize the unprecedented benefits of managing a large and growing number of diverse relationships with customers (Cenamor, Parida and Wincent, 2019). Consumer behavior is changing in response to the digital revolution (Verhoef et al., 2019). Digitalization enables SMEs to significantly enhance their relationships with customers, facilitating customer value creation through the adoption of digital technologies that support all stages of the customer journey. This, in turn, enables SMEs to introduce a social dimension, a direct and emotional connection with the customer, as well as the rapid development of brand image, at a lower cost (Matarazzo et al., 2021).

This is especially true for international markets, where digital instruments are becoming essential for engaging new customers, creating relationships and brand affection, directly selling products abroad, and better understanding consumer needs and changing attitudes (Matarazzo et al., 2021). However, whereas Joensuu-Salo et al. (2018) found that the positive impact of digitalization on the performance of SMEs operating in their domestic markets was significant; digitalization had no impact on the performance of internationalized firms. They claim this suggests that the tools of digitalization are more difficult to utilize fully in the context of a foreign culture. Operating in a more familiar market makes it easier to exploit the positive effects of digitalization.

2.1.3 Management and planning

More agile governance and flatter, more flexible structures are required for successful digital transformation. Businesses that transform successfully leverage fast and simplified decision-making (Becker and Schmid, 2020). Planning is also an important process for digitalization and may itself benefit from greater automation for increased control and visibility. Practitioners and academics agree that a firm's digital transformation road map must be incremental, cost effective, and sustainable; broken down into manageable iterations; and linked to a strategy that is tied to business outcomes and goals (BCG, 2022; Kääriäinen et al., 2020).

2.1.4 Human resources

Digitalization depends on human capital as well as technological resources. Sousa and Rocha (2019) found that innovation, leadership, and management skills may require considerable development to manage digital disruption. SMEs can learn by studying trends and ways of doing business from bigger competitors and sensing customer needs. This can support the start of digital transformation (Matarazzo et al., 2021). However, digitalization involves developing more agile ways of working, embedding behaviors and a culture that fosters cross-functional collaboration, iterative development, and a new approach to learning that enables people to adapt and innovate (BCG, 2022).

Digitally-skilled employees are necessary for the implementation of disruptive digitalization, hiring new human resources may be a necessary condition. Furthermore, those digitally-skilled employees are central to rebuilding values, norms, and organizational behavior during the transformation process. New organizational functions to deal with e-commerce and digital marketing departments must be created and integrated with traditional functions (Matarazzo et al., 2021). The knowledge from "new" employees may also be deployed to train "old" employees, integrating coordination capability and digital knowledge throughout the organization (Matarazzo et al. 2021: 653).

2.1.5 Technology development

Technology development and implementation is a vital support process for SME digitalization. Garzoni et al. (2020) claim that ICT solutions and business standards often hinder electronic collaboration between companies along the industry's value chain, and this is an issue for SMEs. They claim digital transformation of SMEs is still characterized by limited R&D and innovation performances.

However, in their case study of a project aimed at promoting the digitalization of SMEs, Garzoni et al. (2020) found that by supporting SMEs through the stages from digital awareness through to digital transformation and strengthening the technology expertise of SMEs, they were able to overcome resistance to change. Further, by leading SMEs into a process of growing commitment and awareness SMEs were able to identify potential benefits, and interventions and create a digital transformation road map starting from their various levels of digital maturity. Digital transformation was then characterized by revolutionary processes in the strategic and organizational configuration of the company. This is supported by (Li et al., 2018) who found that SME entrepreneurs, with support from the digital platform service provider, were able to drive digital transformation. Garzoni et al. (2020) found that, despite the technology being essential to the process of digitalization, human and social capital is critical. Kane (2019) found developing a culture of continual learning, recognizing, and rewarding collaboration, accepting an appropriate level of risk of failure, and increasingly organizing around cross-functional teams were fundamental to successful digital transformation.

2.2 Organizational Factors

Digitalization is not just technology, and it is not just change management. Leading experts agree that digitalization is pervasive and must exist in every part of the organization to be effective. Tinkering at the edges is not enough (BCG, 2022). In practice, this means that firms must craft a clear, integrated strategy and a committed leadership team who are sufficiently skilled to implement transformational change across all areas of the firm's value chain. Employee skills and customer skills identified in our discussion on processes are also key enablers of successful digital transformation. However, SMEs must be willing to change and learn.

2.2.1 Formulating an integrated strategy

According to BCG (2022), only 30% of digital transformations succeed. This is especially relevant for SMEs where the liability of size creates unique challenges (Cenamor, Parida & Wincent, 2019). The ability to formulate a digital strategy is a key organizational factor that may affect transformation success or failure. Digital transformation means embracing digital transformation technologies, transformation of value creation mechanisms, and organizational changes that involve financial planning. This permeates the wider organization, transcends existing traditional company borders, and requires a strategy that coordinates the entire transformation to reach the defined goal. Small and medium-sized enterprise managers need to develop key performance indicators and actions to monitor the transformation progress (Kotarba, 2017). However, Eller et al. (2020) found that digitalization does not support financial performance on every level, so a detailed strategy and a robust digital value measurement system, supported by easily accessible data, will be needed to identify undesirable developments. Therefore, digital transformation has consequences for the metrics used to calibrate a firm's performance. SMEs must decide which performance metrics are essential and how these will evolve across the different phases of digital transformation (Verhoef et al., 2019). Metrics will need to cover primary and support activities in the value chain including the performance of digital platforms, given the increasing reliance on networks (Verhoef et al., 2019).

The European Commission introduced a performance measurement system to track the evolution of digital competitiveness in EU member states. They used the Digital Economy and Society Index, which includes many base metrics (European Commission, 2022). Digitalization is also commonly measured at the industry level using metrics such as McKinsey's Industry Digitalization Index (McKinsey Global Institute, 2015). Kotarba (2017) found that a number of base metrics used at country and industry level are in line with those required at enterprise level—digital solution users (gross and net), web site activity tracking, and social media performance, for example. However, there are significant additional measurement areas required at the enterprise level that are not covered, such as the performance of e-commerce and digital customers. Core e-commerce metrics might include visitor/client conversion, digital traffic sources, cross-sell ratio, and campaign performance. Digital customer metrics might include digital revenues/sales and assets; online solution usage, digital self-service ratio, and the evaluation of online experience by customer segment. Key metrics will also need to include performance against business cases such as return on investment; payback; net present value, and internal rate of return (Kotarba, 2017).

2.2.2 Leadership

Committed and sufficiently skilled leadership is required for successful digitalization. Leadership means leading transformation from the top while imbuing every level with responsibility (BCG, 2022). According to Kane (2019), companies must rethink leadership and talent if they are going to manage digital transformation effectively. BCG (2022) claims the most successful digital transformations start with a shift in mindset at the employee, leadership, and organization levels. This shift produces a culture change that allows the company to be more agile. A further factor is who is leading digital progress. Kane (2019) suggests digital transformation needs to be led initially from the CEO's office. Roles change as organizations mature digitally. The position of digital leadership evolves as digitalization evolves.

2.2.3 Being receptive to change and learning

SMEs should find it easier than larger organizations to evolve and change but, despite the availability of low-cost technologies and the benefits for marketing and customer relationships, they lag behind larger firms when it comes to digitalization (Eller et al., 2020). Successful digitalization is characterized by a willingness to change and to learn. Matarazzo et al. (2021) found the trigger for the digital transformation of SMEs is usually the willingness of the company's owner to transform. However, there is widespread resistance to change among SMEs. A study by the Austrian Professional Association of Management Consultancy, Accounting and Information Technology (UBIT) found that the introduction of Data Protection legislation in 2018 improved the digital awareness of SMEs. However, many identified the main barriers as lack of know-how, legal and financial constraints, and the lack of high-speed internet. It was found that SMEs that were digitizing quickly recognized the additional opportunities, economically and in terms of jobs and customer acquisition. Those

SMEs that had little exposure to digitization showed uncertainty and skepticism. The demand for advice and support among SMEs in the study was high.

According to Kääriäinen et al. (2020), SMEs are struggling with limited resources and need practical help with leadership and management skills in specific areas such as more agile governance, digital customers, and marketing skills. SMEs must address significant obstacles to benefit from digitalization. Smaller SMEs seem to need practical support in identifying digital opportunities, finding solutions, structuring digital development, and exploiting international digitalization.

A lack of understanding, resources, and the liability of smallness may discourage some SMEs (Cenamor, Parida & Wincent, 2019). Amaral and Peças (2021) summarized the hurdles facing SMEs. These include: a lack of confidence in data security and privacy, especially in connection with the use of external data and concerns with cybersecurity; a culture of hierarchical structures and internal bureaucracies combined with conservative leadership, deterred by the experimental nature of some digital technologies; a lack of expertise and knowledge and experience, meaning that SMEs are often unable to assess their own capabilities and readiness for digitalization; difficulty in grasping the concept of digitalization; and a lack of clarity about the economic benefits and not knowing where to start to generate new growth opportunities. This may all result in a lack of clear operational vision and leadership from top management. The lack of digital standards, norms, and certifications and the slow expansion of broadband infrastructure are further barriers.

There may be scope for public actors to inform SMEs about the potential of digitalization and to help change attitudes toward digitalization (Kääriäinen et al., 2020). SMEs may choose to enlist the help of consultants who are experts in digital transformation. Fenwick et al. (2020), in their evaluation of digital business transformation services providers, found that connecting strategy and technology to outcomes are key differentiators. They argued that for companies to move beyond digitization to digital transformation, it is no longer sufficient for transformation vendors to deliver piecemeal digital services in projects spanning years.

Transformation services firms that minimize time-to-value (the time it takes a new customer to realize value from the product) while tightly integrating business strategy and technology innovation with operational design and change management. They position themselves to successfully deliver transformational revenue growth and profitability to their customers. Fenwick et al. (2020) applied three evaluation criteria: First, the willingness of providers to share risk by agreeing to smaller incremental contracts built around delivering measurable business outcomes, for example. Second, the ability of providers to combine industry, technology, and organizational expertise into outcome delivery. This acknowledges that the key to success is how well providers can orchestrate all these capabilities together into a single transformation solution with the scope to support transformation to become a digital company. Finally, the ability to accelerate time-to-value with (usable) software assets. This is about building in adaptability as well as agility so that businesses can respond to rapid economic, market, and customer changes. However, the leading providers identified by Fenwick et al. (2020) Boston Consulting Group, McKinsey & Company, and Accenture tend to work with large corporations. Nevertheless, there are a plethora of smaller consultancies specializing in providing digital transformation services for SMEs. However, consultancy is an unregulated industry and SMEs should do their research (Kirkpatrick, Muzio & Ackroyd, 2012).

3. Business Models

While in the previous section of this initial chapter, we investigated the impact of digitalization on SMEs assuming an inward-looking perspective, in this last part of the chapter the attention switches toward the changes introduced by digital transformations to business models of SMEs. Focusing on this strategic perspective, we first delve into the general idea of how different business models might be affected by digital transformations. Then we look more closely into the strategic choices faced by SMEs in the (re)design of their business models to conclude with a reflection on how SMEs could benefit from the value of digital transformations.

Business model literature has been strongly intertwined with studies on technology (e.g., Gambardella & McGahan, 2010; Sosna et al., 2010) and innovation (e.g., Baden-Fuller & Haefliger, 2013). Although several definitions of 'business model' have been produced, for the purposes of this discussion, we consider business models in the most concrete way possible as "how a company makes money" (Birkinshaw & Goddard, 2009, p. 81). In this view, business models combine the idea of how, though the combination of resources, capabilities and activities, a company can create revenues and make profits (Gambardella & McGahan, 2010, p. 263; Zott & Amit, 2010, p. 219), which traditionally are considered in economic terms as the activities of value creation and capture, respectively. In other words, as well explained by Massa et al. (2017), in this

perspective, business models are attributes of real firms and are qualified by (1) a set of activities performed by an organization to achieve an outcome, by making use of resources and capabilities and interacting with suppliers and partners; and by (2) the outcome created by the business model which is also represented by the value created and captured.

3.1 Business Model Types

Whereas the discussion about the alternative definitions of business models might be of some academic interest, it makes sense to look at the strategic choices that firms take when they consider the adoption or change of a business model. The choice is among four different types of business models identified by Baden-Fuller and colleagues (see Baden-Fuller et al., 2018 and their previous contributions: Baden-Fuller & Haefliger, 2013 and Baden-Fuller & Morgan, 2010). These authors present examples of SMEs, and we discuss the possibilities they enjoy for digitalizing their businesses. The first two business model types are called *dyadic* because they assume the form of a one-to-one relationship between two organizations: they are the product business model and the solution business model.

The **product business model** is based on the provision of a product/service to clients. The payment for the product/service happens usually before or immediately after the exchange. This quite common type of model applies to many commodities such as fuel, but also food and other common physical products. The use of the product typically happens after its purchase. Many SMEs operate on this model, directly selling their products to customers. Considering the digital aspects, it is worthy to note that, when business models are digitalized, the change process should not be confounded in the substitution of this business model with the third type of business model, where the exchange happens on a platform.

An example of a digitalization of this business model could be the online website of a local shop selling groceries. In this context, digitalization might encounter considerable technological limits in terms of development and visibility, as we will discuss later when we look at the *scalability* of the models for SMEs.

The **solution business model** is quite like the previous model. The difference is that what is offered to clients is customized for their particular needs. Iconic examples are tailors, make-up artists, and video makers. As for the previous business model type, the digitalization of the solution business model is constrained by the one-to-one interaction between the two parties.

The digitalization would influence the distinction between product and solution business models: product configurators may be available to enable customers to choose among a set of features for the product, such as color, engine size, or optional accessories. This is quite typical of some modular product such as vehicles and is identified as *mass customization*. Mass customization offers products or services with some aspects of customization within a range of prices that are able to raise the interest of a wider group of customers. This strategy attempts to combine some elements of differentiation with the benefits of the economies of scale, typically pursued in low-cost strategies. Customization can be connected to the digitalization of the business model because digital technologies open the possibility of devising a definite number of options related to the offered products. This is the case with the personalization of apparel shopping such as Nike and Adidas shoes (e.g., Piller et al., 2004).

The second class of business models is called *triadic* because they involve interaction among three parties.

The first triadic business model is called the **matchmaking business model**. One of the three parties is a platform where sellers and buyers (the other two parties) meet to trade products or services. A typical example is represented by the Deliveroo model: Deliveroo is a popular app where food is offered by restaurants to final consumers, and the transport is managed by the app through the employment of gig economy workers. One or both parties exchanging products or services could pay a fee to the platform.

Platforms could also use physical spaces such as local markets or stock exchanges. The introduction of digital technologies and their widespread access facilitated the development of platforms that complement and gradually substitute dyadic business models. For instance, a restaurant can offer its services directly through a product business model but also on Deliveroo as one of the parties of a matchmaking business model. What space do SMEs have in matchmaking business models? Besides the obvious role of clients, SMEs are possible sellers of goods and services. The presence on a platform could benefit their visibility to a wider community and could also enable them to manage parts of their value chain where economies of scale and scope can be reached only at a platform level. For instance, the management of the relationship with the customer, who is in contact with customer support of the app and not of the restaurant directly, reduces the restaurant activities so it can focus on the creation of value through the preparation of food.

Besides being sellers, SMEs can also engage in the development of a platform. It is interesting to note how some platforms developed as start-ups. One example is eBay, which was created by Pierre Omydiar in 1995 (Gitlin, 2011, pp. 6–13). Critical to the successful development of platforms is the possibility to achieve network externalities to create a solid customer base and reduce the rise of strong competitors (Zhou & Lu, 2011).

The second triadic business model is called a **multisided business model**. In this model, a first group of customers (*customer beneficiaries*) receive a product or service below its actual cost, because a second group of customers (*paying customers*) offers to pay for the difference because they receive another type of benefit from the exchange. At the center of this business model there is a *platform organizer*: this organization can offer assorted products and services to the two groups. For instance, Facebook does not require users to pay for its services, but it sells its marketing spaces to a second group of customers. Value is thus created by offering assorted products and services to customer groups who are not directly in contact with each other, as happens in the matchmaking business model. This business model requires the ability to identify a product or service to be offered to both types of customers: the consumption of the free product or service done by the customer beneficiaries should create value for the paying customers. Both beneficiaries and paying customers extract value by the interaction and might pay a fee to the platform organizer. Online news portals, free newspapers, and web engines are typical examples. Charities also can be associated with the multisided business model by their ability to interact with donors, on one side, and people in need of help, on the other side. The two groups do not necessarily enter into contact, as all the interactions are mediated by the charity itself.

Digital technologies enable the creation of multisided business models in several ways (Gandia & Parmentier, 2017). First, if the platform organizer controls the technology and users are involved in the value creation, it is possible to optimize the value captured by the SME. Involving users in the creation of content such as circuits and cars in a video game increases the content variety with an open innovation approach: users are keener to receive a non-monetary form of value from the interaction, and the SME does not need to make a huge investment in content development. Second, digital technologies favor the creation of toolkits to manage the creation of contents and accelerate the time to market. Third, the multisided business model can be then considered as a sustainable model to create and capture value and to give impetus to the growth of an active community by means of dedicated software that supports value creation (Burger-Helmchen & Cohendet, 2011).

3.2 Strategic Choices for SMEs

In this last part of the chapter, we move to some considerations regarding the strategic choices related to the design of business models and some success factors that SME should consider. First, the product and solution business models require direct control of the digitalization process, which often challenges SMEs when fulfilling the minimum requirements. This may pose constraints to their digitalization. It is then more likely that SMEs will look at matchmaking and multisided business models to find the support of suitable digital platforms and expand their customer base. Becoming part of a triadic business model will expose SMEs to a situation where the value created in the exchange would also need to be shared with the platform. While the access to platforms may expand the customer base, the challenges posed by triadic business models refer to the increased complexity of the interactions and the dynamics of competition. In a matchmaking business model, the platform would be interested in expanding its user base, but this will attract more sellers and, consequently, affect the competition among them.

Digitalization and the rise of platforms reshaped the dynamic of competition. It marks an evolution from an industry-based competition (Porter, 2008) to an ecosystem-based competition (Jacobides et al., 2018). The choice of which of the four business models to adopt is a critical one and does not exclude the possibility of a combination of different business model types: for instance, a traditional restaurant (product business model) that also offers meals on the popular application Deliveroo (matchmaking business model, see Par. 3.1). Managers should consider that the presence on a particular platform can influence how value can be created and captured.

Also, terms of the relationship with customers involved in other business models, managers should evaluate which business models and platforms they want to target and how they will integrate them. The resulting combination of business model types is a strategic choice that should be considered well before the deep dive

into complex business model design activities such as a detailed work on a single business model canvas (see Osterwalder et al., 2010), which might constraint the strategic thinking in a detailed design process. Instead, a good starting point is the definition of a solid value proposition for each of the business models the firm is adopting. A value proposition is defined as ‘the bundle of products and services that create value for a specific Customer Segment’ (Osterwalder et al., 2010, p. 22). Osterwalder et al. (2014) divided the concept of value proposition into two building blocks: the customer (segment) profile and the value proposition itself. The former looks at customers’ needs, whereas the latter concentrates on how the products and services address those needs. We argue that these two fundamental blocks constitute the starting point for an in-depth evaluation that SMEs could conduct on creating and capture value in the four types of business models.

4. Conclusion

Sustaining the stages of digital transformation from initial digitization through digitalization to full effective digital transformation transcends all the activities on a firm’s value chain. The organizational factors that may support or hinder digitalization and that have the potential to make the difference between digitalization and SMEs realizing the full benefits of effective digital transformation are the ability to formulate a digital strategy and roadmap, leadership, employee and customer skills, and being receptive to change and learning. Some SMEs face financial, resource, and even legal constraints. Many require help with identifying the opportunities provided by digitalization and the skills required to carry them out.

A few emergent issues present challenges that lie ahead of SME digitalization. There is a possible trade-off between SMEs that wish to pursue digital and environmental strategies simultaneously. Both topics are taking center stage in managerial literature and both present major challenges that must be faced by SMEs. Ardito et al. (2021) questioned the feasibility of engagement in both digital and environmental courses of action. Here again, the issue of resources is core to SMEs. Environmental and digital strategies address heterogeneous goals and employ different resources that may go beyond SMEs’ financial and managerial possibilities.

A second topic deals with the type of relationships that SMEs undertaking digitalization should establish with customers. Success in the digital market is linked to social media usage that can take customers all the way through the purchasing experience: from the search for a product or service to post-sales assistance. Building long-term relationships with clients when markets are dedicated to specific transactions becomes a relevant question. SMEs are accustomed to relying on traditional distribution channels, often locally positioned, and on a solid reputation built over time. Operations in the digital market resort to social media extensively (Kääriäinen et al., 2020; Matarazzo et al., 2021). SMEs need to experiment and become familiar with a set of social media-driven marketing tools like collaborations with change agents and opinion leaders. This holds particularly true if firms home in on international markets (Brouthers et al., 2016). It then becomes fundamental for SMEs to consider their participation in matchmaking and multisided business models as possible strategic choices to enhance their digital strategy. Value creation and capture in these triadic business models relates to the particular business model type and with the role of the various actors on the selected platforms. A careful evaluation of the value proposition (see Par 3.2) and the sustainability of the combination of the different business models adopted by the SME is then of pivotal importance.

Finally, cybercrime and global legal protection are issues that must be coped with and are of the utmost importance in the digital single market (Hervé et al., 2020). In particular, SMEs may have limited financial and managerial resources, and it can be difficult for them to protect their businesses when making transactions online. Digital platforms and belonging to value chains orchestrated by large companies can provide more safety, but this is counterbalanced by a loss of independence on the SME side. The SME’s search for data protection can, therefore, present a trade-off: on one hand, digitalization can empower SMEs, reducing their dependence from large companies, but on the other, it can increase the need for SMEs to be related to value chains orchestrated by large companies and/or digital platforms to gain safe procedures in the digital single market.

Digitalization represents an outstanding opportunity for SMEs to strengthen their long-held weaknesses, especially in the international arena, and to exploit their valuable flexibility, but this promising avenue requires a dramatic rethinking of organizational processes and overall strategy.

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