

## Determinants of the Digital Orientation of Small Businesses

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# **Determinants of the Digital Orientation of Small Businesses**

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## **Abstract**

A digitally oriented company recognizes digital resources throughout the company and integrates them with value creation. Digital orientation, composed of market orientation, entrepreneurial orientation, relationship orientation, and technology orientation, is thus considered to be a top strategic priority for companies to stay competitive. Prior studies call for further evidence on what determines the digital orientation of small businesses. We study the conditions under which small companies are likely to pursue different forms of digital orientation and which types of companies are most likely to embrace different digital orientations. The results show that the companies that have digitality well represented in their strategy embrace digital orientation more than the companies that do not have digitality well represented in their strategy. Also, companies' willingness to grow affects the level of digital orientation, whereas competitive intensity in markets does not.

**Keywords:** digital orientation, digital strategy, technology orientation, SME, competitiveness, digital transformation

## **Introduction**

In the near future, many ecosystems and businesses of different organizational types will face transformations and challenges in their operation environments caused by increasing digitalization (Bouwman et al., 2019). This digital transformation poses great challenges to companies (Li et al., 2018) when connected products, services, and operations transform businesses, making new approaches for adapting to the changes necessary (Kallinikos et al., 2013; Yoo et al., 2012). A company oriented toward digitality recognizes digital resources outside their IT function and integrates them with value creation (Quinton et al., 2018). Digital orientation, composed of market orientation, entrepreneurial orientation, relationship orientation, and technology orientation, is thus considered to be a top strategic priority for companies to stay competitive. Most research on digital orientation focuses on large companies, but the digital orientation of small companies is different. Therefore, there is a lack of evidence about the context in which small businesses can pursue digital orientation.

As there is growing demand for understanding the digital transformation of small businesses in for such businesses to have a sustainable business model with a future orientation (Ukko et al., 2019), this chapter studies the conditions under which small companies are likely to pursue different digital orientations. Furthermore, this chapter explores and presents the types of companies that are most likely to embrace different digital orientations. The findings are useful to different business-oriented organizations looking to stay profitable and sustainable in operational environments shaped by the digital transformation.

Combining the insights from the literature review with empirical data, this chapter contributes to existing literature by both conceptualizing digital orientation and defining the factors that support or hinder the digital orientation of small businesses. The empirical data for the study presented in the chapter were gathered from small businesses located in Finland. The results show that the companies that have digitality well represented in their strategy embrace digital orientation more than the companies that do not have digitality well represented in their strategy. Also, companies' willingness to grow affects the level of digital orientation, whereas competitive intensity in markets does not. Finally, company type affects the individual components of digital orientation but not the digital orientation as a whole.

The chapter is structured as follows: After the introduction, we present contemporary companies' different views of digital orientation based on prior literature. Next, we discuss the propositions regarding the digital orientation of small businesses as well as the research model of the study. In the section that examines empirically the digital orientation of small businesses, we present the data collection, measurements, and the results of the analyses. Finally, we provide the most important conclusions and implications.

## **Digital Orientation**

Digitally oriented companies are generally more open to and engaged in using digital technologies (Khin and Ho, 2019; Ukko et al., 2019). The influence of digital technologies in companies' operating environments is highly dependent on how small businesses approach digital transformation strategically (Quinton et al., 2018). Generally, strategic orientation refers to "the strategic directions implemented by a firm to create the proper behaviors for the continuous superior performance of the business" (Gatignon and Xuereb, 1997, p. 78). In relation to the digital transformation, a strategic orientation is crucial to the management of digitality as it assists in determining the focus for digitally enabled operation and is thus considered to be a top strategic priority for companies to stay competitive. There are several different digital orientations that reflect the focus of a company's digitally enabled operation. For example, Khin and Ho

(2019) conceptualize digital orientation as an extension of the technology orientation. They define it as “a firm’s commitment toward the application of digital technology to deliver innovative products, services, and solutions.” Mithas et al. (2013) use the term digital strategic posture to describe a company’s level of specific digital business practices compared with the industry in which the company operates. Thus, customers, competitors, and technological developments are the crucial issues that need to be taken into account when aiming to approach digital technologies strategically. Furthermore, Quinton et al. (2018) suggest that digital orientation is a combination of the market, learning, and entrepreneurial orientations. They state that companies embracing such orientations adopt behaviors that support the development and utilization of market insight and renewal.

Therefore, this study defines digital orientation as a company’s engagement with the application of digital resources to create value throughout and outside the company. Digitality is considered to be a strategic priority for companies (Quinton et al., 2018; Ukko et al., 2019), and prior research states that elements of strategic orientation include market orientation (Narver and Slater, 1990; Kim et al., 2013; Ho et al., 2016), entrepreneurial orientation (Covin and Slevin, 1989; Ho et al., 2016), relationship orientation (Panayides, 2007; Ho et al., 2016), and technology orientation (Gatignon and Xuereb, 1997; Kim et al., 2013; Khin and Ho, 2019). According prior research, digital orientation is composed of market orientation, entrepreneurial orientation, relationship orientation, and technology orientation. In this chapter, we use the following definitions of the four elements of digital orientation: Market orientation focuses on companies’ actions to understand customer needs and respond to their needs with digital technologies (Narver and Slater, 1990; Kim et al., 2013; Ho et al., 2016; Quinton et al., 2018; Saunila et al., 2019). Entrepreneurial orientation emphasizes recognizing market opportunities and being proactive in markets with the assistance of digital technologies (Covin and Slevin, 1989; Ho et al., 2016; Quinton et al., 2018). Relationship orientation refers to forming and retaining mutually valuable external relationships by using digital technologies (e.g., with suppliers, customers) (Panayides, 2007; Ho et al., 2016). Technology orientation emphasizes the application of novel technologies in company operation (Gatignon and Xuereb, 1997; Kim et al., 2013; Khin and Ho, 2019). These four orientations are required to take advantage of the possibilities offered by digital technologies.

### *The Role of Context*

The importance of context for a deep understanding of the phenomena in our world cannot be ignored. A deeper appreciation of context enables the exploration of innovative perspectives and solutions to existing issues by enabling different interpretations and novel insights (Härtel & O’Connor, 2014).

As the size of a company reflects the extent of the company's capabilities, resources, and skills (Valtakoski and Witell, 2018), considering company size in strategic and market orientations is important (Laforet, 2009). Generally, small businesses serve small, niche, and local markets, and the necessity of digitality in market orientation (i.e., advertising and enhancing products and services) might not be felt at all times (Camilleri, 2019). At the same time, the dynamic nature of the current business environment causes small businesses to utilize digital orientation in order to find opportunities for new resources, new relationships, and new markets (Cenamora et al., 2019). However, small businesses are not as well-equipped as large companies and might have some difficulty in finding financial support for tangible and intangible equipment (Laforet, 2008). Empirical evidence has revealed that small businesses can successfully adopt ideas and practices that worked for large companies (Russo and Perrini, 2010). Therefore, the first proposition is structured as follows:

P1. The digital orientation of a small business is determined by a company's size.

Moving toward digitality, whereby manufacturers are equipped with smart products that operate autonomously and interact with other devices, requires digital systems to support novel industrial product and service offerings. In order to handle these kinds of offerings, there is a need for technical reconfigurations and to develop specific means in relation to market structures. Digitalized product-service systems raise complex and far-reaching challenges for the whole manufacturing process and industrial companies, requiring close collaboration between different parties, including manufacturing companies and electronic equipment providers as well as manufacturers and customers. The series of actions in value creation can connect the industrial economy and the digital economy, providing opportunities for both economies to enhance each other (Lerch and Gotsch, 2015). Therefore, as there are many differences in the operational logics between the manufacturing and the service industry (Valtakoski and Witell, 2018), the next proposition is this:

P2. The digital orientation of a small business is determined according to the different industry types.

*The Role of Company Conditions*

Literature suggests that it is essential for digitalization in its various forms to be integrated into corporate strategy (Thompson et al., 2013; Ukko et al., 2019). For example, Thompson et al. (2013) argue that it is dangerous for small business owners to assume that new technologies will automatically provide their businesses with a competitive edge. They claim that small businesses need to ensure that business strategies fully incorporate new digital technologies and have a clear understanding of what the consequences are of adopting these technologies. Similarly, Ukko et al. (2019) state that digital business strategy refers to the transformation in the business process (Cui and Pan, 2015), company capabilities (Cha et al., 2015), and operational routines (Chen et al., 2014) and their integration with the corporate strategy. Quinton et al. (2018) claim that companies that are guided, for example, by a combination of the market, entrepreneurial, relationship, and technology orientations are well positioned to take advantage of the opportunities presented by digital technologies because such companies adopt attitudes and behaviors that support the generation and use of market insight, proactive innovation, and openness to new ideas. In turn, these behaviors are directed by the companies' strategic orientation (Ketchen Jr et al., 2007; Quinton et al., 2018). In line with the discussion above, we propose the following proposition:

P3. The digital orientation of a small business is determined by the presence of digitality in a company's strategy.

Many prior studies have suggested that digital orientation in its various forms is positively related to small business growth, performance, and competitiveness (Quinton et al., 2018; Taiminen and Karjaluo, 2015; Weill and Woerner, 2015). For example, Weill and Woerner (2015) show an increase of revenue growth and profit margins for companies that embrace digital technology and operate within the digital ecosystem. Quinton et al. (2018) report that digital orientation offers a new perspective for small businesses interested in the adoption and diffusion of digital technologies as a way of approaching strategic marketing and creating company growth. From a marketing orientation perspective, Taiminen and Karjaluo (2015) state that digital marketing and social media provide opportunities for small businesses to attract new customers and reach existing customers more efficiently. Similarly, Chuang and Lin (2015) consider digital service capabilities as an internal driving force that enables companies to better understand their customers, improve their service delivery, and respond to customer needs. Thompson et al. (2013) report that small businesses with no e-commerce sales are less likely to innovate in the absence of growth and those with higher e-commerce sales are significantly more likely to increase sales and be innovatively orientated. Therefore, as a key mechanism for organizational growth and renewal, digital orientation is implicitly central to this theory (Saunila et al., 2019). Consequently, we put forward the following proposition:

P4. The digital orientation of a small business is determined by a company's willingness to grow.

In order to manage competition, small businesses need to adopt behaviors that fit the characteristics of the market they are in, such as acquiring certain assets or capabilities (Quinton et al., 2018; Theodosiou et al., 2012). However, adopting too specific a strategic or a digital orientation can also have disadvantages; this trait is particularly treacherous in the presence of market turbulences, such as changes in the technological landscape (Grewal and Tansuhaj, 2001; Quinton et al., 2018). This means that the competitive position and the technological development of an industry may affect the digital orientation of small businesses. For example, Quinton et al. (2018) argue that companies' external environments shape their structures and actions (Scott and Christensen, 1995), including intentions to adopt digital technologies (Kim and Pae, 2007). They also identified three types of external pressures that may affect the adoption of digital technology: coercive pressure, mimetic pressure, and normative pressure. Coercive pressure may take the form of political influence or lack of legitimacy (DiMaggio and Powell, 1983) and originates from customers, suppliers, or trading partners, referring to formal and informal effects that lead a company to adopt a technological solution. In mimetic pressure, a company feels pressured to imitate the technological behavior of other companies instead of creating a set of behaviors of its own. Normative pressure refers to the expectations associated with professionalization, including the rules and conditions that a company has to comply with to continue trading or for social legitimization (Quinton et al., 2018). Thus, in line with above, we present the following proposition:

P5. The digital orientation of a small business is determined by the competitive intensity in the markets.

### *Research Model*

We developed our research model based on the literature review of the context where strong digital orientation is the most commonly implemented and the conditions under which small companies are likely to pursue different digital orientations. As illustrated in Figure 1, both company characteristics and company conditions, namely the presence of digitality in a company's strategy, a company's willingness to grow, and the competitive intensity in the markets, determine the level of digital orientation. Digital orientation is composed of market orientation, entrepreneurial orientation, relationship orientation, and technology orientation.

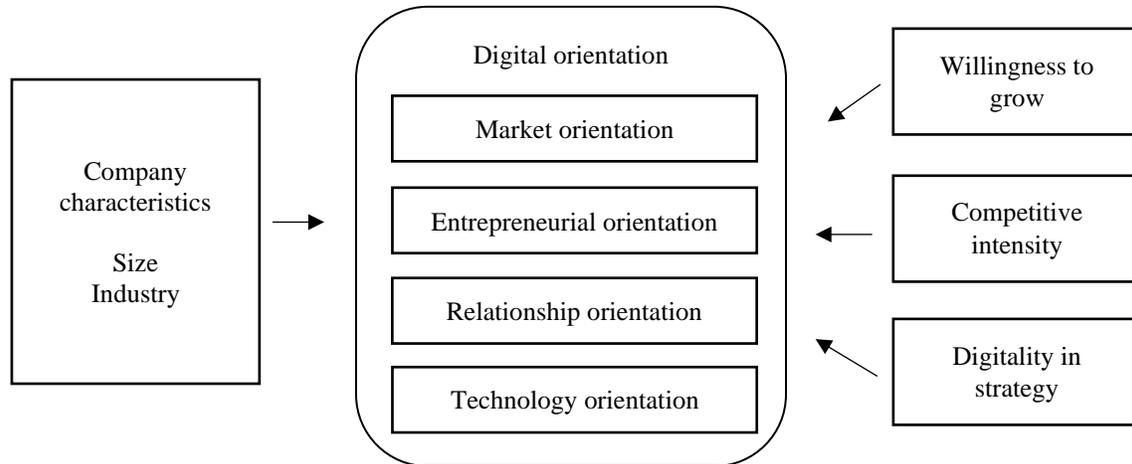


Figure 1. Research Model

## The Empirical Examination of Digital Orientation of Small Businesses

### *Data Collection*

The study is built on a web-based questionnaire that assessed digital orientation of small businesses. The respondents were management representatives, and the unit of analysis was the company level. The respondents represented small businesses with less than 250 employees, the limit defined by the Federation of Finnish Enterprises. The responses were received from 98 small businesses located in the region of Päijät-Häme, Finland.

The respondents represented the companies of which 67% had revenue of less than 2 million euros and 33% had revenue of 2 million or more. Around 30% of the studied companies operated in the manufacturing sector, and the remaining 70% operated in the service sector. Many different industries were represented—for example, production, trade, IT, building and construction, and real estate.

### *Measurements*

The literature review informed the questionnaire design. The questionnaire was based on reflective measures, and its content (with exact items) and references are presented in Table 1. Two company characteristics were included to study which types of companies are most probably involved in embracing

different digital orientations. The company characteristics included size (measured using revenue) and industry (measured using a manufacturing or a service dummy variable).

Table 1. Survey Items

Themes	Items	Scale	References	$\alpha$
<b>Company characteristics</b>	Company size	Open field (revenue)		
	Industry	Manufacturing/Service		
<b>Digitality in strategy</b>	Digitality is part of our company strategy	From 1 to 5 (strongly disagree to strongly agree)	E.g., Thompson et al., 2013; Ukko et al., 2019.	
<b>Willingness to grow</b>	Our company aims to grow fast	From 1 to 5 (strongly disagree to strongly agree)	E.g., Taiminen and Karjaluoto, 2015; Weill and Woerner, 2015; Quinton et al., 2018.	
<b>Competitive intensity</b>	The competition in our industry is tough	From 1 to 5 (strongly disagree to strongly agree)	E.g., Grewal and Tansuhaj, 2001; Theodosiou et al., 2012; Quinton et al., 2018.	
<b>Digital orientation</b>	We have a need to adopt digital technologies in order to:			
<b>Market orientation</b>	Increase understanding of customer needs	From 1 to 5 (strongly disagree to strongly agree)	E.g., Narver and Slater, 1990; Kim et al., 2013; Ho et al., 2016; Quinton et al., 2018; Saunila et al., 2019.	0.788
	Analyze competitors			
	Monitor changes in the markets			
<b>Entrepreneurial orientation</b>	Improve the range of products and services	From 1 to 5 (strongly disagree to strongly agree)	E.g., Covin and Slevin, 1989; Ho et al., 2016; Quinton et al., 2018.	0.715
	Expedite market entry			
	Reach new customers			
<b>Relationship orientation</b>	Search for new partners	From 1 to 5 (strongly disagree to strongly agree)	E.g., Panayides, 2007; Ho et al., 2016.	0.743
	Improve collaboration with partners			
	Improve the company image			
<b>Technology orientation</b>	Intensify processes	From 1 to 5 (strongly disagree to strongly agree)	E.g., Gatignon and Xuereb, 1997; Kim et al., 2013; Khin and Ho, 2019.	0.842
	Intensify the use of resources			
	Enhance information flow			
	Enhance ICT expertise			

The studied conditions under which small companies are likely to pursue different digital orientations were the presence of digitality in company strategy, a company’s willingness to grow, and the competitive intensity in the markets. Digitality in strategy was measured with one item, which asked the respondents to assess whether digitality was part of the company strategy on a scale of 1 to 5 (strongly disagree to strongly agree). A company’s willingness to grow was measured on a scale of 1 to 5, with response options ranging from strongly disagree to strongly agree. Regarding the competitive intensity in the markets, a similar scale of 1 to 5, with response options ranging from strongly disagree to strongly agree, was used.

Digital orientation was measured via four dimensions discussed in Section entitled “Digital orientation”, namely market orientation, entrepreneurial orientation, relationship orientation, and technology orientation. Each dimension was measured using 3–4 items that asked the respondents to assess whether they had a need to adopt digital technologies (in relation to the specified goals presented in Table 1). Response options also ranged from strongly disagree to strongly agree.

*Results of the Analyses*

Figure 2 presents the conditions under which the studied companies operated. Around 78% of the companies agreed that they had a high presence of digitality in their strategy, and only 11% did not consider the presence of digitality in company strategy to be high. The remaining 11% of the companies neither disagreed nor agreed. Regarding the willingness to grow, 71% of the companies agreed that their company’s willingness to grow was high. Only 18% did not agree, and the remaining 11% of the companies neither disagreed nor agreed. 62% of the companies agreed that competitive intensity in their markets was high, while 17% did not agree. The remaining 21% of the companies neither disagreed nor agreed.

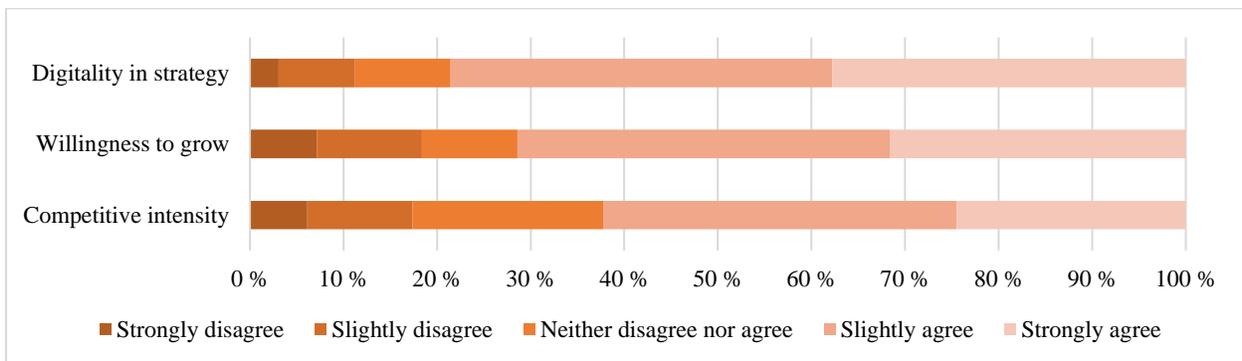


Figure 2. Description of the Context

Figure 3 shows the level of digital orientation in small businesses divided into four dimensions: market orientation, entrepreneurial orientation, relationship orientation, and technology orientation. Twenty-seven percent of the studied companies thought that their digitally assisted market orientation was strong (with the mean being between 4.1 and 5 on a scale of 1–5). Around 53% of the companies had put little effort into the digitally assisted market orientation (with the mean between 3.1 and 4 on a scale of 1–5). Also, a noticeable portion, 20% of the companies, had not put significant effort into the digitally assisted market orientation (with the mean between 1 and 2 on a scale of 1–5).

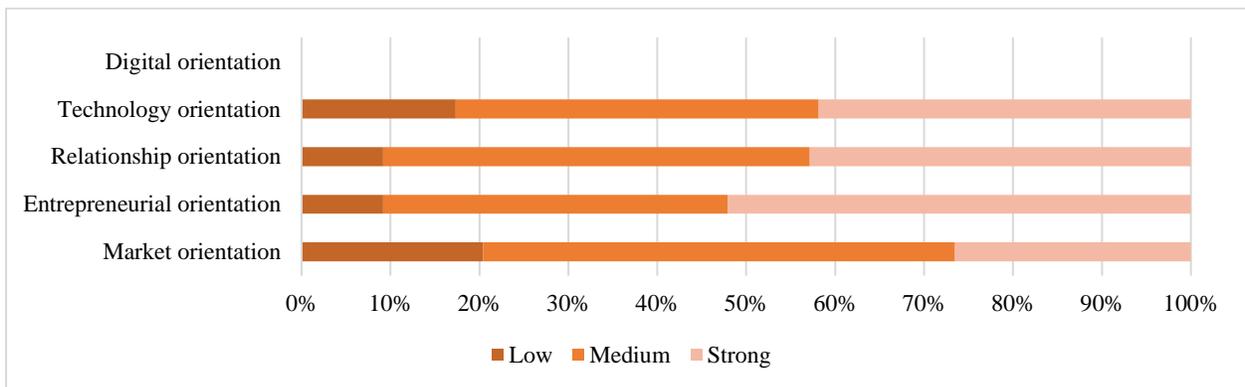


Figure 3. Small Businesses’ Digital Orientation

Fifty-two percent of the studied companies thought that their digitally assisted entrepreneurial orientation was strong (with the mean being between 4.1 and 5 on a scale of 1–5). Around 39% of the companies had put little effort into the digitally assisted entrepreneurial orientation (with the mean between 3.1 and 4 on a scale of 1–5). Only 9% of the companies had not put significant effort into the the digitally assisted entrepreneurial orientation (with the mean between 1 and 2 on a scale of 1–5).

Forty-three percent of the studied companies thought that their digitally assisted relationship orientation was strong (with the mean being between 4.1 and 5 on a scale of 1–5). Around 48% of the companies had put little effort into the digitally assisted relationship orientation (with the mean between 3.1 and 4 on a scale of 1–5). Only 9% of the companies had not put significant effort into the digitally assisted relationship orientation (with the mean between 1 and 2 on a scale of 1–5).

Forty-two percent of the studied companies thought that their digitally assisted technology orientation was strong (with the mean being between 4.1 and 5 on a scale of 1–5). Around 41% of the companies had put little effort into the digitally assisted technology orientation (with the mean between 3.1 and 4 on a scale of

1–5). Also, a noticeable portion, 17% of the companies, had not put significant effort into the digitally assisted technology orientation (with the mean between 1 and 2 on a scale of 1–5).

We used an analysis of variance to determine whether the small businesses' digital orientation generally differed based on the type of company, the presence of digitality in company strategy, a company's willingness to grow, and the competitive intensity in the markets. The results are presented in Table 2.

First, the influence of company characteristics on the digital orientation of small businesses studied. The differences between micro companies and small companies were examined. The results suggest that company size does not have a significant effect on its digital orientation. The differences between the manufacturing industry– and the service industry–oriented companies were also analyzed. The results suggest that a company's industry significantly affects only one dimension of digital orientation, namely technology orientation. The service-oriented companies placed more emphasis on technology orientation than the manufacturing companies did.

Second, the differences in digital orientation were studied according to the presence of digitality in a company's strategy. Significant differences were found in all dimensions of digital orientation, meaning that the presence of digitality in a company's strategy affects digital orientation in terms of market orientation, entrepreneurial orientation, relationship orientation, and technology orientation. Those companies with a high presence of digitality in their strategy were more widely oriented toward digitality than those who did not have digitality strongly included in their strategy.

Third, the effect of a company's willingness to grow on its digital orientation was studied. Significant differences were found in the market orientation, entrepreneurial orientation, and technology orientation based on a company's willingness to grow. Thus, the companies that have a strong will to grow put more emphasis on digitally assisted market orientation, entrepreneurial orientation, and technology orientation than the companies that have no will to grow. A company's willingness to grow did not affect the level of the digitally assisted relationship orientation.

Fourth, the differences between companies that operate in highly competitive markets and those that have less intense competition in their markets were examined. Significant differences were not found in the digital orientation of small businesses based on the competitive intensity in their markets. Table 3 presents the summary of the results and their interpretation.

Table 2. Results of the Analyses: Digital Orientation Based on Company Type and Company Conditions

		Market orientation		Entrepreneurial orientation		Relationship orientation		Technology orientation	
		Mean	Sig.	Mean	Sig.	Mean	Sig.	Mean	Sig.
<b>Company size</b>	Micro	3,88	3,52	4,14	1,29	4,11	1,05	4,00	1,51
	Small	3,56		3,93		3,95		3,75	
<b>Industry</b>	Manuf.	3,65	1,02	4,14	0,29	4,06	0,00	3,64	4,30*
	Service	3,83		4,04		4,06		4,05	
<b>Digitality in strategy</b>	Low	3,43	8,37**	3,76	5,54*	3,83	3,96*	3,53	8,49**
	High	3,92		4,19		4,15		4,09	
<b>Willingness to grow</b>	Low	3,42	13,74***	3,78	7,37**	3,91	2,61	3,69	4,47*
	High	3,99		4,24		4,15		4,07	
<b>Competitive intensity</b>	Low	3,71	0,18	4,05	0,02	3,82	2,86	3,95	0,02
	High	3,79		4,07		4,12		3,92	

Sign. \*\*\*  $p \leq 0.001$ , \*\*  $0.001 < p \leq 0.01$ , \*  $p \leq 0.05$

Table 3. Summary of the Results

Proposition	Support	Interpretation
P1. The digital orientation of a small business is determined by company size.	Not supported	Company size does not affect companies' digital orientation, that is, the engagement with the application of digital resources.
P2. The digital orientation of a small business is determined according to the different industry types.	Partially supported	Service-oriented companies are more advanced in terms of technology orientation (the application of novel technologies in company operations) than manufacturing-oriented companies.
P3. The digital orientation of a small business is determined by the presence of digitality in a company's strategy.	Supported	Companies that have a high presence of digitality in strategy are more advanced in terms of digital orientation (in all its dimensions: market orientation, entrepreneurial orientation, relationship orientation, and technology orientation).
P4. The digital orientation of a small business is determined by a company's willingness to grow.	Partially supported	Companies that have high willingness to grow are more advanced in terms of digital orientation (in its three dimensions: market orientation, entrepreneurial orientation, and technology orientation).
P5. The digital orientation of a small business is determined by the competitive intensity in the markets.	Not supported	Competitive intensity in the markets does not affect companies' digital orientation, that is, the engagement with the application of digital resources.

## **Conclusions**

In this chapter, we intended to contribute to the empirical literature on the digital orientation of small businesses. In this regard, we were able to demonstrate that knowing the conditions under which small businesses operate can indeed add to our understanding of the digital orientations they pursue. Therefore, this chapter contributed to existing literature by both conceptualizing digital orientation and defining the factors that support or hinder the digital orientation of small businesses. The implications for research and practice are introduced next.

### *Theoretical Implications*

We proposed to study the conditions under which small companies are likely to pursue different digital orientations and which types of companies are most likely to embrace different digital orientations. Moreover, by using empirical survey data, the objective was to enhance the literature on digital orientation with further empirical insights. First, the results indicate that certain conditions, such as digitality in strategy and willingness to grow, explain small businesses' digital orientation to some degree. With regard to the presence of digitality in the strategy of small businesses, the results strongly support Ukko et al. (2019) and Thompson et al. (2013), who concluded that small businesses need to ensure that business strategies fully incorporate new digital technologies, with a clear understanding of what the consequences are of adopting these technologies. The results also support prior studies that suggest that digital orientation in its various forms is positively related to small business growth (Quinton et al., 2018; Taiminen and Karjaluoto, 2015; Weill and Woerner, 2015).

Second, company size or industry did not explain the level of digital orientation. Although small companies are not as equipped as large companies (Laforet, 2008), they can perfectly adopt ideas employed by large companies using a high level of flexibility, teamwork, and fast adaptability (Russo and Perrini, 2010). Thus, companies' characteristics in terms of size do not play an influential role in the digital context. This can be due the fact that digital orientation operates as a comprehensive strategy, allowing companies with different sizes and activities to cooperate. In terms of industry, the service-oriented companies are more advanced in terms of technology orientation than manufacturing-oriented companies. The reason behind this might be the differences in the operational logic of the service and the manufacturing companies (Valtakoski and Witell, 2018) and the nature of service companies, whereby efficient service offerings using novel technologies are their core business.

Third, the competitive intensity in the markets does not explain small businesses' digital orientation. The results challenge the idea that in order to manage competition, small businesses need to adopt behaviors that fit the characteristics of the market they are in, such as acquiring certain assets or capabilities (Quinton et al., 2018; Theodosiou et al., 2012). In fact, competitive intensity in the markets does not seem to shape the digital orientation of small businesses. Therefore, our study concludes that the various forms of digital orientation are determined by a company's internal factors. In small companies, internal factors determine the digital orientation, and external factors, namely the intensity of competition, do not play a significant role.

### *Managerial Implications*

In terms of the managerial and policy implications, our research raises the awareness and understanding, previously based on very few empirical studies, of the role of the context and company conditions for the digital orientation of small companies. As the results of the study show that company size does not affect companies' digital orientation, the managers of companies should understand that, despite the size of the company, there are possibilities available when considering the digital orientation of the company. The results also indicate that service-oriented companies are more advanced in technology orientation than manufacturing-oriented companies. As such, managers of the manufacturing-oriented companies should pay attention to the new possibilities that the digital orientation of the service companies could provide them with. This study further provided evidence that managers of small businesses should consider the significant role of digitality for strategy in all the dimensions of digital orientation. In other words, by implementing an advanced level of digitality in strategy, decision-makers in small business could successfully perform in digital orientation in terms of the market, the entrepreneurial, the relationship, and the technology orientation. Additionally, decision-makers, especially in small businesses, should consider the internal and the external nature of factors and activities in their businesses. For instance, a company condition in terms of willingness to grow is mainly related to internal activities, whereby the work patterns will change based on the factors inside the company, including its market, entrepreneurial, and technology orientations. In contrast, competitive intensity involves activities that are more external, meaning change will occur externally. As the competitive intensity in the markets does not affect companies' digital orientation, the managers of the companies are not forced to shift toward digital orientation as a reaction to the activities of their competitors; the digital orientation is motivated more due to the internal characteristics of companies.

### *Limitations and Further Research Directions*

Although the results presented in this chapter indicate that the factors supporting the digital orientation of small businesses seem to be internal, such as digitality in strategy and willingness to grow, the phenomenon needs more evidence and greater empirical understanding. There are avenues for future research that could improve the understanding of the implementation of digitality in a company's strategy. Furthermore, it would be reasonable to improve the understanding of why the external factors, such as the competitive intensity in the markets, do not explain the level of digital orientation of small businesses. As a limitation of the chapter, it should be noted that the results were gathered from only one country. As such, there might be some country-specific factors affecting the conditions under which small businesses operate. For that reason, it would be a good idea to conduct further research to extend the empirical understanding regarding the phenomenon in other countries. Finally, as this chapter focused on the digital orientation of small businesses, further research could work to understand the factors supporting the digital orientation of large companies.

### **Author Biographies**

Minna Saunila (D.Sc. Tech.) is a senior researcher at LUT University, School of Engineering Science, Department of Industrial Engineering and Management. Her research covers topics related to performance management, innovation, service operations, as well as sustainable value creation. She received a D.Sc. degree from LUT in 2014 in the field of Industrial Management. Recently, her research projects have been related to digitization of services and production. She has previously published in *Journal of Engineering and Technology Management*, *Technology Analysis and Strategic Management*, and *Computers in Industry* among others.

Mina Nasiri (M.Sc. Tech) is a junior researcher at LUT University, School of Engineering Science, Department of Industrial Engineering and Management. Her research interests lie in the area of digitalization, digital transformation, performance measurement and management, operations management and sustainable strategies.

Juhani Ukko (D.Sc. Tech.) is a senior researcher at LUT University, School of Engineering Science, Department of Industrial Engineering and Management. He is also an adjunct professor at Tampere University. His current research focuses on performance measurement, operations management, digital transformation, digital services and corporate sustainability performance. In recent years, he has managed

and participated in research projects related to digital transformation in companies and society. His work has been published in journals such as *International Journal of Operations and Production Management*, *Production Economics* and *Journal of Cleaner Production*.

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