

Digitalization and Its Impact on the Internationalization Models of SMEs



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Abstract In the European Union, SMEs represent as much as 99% of businesses, but only 3 out of 10 companies have some international involvement. EU policy makers perceive SMEs internationalization as a desired path for global growth; thus, they have put forward certain tools which aim to boost the pace and scope of internationalization, i.e., by creating and facilitating access to support activities, sharing information, promoting cluster and networking initiatives, making support schemes consistent throughout the EU, etc. (Della Corte, Handbook of research on strategic Management in Small and Medium Enterprises. IGI Global, 2014). However, a vital point in creating a successful internationalization framework requires understanding that SMEs internationalization models may and do differ from those of multinational enterprises (MNEs). SMEs have a different structure, and they act differently, since their aims vary from those of MNEs (Knight and Liesch, Journal of World Business 51(1): 93–102, 2016; Buckley, Journal of World Business, 51(1): 74–82, 2016).

Former studies of European SMEs indicate that there are specific traits of company characteristics that determine their internationalization process. Amongst the distinguished factors, size, activities performed, age, and experience counted as the most significant determinants of the expansion. However, these findings refer to occurrences dating back at least 5 years. In the era of rapid digitalization and—still—ongoing globalization, the impact of these factors might have diminished, making place for others. Therefore, the rising importance of digitalization calls for the need to identify new barriers and opportunities for SMEs to become international.

The aim of this chapter is to see whether and how digitalization has influenced the internationalization models of Polish SMEs. We do not provide quantitative analysis that would allow us to statistically verify hypotheses on that matter; however, given the recent developments of the business world and internationalization trends, we assume that digitalization has had an impact on how companies expand abroad nowadays. The study has a screening aim and should allow us to determine whether,

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in the case of the Polish context, the matter requires further pursuit. The remainder of this chapter is structured as follows: first, we discuss the internationalization models which commonly referred to the international expansion of SMEs. Secondly, we discuss how digitalization can influence the process and its determinants. Finally, we present our research results based on quasi-focus group discussion with Polish SMEs. The study concerned the impact the digitalization has on the internationalization experience of those companies.

Keywords Digitalization · Internationalization · SME · Poland

1 Selected Internationalization Models of SMEs

Internationalization means having some international involvement. Scholars distinguish between active internationalization, which means expanding the geographical range of the company, and passive internationalization, which refers to sourcing goods and services from abroad. The internationalization models discussed here concern the active approach, since such activities are said to boost growth, reduce unemployment, and enhance competitiveness. Internationalization is a phenomenon that accelerated in the 1920s (Ruzzier et al., 2006) and, due to globalization gained, strength and impact. Therefore, observing the business reality, scholars conceptualized the internationalization processes into models that were (and sometimes still are) specific to certain company groups.

One of the models that played a key role in explaining the internationalization process is the so-called Uppsala model, otherwise known as the dynamic sequential model. This framework, conceptualized in the 1970s, explains the process of a firm's internationalization; namely, how organizations learn and how their learning path impacts companies' international expansion. The dynamic model claims companies undertake expansion in a stepwise and orderly manner. They increase their commitment in both markets and operations. Firms are expected to start their operations in close markets, i.e., markets close to the domestic one in terms of psychic distance. They are also said to start with modes that do not require much investment, which means they start with the non-equity modes and later turn to equity ones. In time, organizations would change by learning from their experience. They would also extend the scope of their operations, starting with sales and marketing, and later moving on to production, R&D, finance, and others. Incremental expansion also concerns the number and types of products and services offered in foreign markets, which increase over time. The sequential model assumes that in time, companies deepen their dependence on their business functions, like marketing, production, finance, personnel, and administration in international markets. Along with the new entries, they also deepen the degree of penetration in already acquired markets. The Uppsala model was criticized for its deterministic nature. Companies said to internationalize in stages would have no real strategic choices (Chetty, 1999). Also, the appearance and spread of the so-called born-globals seems to prove that the model is losing its bearing on contemporary businesses.

Table 1 Determinants of internationalization process—cross-comparison of chosen models

Determinants of internationalization process		
Stage approach	Resource-based approach	Networking approach
Geographical distance	Network-oriented resources	
Cultural distance		
Time		
Firm-oriented resources		Reputation
		Industry pressure
Knowledge		

Source: own elaboration

The business network internationalization process model was developed as an answer to the changes in business practices and theoretical advances which have occurred since 1977. Companies are embedded into a business network, and therefore, market entry should not be considered as a decision of modes of entry, but instead as a position-building process in a foreign market network. Anything that happens does so in the context of a relationship. International expansion “is pursued within a network.” Internal network relations are characterized by specific levels of knowledge, trust, and commitment, which vary between the network members, and therefore, they may differ in how they approach the internationalization process. The speed, intensity, and efficiency of the learning processes, knowledge creation, and trust building depend on the existing level of these factors, and especially on the extent to which the partners find given opportunities appealing. The business network ceases to see the firm as a production unit and starts perceiving it as an exchange unit. Therefore, for them, we no longer talk of the internationalization of a unit, but of the entire network. The network may also be driven to internationalization by environmental push factors, which aim to increase the competitiveness level of the entities involved (c.f. Kania, 2019).

The resource-based view originates from strategic management, where a company seeks a source of competitive advantage in its competences and resources. Likewise, a company’s ability to seek, seize, and attain position in international markets can also stem from the company’s unique capabilities and resources (cf. Conner, 1991). The importance of intangible, knowledge-based resources is especially emphasized. In reference to SMEs, however, some scholars point to the fact that it lacks explanatory power. SMEs tend to be heterogenic, and identifying the resources critical for internationalization is difficult to achieve.

As Table 1 indicates, the internationalization models draw on one another. The stage approach and resource-based approach both emphasize the importance of experience and knowledge in venturing abroad. It is also vital to stress the dependence between knowledge and resource commitment. The resources committed will translate into a greater degree of internationalization and complexity and that in return should result in accumulated knowledge on the internationalization process. Similarly, one can also indicate commonalities between the resource-based internationalization approach and the networking approach. Some claim that both

perspectives evolve hand-in-hand (Ruzzier et al., 2006). Companies create their resource not only internally, but especially through network interactions. Therefore, the control over and interdependence of the resources crucial for internationalization can be network-based.

To give a fuller perspective on the internationalization models of the SMEs, it is crucial to mention the international entrepreneur approach where the time of internationalization is emphasized. Since entrepreneurship by nature is size-limited, internationalization is normally driven by the entrepreneur's abilities to innovate. In the internationalization process, what counts is not only the innovation's feasibility to be introduced; the key element is also the timing, which needs to be quick (c.f. McDougall & Oviatt, 2000). That links directly to the concept of born globals, companies which internationalize quickly after launching their market activities.

Given the fact that the discussed models have been developed mostly based on MNEs, there is a lasting doubt as to their fitness for SMEs' internationalization path. The SMEs suffer from the "liability of smallness" (Aldrich & Auster, 1986), "liability of newness" (Freeman et al., 1983), "liability of foreignness" (Mezias, 2002; Zaheer, 1995), and "liability of outsidership" (Johanson & Vahlne, 2009), meaning that they have fewer resources, lower reputation reach, lower knowledge of international markets, and a lesser position in the international networks. This used to mean a greater shock when expanding abroad (Morais and Ferreira, 2020). Morais and Ferreira (2020) conducted a systematic literature review which indicates that SMEs—depending on the context—seem to follow different internationalization models. It is, however, impossible to pinpoint which of the perspectives—in case of SMEs—is superior in comparison to others. Therefore, scholars recognize the need to combine ideas stemming from different frameworks and not base their assumptions on one approach only (c.f. Vahlne & Ivarsson, 2014). It is also commonly acknowledged that although MNEs and SMEs differ structurally, they need to overcome similar internal and external barriers in the process of internationalization (García-Álvarez de Perea et al., 2019). They are also all prone to the pressure of globalization that makes the internationalization processes more alike. Some scholars claim that MNEs are no longer viewed as big global monoliths but rather as subunits of MNEs that follow their own internationalization paths and in this regard are similar to SMEs (Borghoff & Welge, 2001). Therefore, although the discussed models—and the stage model especially—are well-recognized approaches in discussing MNEs' expansion, they are equally suited for analyzing the SMEs internationalization processes. The Uppsala model is known for its general validity which makes it both its strength and weakness at the same time, but this unambiguously points to the fact that it can be applied to SMEs as well. The networking approach, on the other hand, is also applicable as the network is generally seen as a tool allowing the SMEs to combat size-related disadvantages when entering the foreign markets. However, recently, a more pressing issue has emerged as to which of the factors discussed as determinants of the internationalization process were influenced by the digitalization effect.

2 Digitalisation Impact on Business

Digitalization and digital transformation have a variety of definitions and dimensions. Gartner (2018) defines digitalization as “the use of digital technologies to change a business model and provide new revenue and value-producing opportunities; it is the process of moving to a digital business.” Mazzone (2014) treats digital transformation as the intentional and continuous process of digital evolution of a company business model at strategic and tactical levels. PwC (2013, cited in Schallmo et al., 2017, p. 3) perceives it as “the fundamental transformation of the entire business world through the establishment of new technologies based on the internet, with a fundamental impact on society as a whole.” Boueé and Schaible (2015), cited in Schallmo et al., 2017, p. 3) consider it as a “consistent networking of all sectors of the economy and adjustment of the players to the new realities of the digital economy. Decisions in networked systems include data exchange and analysis, calculation, and evaluation of options, as well as initiation of actions and the introduction of consequences.” Although digital transformation might be similar to Business Process Reengineering, as it aims to reduce costs, changing the determinant of competitive advantages (within value chain) and improving the quality of goods and services, there are some distinct differences between those two notions (Schallmo et al., 2017). As we refer to digitalization in the manufacturing sector, with embedded sensors in virtually all product components and manufacturing equipment, ubiquitous cyberphysical systems, and analysis of all relevant data, we come to the concept of Industry 4.0 (McKinsey and Company, 2015). Industry 4.0 is a collective term for “technical innovation” and the concept of value chain organization. Industry 4.0 is based on two fundamental foundations: the “Internet of Things,” allowing for global access to data and machines, and “machine intelligence,” enabling full autonomy of the production processes. It is nothing more than implementing solutions which allow collection of data and the aim of process optimization, which links this notion to business process reengineering. This is also a combination of the production machines operating in real world with the virtual world of data. This continuous exchange of information between the real and virtual worlds enables the reengineering of processes that should result in higher efficiency in production.

The digitization of the global economy certainly is a process which dynamically changes the conditions for the functioning of enterprises on a global scale and challenges the competitive advantages of well-established business; it also creates conditions for transforming the existing business models and creating new ones. This process creates a great opportunity for the implementation of new solutions—innovations—but it also carries a number of threats for those companies that cannot find themselves in the new reality, or are unable to generate or buy new technological solutions. The digital transformation affects individual industries to a different extent. According to research conducted by The Global Centre for Digital Transformation among 1200 business leaders, presented in the Digital Vortex report (Yokoi et al., 2019), the most radical changes await data-driven industries, such as Media &

Entertainment, Technology Products and Services, Telecommunications or Retail. In turn, the sectors most resistant to digital transformation include real estate, construction, energy, utilities, manufacturing, health, and pharmaceuticals. What is more, the impact of the digital transformation grows—in 2019, 88% of executives believed that digital disruption will have a major or transformative impact on their industries, while in 2015, only 27% of managers had such an opinion (Yokoi et al., 2019).

What primarily drives the pace of the digitalization are: internet of things, cloud computing, big data analytics, automation of production processes, and robotization, together with hyperconnectivity. The Roland Berger consulting group in its 2015 report identified four levers of the digital transformation process, supported by enablers and propositions (Roland Berger BDI, 2015):

1. Automation (with additive manufacturing and robotic as enablers)
2. Digital data (with internet of things, big data, and wearables as enablers)
3. Digital customer access (with social networks and mobile apps as enablers)
4. Connectivity (with cloud computing and broadband as enablers)

Enablers serve to enable services or process applications to be used for the transformation of business models. All these supporting technologies and propositions prepare the ground for a disruptive development of the business and accelerate its pace. The faster the pace and the larger and more synergetic the combination of individual technologies is, the greater the combination of individual technologies; thus, investing in a wider number of digital technologies increases the chance of achieving a competitive advantage. The main areas in which enterprises benefit from participation in digital transformation are as follows:

1. Efficiency and process optimization—due to networking and cross-linking of production, enterprises can produce more economically and respond faster to individual customer needs – greater automation and robotics, fast data exchange enabling almost immediate decision-making, improved productivity; reduction of costs (optimized manufacturing process, fast information about possible and real breakdowns, customer expectations, wider variety of deliverers, robotics and automatization of many production processes), optimized decision-making process due to accurate analysis of data, and the higher agility of the company's operations.
2. Innovativeness – digitization forces investments in modern technologies, while increasing the effectiveness of both basic and applied research. This results in new technologies, new operating models, new methods of communication with customers, faster response to changes and customer expectations, and faster adaptation to market conditions.
3. Access to a wider market—digitalisation of products and services together with wider marketing options offers an opportunity to go beyond local and national markets.

4. Employment—digitalisation gives an option of remote working which together with wide specialization and possibility of subcontracting employees from distant countries guaranties much more options in HRM.

In 2015, McKinsey asked 300 experts from all relevant industries about the impact of digitization. The most profound conclusions were as follows (McKinsey and Company, 2015):

- (a) Companies are still careful as far as investing in industry 4.0 is regarded—it is about 15% of all R&D spending.
- (b) 80% of respondents expect the impact of digitization on the current business model.
- (c) Companies expect an increase of productivity by 26% and revenues by 23% in the next few years.
- (d) Labor, quality, and development time are considered to be the main areas of improvement, mostly in knowledge work, advanced analytics, and touch operations/interfaces.
- (e) The biggest obstacles are: process and control know-how for employees, data security and safe-guarding systems, a uniform standard for data transfer, and end-to-end connectivity via wireless networks.
- (f) Companies are reluctant about hiring foreign IT providers because of cybersecuri-ty concerns.

The effects of digitization are visible not only at the level of processes, but also management. As a company wants to benefit from digital transformation, it must first diagnose which areas have the potential for implementing new solutions. Only after identifying these areas can the company search for a technological partner and appropriate tools, tailored to the scale of the operation. The search for the right technology and partners is also a matter of operational and strategic management. It is a matter of calculating risk and matching financial patterns. Modern technologies are expensive, so implementing temporary solutions will certainly not bring the expected benefits. Entering modern technologies is a strategic decision that must result from far-reaching plans for production planning, but also the choice of markets, customer segments, sales policies, logistics partners and distribution networks. There is potential for change in all of these areas, but decisions must be well-thought-out, and in particular, comprehensive and integrated, embracing the company's overall policy, in pursuit of the strategic vision.

3 Digitalization Impact on the Internationalization Process of Companies: Evidence from the Past

The advance in digital technologies has inevitably led to the transformation of business models that are now based on usage of data and online systems (c.f. Hervé et al., 2020). The increased significance of digitalization has caused a

change in how one perceives internationalization, though studies on the matter are still relatively scarce (e.g., Brouthers et al., 2016; Wittkop et al., 2018). The use of digital tools—especially through e-commerce—may impact a company’s choices of location and entry modes, internationalization speed and degree, resource accessibility, and company’s learning and adaptation curves (Coviello et al., 2017).

This draws attention to the issue of whether the so-far established internationalization models are still valid, or whether they should be adapted to the challenges and opportunities of the digital world. With the “dematerialization” of borders, the issue goes so far as to question the essence of internationalization, since trade can be performed with minor adjustments on a global scale without much hassle. Companies may mark their international presence not only by establishing tangible links to certain markets, but by offering their products and services via online platforms. However, the issue is more complex. Digitalization affects not only the way companies attract new customers (pull effect), but also the way they attempt the internationalization steps in more traditional approach towards internationalization. Digitalization should enable companies to establish themselves among the local networks with more ease and shorten the time companies require to analyze markets or increase the efficiency of executing transactions (Neubert, 2018; Witten et al., 2016).

Neubert (2018) explores how digitalization impacts international marketing and international entrepreneurship. With the use of multiple case studies, he analyzes how beneficial the application of new technologies in companies’ foreign activities may become. Zhu and Qian (2015), and Nummela et al. (2004) look into the determinants of digital companies’ rapid internationalization. In most such studies involving digitalization, however, researchers focus on the internationalization outcome and not the process itself. If they relate to internationalization models, they mostly invoke the stage model(s) and the effect the digitalization exerts on internationalization speed. Still, general research underestimates or rather neglects the impact digitalization has on internationalization and the need for conceptualizing digitalized or digitalizing firms (Neubert, 2018). The reason is quite simple—the issue is still novel and the data on the matter is lacking. Scholars suggest (e.g., Vahlne & Johanson, 2017) introducing qualitative analyses to explore the relationship between digitalization and foreign market entries that would enable us to find a starting point for discussion on the internationalization models’ adjustment to the digitalization effect.

In the remainder of our study, we address the gap identified by Neubert (2018), and with the use of an empirical, qualitative study, we focus on establishing what impact digitalization has on the established internationalization models. We do not focus on determinants of rapid foreign expansion, nor do we question the degree of internationalization or performance. By analyzing the companies’ approach toward the digitalization and internationalization process, we verify whether the main assumptions of the stage models, networking, and resource-based models changed significantly and in what way. It is vital to stress that so far, most research focusing on the digitalization-internationalization co-dependence paid little attention to company type. In our research, we include only SMEs, which will also impact the

conclusions we draw about the internationalization model's validity. Based on the theoretical discussion, the following research questions are asked:

RQ1 How does digitalization impact the internationalization process of companies?

RQ2 To what extent should the main assumptions of the stage models, networking, and resource-based models be changed while internationalization is supported by digitalization?

4 Methods and Research Assumption

4.1 Method and Data Collection

The nature of the research problem determined the choice of the qualitative research method. Initially, we intended to implement the focus group discussion to deepen discussion and understanding of the problem of impacting the digitalization exerts on the Polish SMEs internationalization process. Preparing for leading the discussion in focus group, we enumerated the main problems to discuss, defined the representatives of SMEs as participants, and prepared the time and space for it. The study was supposed to be conducted on March 25, 2020. However, the lockdown introduced in the middle of March 2020 due to the COVID-19 pandemic forced us to rethink our initial research strategy. When the pandemic situation stabilized in June 2020, before the second wave of the pandemic, we decided to conduct the research with the use of a hybrid research method. We kept the initial topics to discuss with SMEs representatives; we arranged for online quasi-focus discussion, but as the possibilities of free discussion were limited, later on we asked all participants to write down their reflections on the issues raised. As not all initially invited participants were able to join this online quasi-focus discussion, we had several one-to-one online meetings or phone calls to express the main research problem and ask participants to write down their reflections as well. Finally, we collected SMEs representatives' opinions between 15/06/2020 and 04/07/2020.

Using such a hybrid method, we managed to collect the opinions of 16 representatives of SMEs in Poland. Over half of participants were between 41 and 50 years old (9 of 16), 5 persons were between 31 and 40 years old, one person was less than 30 and another was more than 51. The group was represented by 6 women and 10 men, which also reflects the existing gender gap in entrepreneurship in Poland. All participants had higher education, and half of them reported more than 21 years of professional experience, while six participants were slightly less experienced (11–20 years). Not all participants claimed knowledge of foreign languages, but among those who did, most can communicate in English or German, and almost half of participants claimed to speak at least two foreign languages. Regarding the participants' experience with internationalization, they represented three groups. The largest group of participants (seven participants out of 16 in total) were actively internationalized and worked as export and/or import managers, or managers of

international companies, being responsible for international sales across Europe and out of Europe, mostly Asia. The second largest group (five participants of 16 in total) consisted of participants with minor internationalization experience, but who were considering going abroad with their market activities or had just started to go international. Their experience was mostly related to global market analyses, or to making some preparations to become international or already obtaining their first two international clients. The third group of participants (four participants of 16 in total) were consultants specializing in supporting other companies in becoming international by delivering strategic or financial consulting services. To sum up, the participant group in Poland consisted of well-educated and highly-experienced representatives of SMEs.

4.2 Issues in Focus Group

Before we started the discussion, we made some clarifications about the meaning of internationalization and digital internationalization, as they are broad concepts and we wanted to be well understood. We explained that in our quasi-focus research, internationalization meant any activity undertaken abroad by a company, mostly in the context of selling products or services in international markets. Digital internationalization was understood here as company's activities in international markets undertaken with the support of digital tools, for example, selling products abroad with the use of an e-commerce platform.

Within our quasi-focused research, we discussed seven issues related to two groups of topics. First, we wished to get the opinions of participants on internationalization in general, to get a starting point for understanding their perspective, and to be able to compare it with internationalization supported by digitalization. Specifically, we explored the following themes:

1. Participants' opinions on factors supporting internationalization
2. Factors limiting internationalization
3. The skills and competences needed to become international

The second group of topics was crucial for the research, as it concerned the impact of digitalization on companies' internationalization. We discussed the following issues:

4. To what extent digitalization can support the internationalization of companies
5. To what extent digitalization can limit the internationalization of companies
6. How internationalization can benefit the most from implementing digitalization
7. Which digital skills and competences are most needed to support internationalization

The topics discussed referred closely to the assumptions of the commonly acknowledged internationalization models, i.e., the sequential dynamic model, the networking approach, and the resource-based perspective.

4.3 Data Analysis

Due to the hybrid manner of conducting the research, we made transcriptions of the discussions but we also asked participants to write down their opinions and send them to us. The analysis was based on an inductive approach with qualitative content analysis and was divided into three steps. During the first step of the analysis, we read participants' opinions several times to realize the main meanings and to code them. Then, in the second step, we combined them into categories. Finally, we analyzed the frequency of similarities and differences in participants' opinions. Details of themes of quasi-focus discussion, opinions, and categories are presented in Table 2.

5 Digitalization in Shaping the Process of Internationalization: Research Results

5.1 Internationalization Process in Opinions of Participants

The first part of the quasi-focus research was to collect opinions on factors determining internationalization both positively and negatively. According to our participants, such factors can be divided into the following categories: global trends (i.e., macroeconomic trends, unification, liberalism, decentralization and globalization, economic growth, e-commerce); the business global environment (i.e., formal environment of contracting, law and taxes, support for both local and governmental institutions, easy logistics), the company's resources (i.e., competitive products, the international network and local agent, skilled employees, communication skills, market knowledge and understanding, knowledge of foreign languages, awareness of cultural differences, and business experience), and the company's behavior (i.e., gathering and sharing information, use of ICT technology, online sales and marketing, and participation in international fairs). Among those factors, the most frequently indicated are awareness of cultural differences, knowledge of foreign languages, and formal environment (contracts, law, taxes). There is one more factor mentioned by participants, but surprisingly only as a factor limiting the internationalization; namely, the institutional factor, explained in the context of informal institutions such as religion, stereotypes or conservatism, and formal institutions, such as a poor educational system, politics, trade protectionism, or time shift.

Based on the participants' answers, four groups of skills and competences are indicated as essential for a company to become international. The first group is related to the personality factors of entrepreneurs, managers, and employees, which consists of such traits as being open-minded, courageous, curious, well-organized, flexible, optimistic, independent, being quick learner. The second group involves skills developed by education and learning, which include: foreign language skills, communication (also cross-cultural), emotional intelligence, cultural awareness,

Table 2 Overview of issues, opinions, and categories

Themes	Opinions	Category
Factors supporting internationalization	Skilled employees; knowledge exchange; market knowledge; knowledge of foreign languages; knowledge of cultural differences	Knowledge
	Business experience; deep understanding of target markets	Understanding
	Formal aspects (law, taxes, contracts, law, taxes); support of local authorities; support of governmental institutions; easy logistics	Business global environment
	Macroeconomic trends; unification; liberalism; decentralization; economic growth; globalization; global market for digital services	Global trends
Factors limiting internationalization	Religion; stereotypes; poor educational system; politics and political factors; time shift	Institutions
	Legal aspects; lack of local support; lack of institutional support; custom duties; currency; small foreign market potential;	Business global environment
	Lack of foreign language knowledge; communication gaps; lack of business experience; cultural differences; lack of market knowledge; lack of knowledge of client buying behavior; lack of knowledge on customers; lack of negotiation knowledge; lack of negotiation experience	Knowledge
	Financial constrains; costs	Resources
	Unwillingness to travel; lack of ICT technology use; searching for cost advantage; fear; mind-set	Behavior
	Unfavorable macroeconomic trends; conservatism; trade protectionism	Global trends
The skills and competences needed to become international	Foreign language skills; communication skills; negotiation skills; cross-cultural communication; cultural awareness; emotional intelligence; collaboration skills; cooperation abilities; sales skills	Skills
	Knowledge of international business rules, techniques, and customs; knowledge of international finance; knowledge of commercial law; preparation of documents in international business; knowledge of risk management; knowledge of global online services; long-term perspective of company development; adoption of strategy to local, foreign market; ICT competences; usage of new communication tools;	Knowledge

(continued)

Table 2 (continued)

Themes	Opinions	Category
	marketing competences; promotion abilities; knowledge of customer needs; analyses of competitors; understanding of local culture; understanding of local market	
	Open-minded; courage; curiosity; patience; well organized; flexibility; optimism; quick learner; independence	Social and personal treats
Digitalization in supporting the internationalization	Digitalization as a key for internationalization; no time and space limits; easier to transfer knowledge; “a must” in 4.0 revolution; push to be innovative	Feature of digital internationalization
	Makes easier; easier contacts; faster contacts; easier documentation arrangements; easier to build trust with social media support; easier access to foreign customers; faster duty; similarity of digital services across the world; availability of information about company and products; digital marketing; e-commerce; many services can be delivered; availability in internet in real time; lower costs	Benefits
	Cultural differences are less important; digitalization: a bridge fir the cultural divide; less formal contacts; standard global operation	Cultural issues
	English used worldwide in online communicators; language support; online meetings; overcoming communication gap	Communication/ language
Digitalization in limiting the internationalization	No limits; needed to be correctly checked	
Benefits from implementing digitalization into internationalization	Digitalisation is the key, the most crucial in internationalization; internet knows no time or space limitations	General
	Digitalization as often the only way to approach and scale quickly in an international market—Assuming that products are “digital” ready and so are the distribution channels; lower cost by simplifying target selection and unifying access to information; remote management	The effect of scale
	Reach the customer faster; easier to reach clients; easier to create and maintain relationships with customers; common daily contacts and exchange of information between international partners is much faster, easier, and complete	Fasten the process

(continued)

Table 2 (continued)

Themes	Opinions	Category
	Communication may become more rapid and even live; the improvement of the communication process with the client; bridging gaps between two companies	Improvement of communication process
	Increase of sales without traveling; streamlines the sales process	SALES general
	Digitalization as a prerequisite condition for e-commerce; online tradeshows and exchange platforms; online & social media advertising to promote products locally, while managing and monitoring costs at a distance; local legal, cultural aspects and preference are key to successful e-marketing; local digital agencies are more effective; new opportunities of a digital platform; necessity to build an e-export platform, which makes some duty processes faster	SALES specific issues
Digital skills and competences needed to support internationalization	Ability to work online; daily use of e-mails, word, excel spreadsheets; knowledge of digital tools; knowledge of building and delivering digital tools; knowledge of cyber security	General digital skills
	Communicating through different digital platforms and devices; knowledge of communication tools; skilled in preparing digital presentations, power point, videos, films and marketing materials	Digital communication
	Searching for information on the internet, networks, and websites; ability to find right channels to target the right segment of the market in the given country; online data acquisition and use of online marketplaces	Searching information
	Social media skills; social media savvy in particular on platforms; planning of online media; understanding and implementing web-based or software based solutions for business processes; ability to create content in local language and fitting cultural preferences; ability to build www pages, online shops, internet communicators	Digital marketing
	Digital payments and banking systems	Digital finance

cooperation skills, negotiation skills, and sales skills. The next group of competences is related to possible knowledge to be gained; for example, knowledge of international business rules, techniques and customs, knowledge of international finance, knowledge of commercial law, the skills to prepare documents in international

business, knowledge of risk management, knowledge of global online services, knowledge of strategy (long term strategy and strategy adoption to local market), ICT competences, marketing competences, knowledge of customer needs, and analyses of competitors. The last competence discussed by participants is the understanding of local cultures and of local markets.

All these factors, skills, and competences affecting the process of going international led to the conclusion that generally the participants' perception of internationalization reflects on the Uppsala model and related stage models. Being internationally active appears to be an indication of a company's maturity regarding their business processes and competences. Combining this business maturity with institutional factors and some skills mentioned by participants supports the point of view of starting internationalization with the culturally and geographically closest countries.

5.2 Implementing Digitalization into the Process of Internationalization: Participants' Opinions

Treating this general opinion on internationalization as a starting point for discussion, we asked questions about how digitalization can shape internationalization to refer to our RQ1. The first step was to discuss to which extent digitalization can support the internationalization of companies. Our participants noticed that nowadays, digitalization is a key facilitator of internationalization, as, thanks to it, there are no time and space limits and it makes it easier to transfer knowledge and develop innovation. It is, however, important to stress that digitalization was perceived as a tool to make the internationalization process more efficient (or even to determine the process's success probability), not as a factor enabling the internationalization to take place. Therefore, it was not perceived as an internationalization factor, but as a "changer" of the characteristics of the contemporary internationalization models.

Participants discussed several benefits of using digitalization in the process of internationalization. The most frequently noticed aspects are that digitalization makes the process of internationalization easier and faster (according to nine participants). Implementing digital tools makes easier such aspects of internationalization as making contacts, documentation preparation, access to customers, and building trust with social media support. Digital services are very similar across the world; many services can be delivered online. Digitalization is a supporting tool; thanks to the availability of information about companies and products, it supports digital marketing and e-commerce, availability on the internet in real time and reduces costs.

Cultural aspects of internationalization were highlighted in the earlier discussion; four of the participants also pointed out this issue. Thanks to the implementation of digital tools in the process of internationalization, cultural differences are less important, as all international contacts become less formal, and this leads to

standardization of the global operation. Digitalization allows for the bridging of cultural differences. Another important aspect of internationalization is the knowledge of foreign language. Four participants noticed that digitalization also supports internationalization thanks to the English language being used worldwide in online communicators, the language support available online, and the possibilities to arrange online meetings and overcome the communication gap.

The next aspect of our discussion was related to the limits of digitalization in the process of going abroad. Half of participants (8 out of 16) claimed that digitalization does not limit the internationalization process at all. However, others mentioned several aspects. The foreign market should be mature enough to use digital tools in supporting internationalization process. Digitalization can create misconceptions about the company and the local support of institutions present in the target market is key in assessing the actual integrity and business experience of the local contact with whom we are dealing. Lack of proper ICT tools or applications can limit promotion and sales possibilities; lack of knowledge of modern ICT solutions can create risks connected with cyber security, or the risk of hacker attacks. The lack of direct contact with the customers can limit the knowledge of their real needs and opinions about our products, while face-to-face communication may create a stronger trust that is not induced directly in online meetings.

There is also an important shift in the competences needed to become international with the support of digitalization. Our participants mentioned general digital skills, digital skills related to online communication, skills needed to gain and create information and skills related to the usage of digital tools as crucial in digital internationalization. Among the general digital skills, the ability to work online, technical efficiency, computer and smartphone savviness, artificial intelligence, knowledge on cyber security, coding and/or no-code approach, and knowledge on digital payments and banking systems were mentioned. Online communication is related to such competences as knowledge of communication tools, communication through the use of different digital platforms and devices, daily use of E-mails, word, excel spreadsheets, using websites, video conference tools like Skype, Microsoft Teams and Zoom platforms, skill of preparing digital presentations, power point, videos, films and marketing materials and the usage of language and translation-based tools. The ability to gain and create information online is related to knowledge of search engines, competences to search for information on the internet, networks and websites, ability to find right channels to target the right segment of the market in the given country, online data acquisition and use of online marketplaces, and ability to create content in local language and fitting cultural preferences. The use of digital skills requires the knowledge of building and delivering digital tools; the ability to build user-friendly systems; the ability to build www pages, online shops, and internet communicators; understanding and implementing web-based or software-based solutions for business processes; social media savvy in particular on platforms that are in use in target markets; and ability in online media planning and general social media skills.

To sum up our discussion, we asked participants about the most important aspects of implementing digitalization in the process of a company's internationalization.

Participants agreed that digitalization is key and the most crucial aspect of internationalization. As the internet knows no time nor space limits, digitalization reduces the cost of internationalization and fasten the process, especially in reaching customers, in creating and maintaining the relationships with customers, in daily contact and informational exchange between partners, in sharing knowledge on the product among customers, and making information flow, data analyses and the decision-making process faster. Digitalization improves the process of communication, which become more rapid and even live. Digital internationalization allows gaining the effect of scale quickly.

5.3 Changes in Internationalization Models Because of Digitalization

The analyses of how digitalization impacts the process of internationalization lead to a contribution to all models of internationalization (see Table 3) and answer RQ2. When considering the stage models of internationalization, it is assumed that internationalization expresses the company's learning process and its business maturity, starting with foreign markets geographically and culturally close and later expanding to more distanced countries. However, when digitalization is implemented into the internationalization process, geographical distance is not important anymore, while cultural distance is less important, as digital means of communication, digital marketing media, and online meetings make all contacts more standardized and uses the same online business etiquette across the world. Business maturity, experience, and learning processes are less important, as digital maturity and digital experience become the key competences.

The resource-based theory of internationalization assumes that the unique set of a company's resources are key factors in going abroad, including human capital resources related to knowledge on global markets, cultural awareness or linguistic skills, or financial resources allowing a company to invest in internationalization. However, when digitalization is implemented, there is also a shift in the resources needed for internationalization. Cultural and linguistic competences are replaced by digital competences, related to digital communicators, standardization of texting and sending information online. The importance of market knowledge is shifting because of the availability of online information, and is replaced by the knowledge of the use of public databases, searching for information online and the use of digital tools in gathering and creation knowledge. The possibilities for arranging online meetings, the use of sales digital platforms, online databases and availability of information, and marketing on social media also reduce the importance of the financial resources needed to be invested in the internationalization process.

The next group of models, the networking models of internationalization, assume that internationalization depends on the participation in a network of suppliers and customers and business contacts within the network with the reputation in the

Table 3 Impact of digitalization on models of internationalizations

Aspects	Models of internationalization	Digital impact
<i>Stage models of internationalization</i>		
Geographical distance	It matters—First, internationalization is begun at close neighboring countries	No matter
Cultural distance	It matters—First, internationalization is begun with countries of close cultural distance	Less important: <ul style="list-style-type: none"> – Digital means of communication make all contacts more standardized. – Online meetings get the same business etiquette across the world. – Digital marketing media are standardized across the world.
Knowledge and business learning process	International as the process of business matures	Business mature is less important; digital maturity is the key competences
Business experience	The next stages of internationalization are taken when business experience is gained at first stages of internationalization	Business experience is less important; digital experience is the key competence
<i>Resource-based theory of internationalization</i>		
Human resource	Key competences: cultural awareness, linguistic skills	Shift in competences: digital competences as key; cultural and linguistic competences are replaced by digital communicators, digital translators, standardization of texting and sending other online information
Knowledge	The uniqueness of a company's knowledge on global markets	Information available online, use of public databases, searching information online
Areas of knowledge	Knowledge on global and target markets (specific for a country of internationalization)	Knowledge of building and creating digital tools (the same no matter the country of internationalization)
Financial resources	Financial constraints to going abroad	Almost no costs to go abroad (online meetings, sales digital platforms, online databases and availability of information, marketing on social media is standardized across the world)
<i>Networking models of internationalization</i>		
Network	Network of companies—a key for being international	Use of digital platforms: instead of position in the network of companies, the possibilities to use a sales digital platform is a key for being international
Reputation	Reputation in the network	Reputation in sales digital platforms

(continued)

Table 3 (continued)

Aspects	Models of internationalization	Digital impact
<i>International entrepreneurship</i>		
Time of internationalization	The main pattern distinguishing companies based on the speed of internationalization	Time does not matter; digitalization hastens the process of reaching customers

Source: own elaboration

network as a key factor. The use of digital platforms shifts this dependence, as instead of the position in the network of companies, the possibilities to use a sales digital platform is key for being international. Instead of the reputation in the network, the reputation gained on sales digital platforms determines the possibilities of internationalization.

The last analyzed group of internationalization models is related to the speed of internationalization being a main pattern for distinguishing companies. Digitalization seems to support international entrepreneurship, as it hastens the process of reaching customers abroad, and, in consequence, hastens the speed of internationalization.

6 Conclusions

The Covid-19 pandemic situation accelerated many of the processes that we observed in the global economy, including the need for and speed of the digitalization process. Even before the pandemic, companies were gradually experiencing an intensified pressure to run their businesses with use of digital tools. Digitalization impacted most of the spheres of a firm’s functioning: the choice of business models, interactions with clients, marketing, and also internationalization models. However, the recent global developments shifted the rate of those changes from gradual development to intensified rush.

All these aspects let to formulate RQ1, asking how the digitalization impact the process of internationalization of companies. Previously, many studies have indicated that the competitive advantage that had driven internationalization could have numerous sources: human-based, knowledge-based, market-based, or even financial. Due to digitalization, the advantage can now be mostly gained again through digital maturity. This also applies to the advantage understood as the position in the network. Digitalization has shifted the network perspective from a small, co-dependent circle of companies toward an unlimited, platform-based network of companies. Companies willing to internationalize seek to uphold an excellent reputation, not within the “old network” but within the vast number of potential still unknown partners. That is achieved through the use of a digital platform. The least-affected framework seems to be the concept of rapid internationalization stemming from international entrepreneurship stream. Digitalization has not really

altered much of its basis, only stressing that time is not of the essence anymore, as digital transformation accelerates the rate at which companies internationalize.

With that in mind, one might ask the question of whether the internationalization models we know and observed are still relevant. Our RQ2 let us to discuss whether digitalization has changed the concept to a degree where we need to seek new internationalization models or are the “old” concepts still valid but slightly changed? It is first crucial to stress that, according to various research, we cannot unambiguously claim that one of the existing models is more relevant than the other. The models emphasize different approaches to internationalization and seek to explain what drives the decisions and the method of internationalization. Digitalization seems to accelerate the internationalization process, as it shortens the time lapse between consecutive stages of internationalization. It makes geographical and cultural distance lose its meaning in deepening internationalization. The study suggests that we shift from appreciating market knowledge and business experience to recognizing digital aptness and maturity. In fact, the most essential aspect of the stage model seems to be questionable; internationalization is dependent on the digital awareness and proficiency, not on consecutive steps that deepen international expansion. Likewise, we can also observe intensified changes toward the resource-based approach.

Since our study had only an initial screening aim and the sample does not allow us to draw final conclusions, we can clearly indicate that the research gives meaningful grounds for further studies on the validity of the known internationalization models. The data gathered clearly indicates that they required updating, at the very least, and we could go so far as to hypothesize that some of them are gradually losing importance. Based on the initial conclusions drawn from the study, we see potential to explore the matters of:

- How digitalization helps to overcome internal barriers in the internationalization process of SMEs
- Whether digitalization strengthens the globalization effect or if globalization rather forces the digitalization process
- If and how digital competences and experience replace other key resources in the internationalization process
- How digitalization changes the meaning of the network in the process of SME digitalization
- Whether digitalization per se has become an element determining the internationalization process, or whether it remains a moderating factor that changes the significance of other internationalization factors.

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