Journal of
Risk and Financial Management

MDPI

Article

Digital Transformation of Small and Medium Enterprises: Aspects of Public Support

Ramona Rupeika-Apoga *, Larisa Bule and Kristine Petrovska

Faculty of Business, Management and Economics, University of Latvia, LV-1050 Riga, Latvia; larisa.bule@lu.lv (L.B.); kr.petrovska@gmail.com (K.P.)
* Correspondence: rr@lu.lv

Abstract: The purpose of this study is to identify the necessary public support measures for small and medium-sized enterprises (SMEs) and provide policy makers with guidance on how to facilitate a successful digital transformation. The study is based on a representative survey of 425 Latvian SMEs carried out in spring 2021. We combine three analyses: a survey among SMEs, qualitative comparative analysis and regression analysis. The results of this study show that a significant number of SMEs are convinced that they will not be able to cope with digital transformation without various kinds of assistance, with direct financial support from the state or EU funds and tax incentives playing a major role. The range of public support required is rather wide, from staff training, mentoring and increasing the potential workforce to tax relief and direct financial support. We found statistically significant differences in public support needed depending on the size of SMEs and their ability to independently manage digital transformation. These findings could be useful for policymakers, managers and practitioners to identify various forms of public support that can maximize the impact of digital transformation not only on business, but also on society as a whole.

Keywords: digital transformation; small and medium enterprises; public support

Citation: Rupeika-Apoga, Ramona, Larisa Bule, and Kristine Petrovska. 2022. Digital Transformation of Small and Medium Enterprises: Aspects of Public Support. *Journal of Risk and Financial Management* 15: 45. https://doi.org/10.3390/jrfm15020045

Academic Editors: Theodoros Stamatopoulos, Eleftherios I. Thalassinos and John Malindretos

Received: 10 December 2021
Accepted: 14 January 2022
Published: 20 January 2022

1. Introduction

The world has been increasingly moving into the digital space, partly due to the emergence of a younger, more technologically perceptive generation. "Transform or go home!" is a common theme in studies, reports, forums and conferences on how companies can stay competitive in this increasingly digital world. Upon going digital, one of the biggest takeaways is that if you are not on the web, you are not real. Unfortunately, many business owners and managers do not understand the meaning of digital transformation (Chonsawat and Sopadang 2020). In this age of digital transformation, the concept has become so abstract, so broad, that it can seem confusing. Does using social media to market your products or using cloud technology indicate that your company is undergoing a digital transformation? Yes and no, since the digital transformation term has different connotations for different companies (Everett 2021). The journey of digital transformation begins with the creation of a digital version of an analogue or physical item. This shift then leads to a shift in business operations, models, and competencies to adapt to available technologies, and it never ends. Continuous innovation, the ability to respond quickly to change, as well as the ability to take advantage of challenges and opportunities are required to ensure success.

So why do we care about digital transformation, does it affect our lives? In recent years, both policymakers (OECD 2019, 2021; The European Commission 2021) and academics (Morakanyane et al. 2017; Ziółkowska 2021; Cichosz et al. 2020) have championed digital and green transformations as the key elements for progress and modernization of companies and the economy, as there are benefits for both the economy and society. As per Gartner Survey 2021 data, digital transformation is expected to fuel economic growth in

2021, due to AI technology, quantum computing, and 5G technology, along with corporate activism to help digital transformation become a reality (STAMFORD 2021). The World Economic Forum believes that digital transformation has the potential to create greater value for society than industry, especially in automatic and logistic services (WEF 2021a). Digital transformation not only enables education and employment to move from schools to homes, but also provides companies and governments with increasingly efficient ways to organize processes.

In light of the importance of small and medium-sized enterprises (SMEs) to any economy and their role as vehicles for economic growth (Wengler et al. 2021; Everett 2021; Priyono et al. 2020; Ardito et al. 2021), the purpose of this study is to identify the necessary public support measures for SMEs and provide policy makers with guidance on how to facilitate a successful digital transformation.

A survey of 425 owners and managers of SMEs in Latvia, conducted using Google Forms in February/March 2021, formed the basis of this study.

While academics focus on digitalization or digital transformation and SMEs' public support, our understanding of the role of public support as a facilitator of the digital transformation of SMEs remains surprisingly incomplete. There are a number of academic studies that show that digital transformation is critical to the modern economy as it affects the business world in a variety of ways (Morakanyane et al. 2017; Ziółkowska 2021; Cichosz et al. 2020). Another area of literature focuses on financial and non-financial public and private support for SMEs, with no particular focus on digital transformation (OECD 2020; Saksonova and Papiashvili 2021; Abel-Koch et al. 2019; Bennett 2008; Mole et al. 2017). While the growing importance of digital transformation for companies and the economy seems clear, support programs for how to facilitate this transformation are still unclear. Should SMEs do this on their own, following the laws of the free market and survival of the strongest, or should the state play an important role here? In this study, we are trying to fill this gap in the literature, as digital transformation provides SMEs with direction to design and implement specific digital transformation strategies, so the selection of appropriate support initiatives can ensure their sustainable growth.

Moreover, previous literature has addressed the main barriers and challenges associated with digital transformation, but no evidence has been provided for supportive measures to overcome them. In this study, we have identified the main measures of public support as derivatives of the obstacles to the digital transformation of SMEs.

In addition, the current empirical research on public support for SMEs' digital readiness is largely based on case studies and limited question-and-answer surveys, mostly limited to yes and no, with no generalized or longitudinal studies (VARAM 2020; Chonsawat and Sopadang 2020; Mole et al. 2017; Grabowski and Staszewska-Bystrova 2020). In contrast, the answers on a 7-point Likert scale made it possible to more accurately formulate opinions on various aspects of public support for SMEs in the process of digital transformation.

To achieve our study's purpose and to test our hypotheses, we combine three analyses: a survey of SMEs, a qualitative comparative analysis, and a regression analysis.

In the public and political debate, we make the following contributions to the academic literature. Firstly, as far as the authors know, this is the first study based on an authentic data set collected from the SMEs during full lockdown in the country for 5 months. The survey data provide insight into the needs of SME owners and managers in an environment where the use of digital solutions has become a matter of survival. The period 2020–2021 has been critical since SMEs did not have enough time to manage digital transformation at their own pace, making public support vital.

Secondly, despite Latvia being a small open economy, its findings can also be relevant internationally. Small economies, especially those engaged in digital transformation, do not necessarily suffer from a disadvantage due to their size.

The results of this study show that a significant number of SMEs are convinced that they will not be able to cope with digital transformation without various kinds of assistance, with direct financial support from the state or EU funds and tax incentives playing a major

role. The range of support required is rather wide, from staff training, mentoring and increasing the potential workforce to tax relief and direct financial support. We found statistically significant differences in public support needed depending on the size of SMEs and the ability to independently manage digital transformation. To test how the need for different types of support affects revenue, depending on the ability to independently manage digital transformation, an ordinal logistic regression method was applied. The results of the regression analysis confirm that there is a difference between SMEs which can independently manage digital transformation (Group 1) and another group of SMEs that cannot cope with it on their own (Group 2). We found that for Group 2 and SMEs with higher needs for skills upgrading, the probability to earn higher revenues is greater. In contrast, for Group 2, tax incentives, mentoring and public funding for research provide a higher likelihood of higher revenue.

The next section, Section 2, discusses the theoretical background and hypotheses. Section 3 focuses on the data and methodology. Section 4 provides the results of the research on the types of support needed. Section 5 discusses the main findings and Section 6 concludes.

2. Theoretical Background and Hypotheses

A systematic literature review was carried out to formulate hypotheses. We started by searching for literature in popular databases such as Scopus, Web of Science, Taylor & Francis, ScienceDirect and others, from 2011 to 2021, using the keywords: public support AND digitalization OR digital transformation OR new technologies AND SMEs OR Small and Medium Enterprises OR small businesses. We have selected 785 articles that were relevant in January 2021. Using the PRISMA search strategy, 51 literary sources were selected (Page et al. 2021). To classify and organize the findings, we examined the results, identified duplicates, and applied the inclusion and exclusion criteria. In order to generate the most relevant search result, we implemented a specific syntax, and then narrowed it down to public support for digital transformation in SMEs. When we determined the qualitative saturation of the results (other articles did not contribute anything), we removed repeated article citations and used the 51 best citations.

The enormous importance of SMEs in the development of the national economy is a generally recognized fact (OECD 2020; Everett 2021; Johnson et al. 2007). SMEs make up the bulk of the world's businesses, providing a significant part of employment and tax revenue to state and local budgets (Saksonova and Papiashvili 2021; Denicolai et al. 2021; Mole et al. 2017). The same applies to the role of digital transformation, as it is a key element in the progress and modernization of companies and the economy (Morakanyane et al. 2017; Ziółkowska 2021; Cichosz et al. 2020). Thus, the phenomenon of digital transformation should be studied in the context of SMEs. At the same time, SMEs are more exposed to various risks associated with entrepreneurial activities than large companies, so it becomes evident that there is a need to support this group of enterprises (Chonsawat and Sopadang 2020; Ziółkowska 2021). A special approach is required for the development and application of various support initiatives, the creation of a concept that provides an understanding of the relationship between the measures applied and the results achieved. The development of the world economy constantly poses new challenges for any business; in recent years, the digital transformation process has been considered one of the most important (WEF 2021b; Voß and Pawlowski 2019; Wengler et al. 2021).

What are the main challenges and barriers to digital transformation? The literature review points to several barriers: a lack of appropriate financing possibilities, IT security issues, insufficient digital skills of employees, shortages of IT specialists on the external labour market, internal resistance to change, lack of managers' knowledge about how to accomplish change, uncertainty about future digital standards, etc. (Cichosz et al. 2020; The Enterprisers Project 2021; Checchinato et al. 2021). These obstacles are commonly grouped into human, technological and financial factors; however, other factors are important too, including organizational, legal, and environmental factors (Vogelsang et al. 2019; Matt et al.

2020). This is a fast-growing research area mainly focused on large companies, but some of the literature is also devoted to SMEs (Abel-Koch et al. 2019; Fanelli 2021). However, the question of what support SMEs need to overcome these barriers is still largely unexplored. Significant resources are channelled into the digitalization of small and medium-sized businesses; action strategies are being developed at the state and international level to ensure an active process of digital transformation, preserve the viability of enterprises, and ensure sustainable development (Kaur et al. 2021). In this study, we have identified the main measures of public support as derivatives of the obstacles to the digital transformation of SMEs. Based on a review of the literature, we assume that the types of public support to overcome the main barriers to digital transformation are: upgrading skills, upgrading safety, expanding the potential workforce, conducting in-house research, mentoring, reduced taxes and fees, and direct public financial support (Bygstad and Øvrelid 2021; Priyono et al. 2020; Truant et al. 2021; Chonsawat and Sopadang 2020). We divide our types of support into financial initiatives (reduced taxes and fees, and direct public financial support), technological (upgrading safety) and human (upgrading skills, expanding the potential workforce, conducting in-house research, and mentoring). There is an opinion among scientists and practitioners that either technological factors, such as cybersecurity, or the human factor, such as unskilled employees, are the main barrier to the development of SMEs (Vogelsang et al. 2019; Matt et al. 2020). However, while observing many SMEs in Latvia before the survey, we had the impression that a lack of financial initiative is the main problem. Therefore, we hypothesize as follows:

Hypothesis 1 (H1). *Financial initiatives are the most important public support for Latvian SMEs for successful digital transformation.*

Digital technologies play a crucial role in the future success of a wide range of industries, from business management to customer experience, yet most executive teams must overcome employee resistance to digital transformation. In reality, however, digital transformation processes take place in different ways, opportunities for SMEs differ significantly, and some market participants have made great progress in the implementation of digital technologies; however, most are still lagging behind for various reasons, even postponing digitization, not to mention digitalization and digital transformation (OECD 2021). A range of factors and barriers contribute to the lag in SME digitalization, including the SMEs' lack of information and awareness, skills gaps, capital shortages, and the absence of complementary assets such as technology itself and organizational culture.

A smaller business is often faced with greater difficulties in adapting to new regulatory frameworks, dealing with issues of data security and privacy, and gaining access to quality digital infrastructure. A substantial share of SMEs have yet to invest in digital transformation, and have never implemented any digital technology (Priyono et al. 2020; OECD 2021; Rupeika-Apoga and Solovjova 2016; Laidroo et al. 2021). Therefore, we hypothesize as follows:

Hypothesis 2 (H2). *The size of a Latvian SME affects the form of support needed.*

The Digital Economy and Society Index (DESI) does not provide a direct answer to the question about the level of digitalization of SMEs. However, analysing the structure of the index, it can be concluded that a certain (high) level is achieved precisely due to the element of digitalization of public services. At the same time, the element of integration of digital technologies indicates a generally low level among enterprises; therefore, it can be assumed that there is a corresponding problem within SMEs. Latest data of the OECD Reviews of Digital Transformation show that more than half of the population and 67% of the unemployed lack even basic digital skills. Latvia also has the lowest share of employed ICT specialists in the EU, while the share of women in the sector has decreased from 30% in 2008 to 14% in 2018. Latvian companies invest relatively little in improving the skills of their employees, especially in ICT training, participation in lifelong learning is low and

the involvement of low-skilled employees in adult education is even lower (OECD 2021). Several studies confirm that digital readiness is higher for large companies than for SMEs, and that SMEs are lagging behind (Rupeika-Apoga and Wendt 2021; Chonsawat and Sopadang 2020; European Investment Bank 2021; Marano 2021), but what happens within SMEs, and what kind of support do they need? Can SMEs manage digital transformation on their own or only with public support from the state and EU funds? Therefore, we hypothesize as follows:

Hypothesis 3 (H3). *The need for public support for Latvian SMEs depends on their ability to manage their own digital transformation.*

3. Materials and Methods

Three different methods were chosen to test the hypotheses. Firstly, we conducted a survey to obtain authentic data and insights from owners and managers of SMEs on digital transformation.

Secondly, we performed a qualitative comparative analysis (Kruskall–Wallis H test) to identify differences between the groups: micro, small and medium-sized enterprises, and SMEs that can independently manage digital transformation (group 1) and a second group of SMEs that cannot cope with this on their own (group 2). This method also allowed us to test our hypothesis and determine how similar or different objects are (Marx 2016; Cooper and Glaesser 2016).

Thirdly, we decided to conduct an ordinal logistic regression analysis, since this method allows us to determine existing differences in the ability to generate higher revenues based on the need for different support measures, depending on the ability of SMEs to independently carry out digital transformation.

3.1. Data Collection and Sample Characteristics

To achieve the research purpose, we used an online survey as a research method to collect data from small and medium-sized enterprises in order to obtain information and an understanding of the real situation when companies go digital. The survey was conducted to collect authentic data from SMEs to draw informed and unbiased conclusions about the support needed to drive digital transformation. In this study, Micro, Small, and Medium-Sized Enterprises are classified by the number of employees in the company in accordance with the methodology of the European Commission (European Commission 2003).

The survey of SMEs was carried out from February to March 2021, when there was a state of emergency in Latvia. The state of emergency began on 6 November 2020 and ended on 7 April 2021. This was a period when restrictions to contain the spread of the coronavirus included remote work, excluding essential workers and jobs that could not be carried out remotely. Companies in many sectors, such as tourism, accommodation and catering, water and air transport, retail, and others, were under pressure, and going digital was the only possible solution for many of them to survive. Conducting a survey where companies were constrained to provide services in the traditional way for several months was especially important to understand the needs of companies to start or facilitate their digital transformation.

Using literature reviews on digital transformation in SMEs (Aggarwal 2021; Chonsawat and Sopadang 2020; Ziółkowska 2021; Verhoef et al. 2021; Priyono et al. 2020; Gregurec et al. 2021; Kaur et al. 2021), the survey questions were identified. The survey began with broad questions concerning topics such as company size, revenue, business models, sector of the economy and the role of the respondent, and then moved on to digital readiness, goals and reasons, digital barriers, digital skills, risks and necessary support. Google Forms, as a cloud-based data management tool, was used to design and develop the web questionnaire. The scale used in the survey is a 7-point Likert scale, which is the most reliable among Likert scales as it captures the respondents' best sentiment. It also offers greater accuracy

of the results and is very useful for researchers, as well as providing more data points that can be analysed statistically.

The survey was conducted with the assistance of a consulting company whose target audience is mainly association executives and small business owners. Also, the authors made use of social networking sites such as LinkedIn *, Twitter *, and Facebook *; oral communications and telephone calls with SME representatives; and online communication with SME representatives. In addition to the target group of Latvian SMEs, the authors contacted leading universities in Lithuania and Estonia to conduct similar surveys, which would allow comparison of data in the Baltic States. In addition, the authors tried to reach a wider audience in other countries through social media.

As a result, we received 433 responses from Latvian SMEs with of the following proportions: micro-enterprises 44%, small enterprises 42% and medium-sized enterprises 13% of the sample, as well as 8 large companies from among the respondents. Since our study is focused on SMEs, our sample includes only businesses with fewer than 250 employees and a yearly revenue of less than 50 million euros, totalling 425 companies in Latvia. Our colleagues from Lithuania and Estonia were not as successful, as only 33 SMEs were from Lithuania and 25 from Estonia. Unfortunately, collecting data from other countries via social media was not successful as we only received responses from 18 companies in Norway, Sweden, Malta, Singapore, and a few other countries.

In Latvia, the digital transformation of SMEs is a state priority. In the middle of 2021, the Cabinet of Ministers approved the Guidelines for Digital Transformation 2021–2027 (Cabinet of Ministers of Latvia 2021). These guidelines describe the future set of actions, main goals to achieve and methods of support.

In general, the situation in Latvian SMEs is similar to the average situation in the European Union; namely, there is a lag in the level of application of digital technologies, respectively, the successful process of digital transformation is under threat, and therefore the provision of sustainable development as such and survival of enterprises in particular are also threatened.

When looking at the situation in Latvia from the point of view of the DESI index used by the European Commission to monitor the level of progress of the participating countries in the digital sphere, it is clear that Latvia's position is not the highest one (Figure 1).

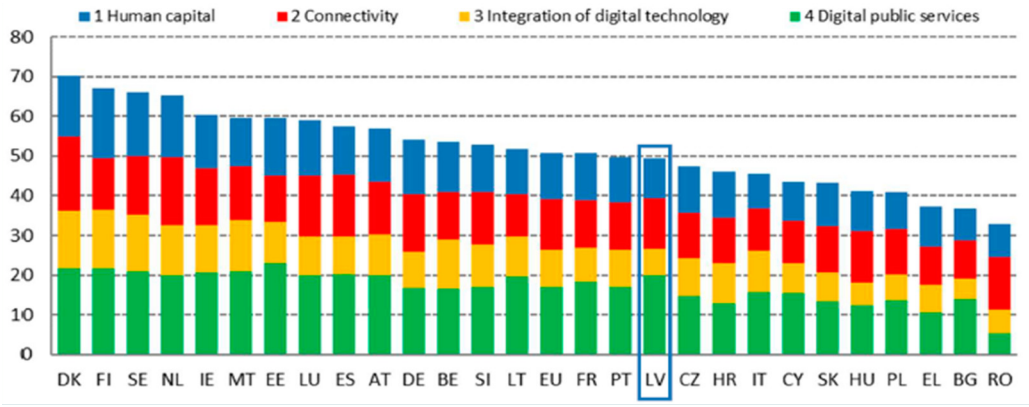
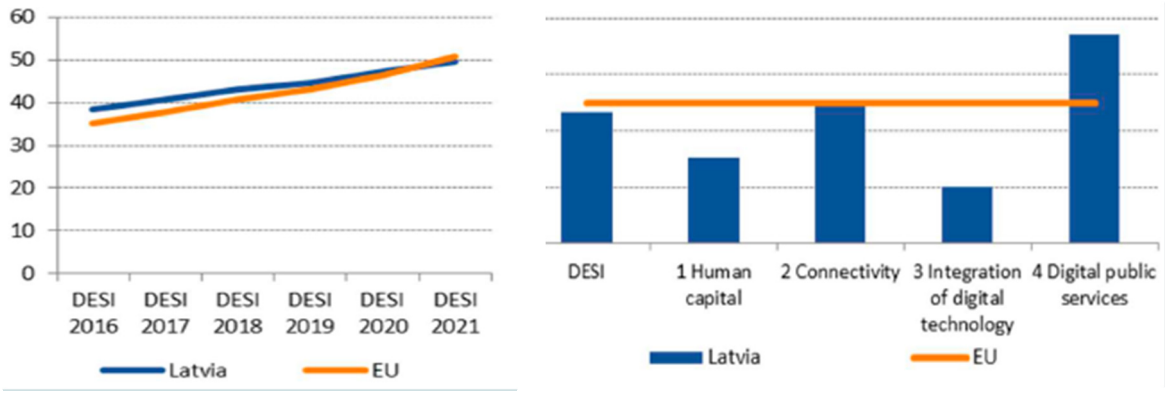


Figure 1. Digital Economy and Society Index (DESI) 2021 ranking (The European Commission 2021).

It should be mentioned that the ranking of Latvia used to be constantly higher than the European average, but recently it has started to lag, despite the obvious progress in development (Figure 2a). At the same time, the digitalization of public services in Latvia is one of the highest among the countries of the European Union. However, the areas of integration of digital technologies and human capital fall significantly behind the European average (Figure 2b).



(**a**) (**b**)

Figure 2. (**a**) DESI evolution in 2016–2021; (**b**) DESI 2021: relative performance by dimension. Source: (The European Commission 2021).

3.2. Qualitative Comparative Regression Analysis

This study focuses on identifying the necessary forms of support for SMEs (Paula 2021; Sebastian et al. 2017; OECD 2021), but the needs of medium-sized companies may differ from those of micro-companies. Several studies confirm that digital readiness is higher for large companies than for SMEs and that SMEs are lagging behind, but what happens inside SMEs, and what kind of support do they need? The qualitative comparative analysis (QCA) was carried out to test for differences in support needed by size of SMEs. The aim of the comparative analysis is to investigate the scope and validity of a truth statement (Kogurt 2010), and how similar or different the objects are (Marx 2016; Cooper and Glaesser 2016).

The first step is to determine if SMEs of different sizes are interested in the same public supporting activities, and, if not, how are they different? Public support activities were selected based on a literature review (see Table 1). Questions regarding support needed ranged from 1 when support was not required to 7 when support was absolutely necessary.

Table 1. Public support measures for digital transformation.

Questionnaire Items	Short	Source
upgrading skills	S_emp_qua	(Bygstad and Øvrelid 2021; Priyono et al. 2020; Truant et al. 2021; Chonsawat and Sopadang 2020)
upgrading safety	S_cyber	
expanding potential workforce	S_empl_incr	
conducting in-house research	S_research	
mentoring	S_mentoring	
reduced taxes and fees	S_tax_relief	
direct public financial support	S_dir_sup	

Source: authors' work.

The next step is to identify the set of causal conditions expected to contribute to the outcome under study. In this study, we wanted to test to what extent the need for public support depends on the ability of SMEs to accomplish their own digital transformation. The question of the ability of small and medium-sized enterprises to digitally transform has ranged from 1, when a company cannot digitally transform on its own, to 7, when a company could manage digital transformation on its own. We then created two comparative groups: the first in which SMEs can independently carry out digital transformation—scoring from 5 to 7—and the second group, in which SMEs cannot digitally transform without support, scoring from 1 to 4. Using the Kruskal–Wallis H test, we determine if there are statistically significant differences between small and medium-sized enterprises of different sizes and the two groups depending on their ability to perform digital transformation.

3.3. Regression Analysis

To test how the need for different types of support affects revenue, an ordinal logistic regression method was applied (using SPSS v20), since the data was on an ordinal scale. The standard interpretation of the ordered logit coefficient is that, for a one-unit increase in the predictor, the response variable level is expected to change by its respective regression coefficient in the ordered log-odds scale (Garson 2016). The revenues were selected as dependent variables, while needs for various support measures were selected as independent variables. The input data are survey data turned into a Likert 7-point scale. The questions regarding the required support ranged from 1 where support was not needed to 7 where support was absolutely necessary. The lowest revenue range has the lowest Likert scale; therefore, results should be interpreted in reverse. Table 1 summarizes the various support measures used in regression analysis.

As there might be a difference in which support measures lead to better revenues, two groups of SMEs were differentiated—SMEs who could perform digital transformation on their own (answered 5–7) and SMEs who responded as being unable to perform digital transformation on their own (1–4).

As previously mentioned, there were no multicollinearity issues within independent variables. Therefore, we met all assumptions to perform an ordered logit regression model. We chose to display Cox and Snell Pseudo R^2, as the ratio of the likelihoods shows the improvement of the full model over the intercept model (the smaller the ratio, the greater the improvement) (Gauthier and Hawley 2015). We also calculated the odds ratio additionally to better explain the results.

4. Results

4.1. Survey Analysis

In 2020, about 95,000 active enterprises were registered in Latvia (Official Statistics Database of Latvia 2022); about 99% of them are SMEs (Ministry of Economics Republic of Latvia 2022). According to Yamane (Yamane 1967), 398 companies are needed for a representative sample with a confidence level of 95% and $p = 0.5$ for 95,000 companies. In our case, we have 425 small and medium-sized enterprises; this amount is greater than 398 and makes our sample a representative one. Appendix A in Table A1 contains descriptive statistics for the sample.

Firstly, to determine the reliability of the sample, common method variance was assessed. Variance that is attributed to the selected measurement methods is known as common method variance (Podsakoff et al. 2003). The same method may have been used to measure two or more constructs, which can lead to an inflated or deflated correlation between constructs (Bagozzi and Yi 1990). The existence of common method variance was tested for via Harman's single factor test, by using un-rotated factor solution. The first factor accounted for only 34.207% of total variance (less than 50%) and the first five factors accounted for 77.34%; therefore, we can conclude that there is no common method bias. We based questions on facts and emphasized that we would maintain confidentiality of the answers gathered. Before publishing the questionnaire, we asked some entrepreneurs and less digitalization-oriented colleagues whether the terms used were clear and easily understandable. We also checked the correlation for common method bias and found that no measurement has higher than 0.7 correlation (Spearman Rank Order Correlation 2010).

To test sampling adequacy, the Kaiser–Meyer–Olkin measure was applied and the result was 0.771, which is above 0.5; therefore further tests can be carried out. In addition, Bartlett's test of sphericity is significant with p value less than 0.000.

Communalities extracted were above 0.5, which was a good result (except for the measure of dt_indep, where the communality extracted was 0.313). The factors were also loaded in a pattern matrix based on constructs.

Cronbach's alpha allows us to check how closely related a set of items is as a group (Tavakol and Dennick 2011). In our data, Cronbach's alpha is 0.754, which means that the data are reliable (Ahdika 2017).

Multicollinearity between independent variables can lead to false results. However, in our study, multicollinearity is not an issue as all VIF values are smaller than 3.3 (Kock and Lynn 2012); see Appendix A Table A2.

When using Likert scale data, the best measure to use is the mode, median or the most frequent response (Harpe 2015; Grima et al. 2021). Table 2 summarizes the survey responses of SMEs to the public support needed for a successful digital transformation. It provides information based on the size of the SME and the mode for each factor.

Table 2. What kind of activities should be publicly supported for successful digital transformation?

Level of Support	1	2	3	4	5	6	7	N	Mode
Number of responses to predefined items									
upgrading skills (micro)	2	1	6	28	49	59	44	189	6
upgrading skills (small)	0	5	5	30	57	55	28	180	5
upgrading skills (medium)	0	1	0	3	11	15	26	56	7
upgrading skills (SMEs)	2	7	11	61	117	129	98	425	6
upgrading safety (micro)	2	9	9	44	33	50	42	189	6
upgrading safety (small)	3	8	5	32	56	48	28	180	5
upgrading safety (medium)	0	1	1	10	9	21	14	56	6
upgrading safety (SMEs)	5	32	37	208	332	377	280	425	6
expanding potential workforce (micro)	2	9	10	38	48	46	36	189	5
expanding potential workforce (small)	2	12	5	40	49	50	22	180	6
expanding potential workforce (medium)	1	0	2	9	7	19	18	56	6
expanding potential workforce (SMEs)	5	21	17	87	104	115	76	425	6
conducting in-house research (micro)	4	5	15	53	45	42	25	189	
conducting in-house research (small)	3	5	11	48	46	42	25	180	4
conducting in-house research (medium)	1	1	1	10	13	17	13	56	4
conducting in-house research (SMEs)	8	11	27	111	104	101	63	425	6
mentoring (micro)	4	12	16	58	33	43	23	189	4
mentoring (small)	3	9	14	53	47	35	19	180	4
mentoring (medium)	0	1	3	17	10	15	10	56	4
Mentoring (SMEs)	7	22	33	128	90	93	52	425	4
reduced taxes and fees (micro)	3	1	4	31	28	50	72	189	4
reduced taxes and fees (small)	2	6	7	26	40	38	61	180	4
reduced taxes and fees (medium)	0	2	1	6	6	15	26	56	7
reduced taxes and fees (SMEs)	7	22	33	128	90	93	52	425	7
direct public financial support (micro)	4	2	4	27	29	39	84	189	7
direct public financial support (small)	2	3	4	25	36	41	69	180	7
direct public financial support (medium)	0	1	1	7	5	15	27	56	7
direct public financial support (SMEs)	5	9	12	63	74	103	159	425	7

Source: authors' work.

The survey results show that direct public financial support and the need to reduce taxes and fees, as financial initiatives, are the most necessary public support types for a successful digital transformation, with a mode "7" for all SMEs. The same is true for SMEs of different sizes, such as micro, small and medium-sized. Interestingly, there is a difference between the required support depending on the size of the company, since financial initiatives are equally important for all small and medium-sized enterprises, while professional development is equally important only for medium-sized companies. In general, the need for public support is more pronounced for medium-sized companies followed by microenterprises, while small businesses lag behind.

4.2. Results of Qualitative Comparative Analysis

QCA was used to test the difference between the requirements for public support depending on the size of the company. In addition, we tested the difference in public support, which also depends on the ability of SMEs to independently manage digital transformation (group 1) and another group of SMEs that cannot cope with it on their own (group 2). We used the Kruskal–Wallis H test to determine if there were statistically significant differences between groups (Gauthier and Hawley 2015). In order to perform the test, four assumptions regarding data should be met. First assumption is that the dependent variable must be ordinal or continuous. In our study, all variables are ordinal, as they are Likert scale variables. The second assumption is that independent variables should consist of two or more categorical, independent groups. In our study, this assumption is also met, as groups are distinguished by number of employees or ability to perform digital transformation independently (group 1 and group 2). The third assumption deals with the fact that observations need to be independent. This is fulfilled, as no single participant is part of both groups. Assumption number four says that distributions in each group should have the same shape. In our dataset, there are differences between dependent variable distribution shapes, and therefore we can use mean ranks when doing comparison.

A Kruskal–Wallis H test (Table 3) showed that there was a statistically significant difference in the need for public support score between SMEs of different sizes for upgrading skills, expanding the potential workforce and conducting in-house research. In all three of these forms of support, the mean ranks are higher for midsize companies, which means they expect more government support to drive digital transformation.

Table 3. The difference in the need for public support depending on the size of the company (Kruskal-Wallis H test).

Test Statistics								
		S_emp_qua	**S_cyber**	**S_empl_incr**	**S_research**	**S_mentoring**	**S_tax_relief**	**S_dir_sup**
Chi-Square		20.991	4.838	11.566	7.924	3.836	5.008	2.519
df		2	2	2	2	2	2	2
Asymp. Sig.		0.000	0.089	0.003	0.019	0.147	0.082	0.284
Mean Rank								
Size	**N**	**S_emp_qua**	**S_cyber**	**S_empl_incr**	**S_research**	**S_mentoring**	**S_tax_relief**	**S_dir_sup**
Micro	189	214.13	211.29	211.37	203.02	208.11	217.48	215.51
Small	180	192.34	204.88	199.56	210.74	209.06	200.30	204.47
Medium	56	275.59	244.88	261.72	253.95	242.18	238.72	231.96

Source: authors' work.

Table 4 shows that there are significant differences with regard to some of the support measures, such as the importance of mentoring, conducting in-house research, upgrading skills and upgrading safety between the two groups. The results are similar to the breakdown of SMEs by size, but another support measure—improved safety—has a statistically significant difference in the need for public support. The results show that for these four support measures, Group 1 needs more public support than Group 2, which means that SMEs that can independently manage digital transformation expect more support.

Table 4. The difference in need for public support between the two groups of SMEs, based on the ability to manage their own digital transformation (Kruskal–Wallis H test).

Test Statistics								
		S_emp_qua	S_cyber	S_empl_incr	S_research	S_mentoring	S_tax_relief	S_dir_sup
Chi-Square		10.509	24.502	3.818	8.932	15.856	0.051	0.227
df		1	1	1	1	1	1	1
Asymp. Sig.		0.001	0.000	0.051	0.003	0.000	0.821	0.634
Mean Rank								
Size	**N**	**S_emp_qua**	**S_cyber**	**S_empl_incr**	**S_research**	**S_mentoring**	**S_tax_relief**	**S_dir_sup**
Group1	173	235.55	247.69	226.70	233.95	240.91	214.56	209.74
Group 2	252	197.52	189.19	203.59	198.62	193.84	211.93	215.24

Source: authors' work.

4.3. Results of Regression Analysis

The regression results confirm that there is a difference in the probability of earning revenue between SMEs that can independently manage digital transformation (Group 1) and SMEs that cannot independently manage digital transformation (Group 2), depending on the required public support. As can be seen from Table 5, which displays the regression results, only a fraction of the coefficients are statistically significant, such as mentoring, tax incentives, and research. For example, SMEs from Group 1 with a need to conduct internal research have a higher odds ratio of earning higher revenues. In addition, the analysis confirms a higher earning probability for those SMEs that have a weak need (1–3 score) for mentoring in Group 1.

In contrast, for Group 2 (see Table A3 in Appendix A), need for public support for expanding the potential workforce provides a higher probability of earning revenue. Those SMEs that say they need this type of support have a higher odds ratio of earning higher revenue than those SMEs that do not need support to increase employment. In addition, SMEs that say they need support to improve their cyber resilience have a higher odds ratio of earning higher revenue. Overall, it can be seen that the relationship between support measures and income is weak or inconsistent, and that various factors are probably more important in describing revenue.

Table 5. Regression results for SMEs that can independently manage digital transformation.

Parameter Estimates										
		Estimate	**Std. Error**	**Wald**	**df**	**Sig.**	**95% Confidence Interval**			
							Lower Bound	**Upper Bound**	**Odds ratio**	**Lower**	**Upper**
Threshold	[Revenue = 1]	−1.142	0.377	9.157	1	0.002	−1.882	−0.402	0.32	0.15	0.67
	[Revenue = 2]	0.391	0.367	1.136	1	0.286	−0.328	1.109	1.48	0.72	3.03
	[Revenue = 3]	2.043	0.406	25.344	1	0.000	1.248	2.839	7.72	3.48	17.09
	[Revenue = 4]	2.432	0.425	32.798	1	0.000	1.600	3.265	11.38	4.95	26.17
	[Revenue = 5]	4.221	0.624	45.787	1	0.000	2.999	5.444	68.13	20.06	231.39
	[Revenue = 6]	4.928	0.797	38.204	1	0.000	3.366	6.491	138.14	28.95	659.20

Table 5. *Cont.*

Parameter Estimates											
		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval		Odds ratio	Lower	Upper
							Lower Bound	Upper Bound			
Location	[S_research = 1]	−0.276	2.104	0.017	1	0.896	−4.400	3.848	0.76	0.01	46.92
	[S_research = 2]	−3.458	1.235	7.835	1	0.005	−5.879	−1.037	0.032	0.00	0.35
	[S_research = 3]	−2.057	0.870	5.589	1	0.018	−3.763	−0.352	0.13	0.02	0.70
	[S_research = 4]	−1.979	0.633	9.771	1	0.002	−3.220	−0.738	0.14	0.04	0.48
	[S_research = 5]	−1.147	0.570	4.046	1	0.044	−2.264	−0.029	0.3177019	0.11	0.97
	[S_research = 6]	−0.953	0.602	2.510	1	0.113	−2.133	0.226	0.39	0.12	1.25
	[S_research = 7]	0			0				1		
	[S_mentoring = 1]	0.908	1.544	0.346	1	0.557	−2.119	3.935	2.48	0.12	51.18
	[S_mentoring = 2]	0.946	0.907	1.087	1	0.297	−0.833	2.725	2.58	0.43	15.25
	[S_mentoring = 3]	2.470	0.886	7.763	1	0.005	0.732	4.207	11.82	2.08	67.14
	[S_mentoring = 4]	1.753	0.647	7.332	1	0.007	0.484	3.021	5.77	1.62	20.52
	[S_mentoring = 5]	1.427	0.631	5.111	1	0.024	0.190	2.665	4.17	1.21	14.36
	[S_mentoring = 6]	0.456	0.603	0.572	1	0.449	−0.726	1.639	1.58	0.48	5.15
	[S_mentoring = 7]	0			0				1		
	[S_tax_relief = 1]	24.323	1.558	243.769	1	0.000	21.270	27.376	3.66×10^{10}	1.73×10^{10}	7.75×10^{10}
	[S_tax_relief = 2]	0.496	1.258	0.155	1	0.693	−1.970	2.961	1.64	0.14	19.32
	[S_tax_relief = 3]	0.777	1.247	0.388	1	0.533	−1.667	3.222	2.18	0.19	25.07
	[S_tax_relief = 4]	−1.056	0.705	2.243	1	0.134	−2.439	0.326	0.35	0.09	1.39
	[S_tax_relief = 5]	−1.046	0.663	2.491	1	0.114	−2.345	0.253	0.35	0.10	1.29
	[S_tax_relief = 6]	−0.339	0.589	0.330	1	0.565	−1.494	0.816	0.71	0.22	2.26
	[S_tax_relief = 7]	0			0				1		
	[S_dir_sup = 1]	−22.078	0.000		1		−22.078	−22.078	2.58	2.58	2.58
	[S_dir_sup = 2]	−1.236	1.218	1.030	1	0.310	−3.623	1.151	0.29	0.03	3.16
	[S_dir_sup = 3]	−2.174	1.825	1.418	1	0.234	−5.751	1.404	0.113	0.00	4.07
	[S_dir_sup = 4]	1.840	0.707	6.768	1	0.009	0.454	3.226	6.30	1.57	25.19
	[S_dir_sup = 5]	1.118	0.672	2.770	1	0.096	−0.199	2.435	3.06	0.82	11.42
	[S_dir_sup = 6]	0.918	0.561	2.679	1	0.102	−0.181	2.017	2.506	0.83	7.52
	[S_dir_sup = 7]	0			0				1		
Number of obs = 173 LR chi2(3) = 41.769 Prob > chi2 = 0.014							Log likelihood = 361.003 Cox and Snell Pseudo R^2 = 0.338 Test of Parallel lines *p* value = 1.00				

5. Discussion

Although most organizations today are undergoing the process of digitalization and incorporating digital technologies, there are still many challenges to overcome before they can truly embrace digital transformation. In addition, large companies are still more successful (Rupeika-Apoga and Wendt 2021; Marano 2021), while SMEs and especially micro-companies are struggling to start their digital journey in order to avoid losing competitiveness. The analysis of the literature carried out by the authors showed that the results of scientific research rather weakly reflect the impact of various support methods on the digital transformation of SMEs per se. Since the concept of digital transformation in scientific publications is displayed as a highly complex matter (Verhoef et al. 2021; Checchinato et al. 2021), often contradictory, it can be concluded that the approaches to the factors triggering such transformations and positively influencing the results are also diverse. Most often, the process of digital transformation is studied in the context of drivers; this section of research is quite wide (Ziółkowska 2021; Cichosz et al. 2020; Wengler et al. 2021; Verhoef et al. 2021). However, the role of various methods of public support in triggering different drivers is not extensively reflected in the scientific literature.

The environmental framework is obviously important in enabling or hampering a company's possibilities to undertake its digital transformation (Fakhar Manesh et al. 2021; Frey 2021). One of four environmental issues covers regulations and incentives introduced by a government (Frey 2021). Direct financial support and tax incentives, hereinafter governmental financial initiatives, may be considered the elements of an environmental framework affecting the process of a digital journey. Scientific literature doesn't provide

sufficient evidence of a correlation between governmental financial initiatives and digital transformation; however, the investigation of the impact of tax incentives and direct financial support highlights that public instruments, such as direct grants and tax incentives, independently and in combination strengthen the research and development orientation and capacity of the SMEs as well as their innovation output (Radas et al. 2015; Vogelsang et al. 2019). Moreover, SMEs need external support to integrate digital transformation into their overall strategy because of their unstable behaviour concerning investments in information and communications technology (Schaltegger et al. 2016; Ulas 2019). Grabowski and Staszewska-Bystrova found that innovation support might not be optimally used in newer members of the EU and that better coordination of aid from the EU and national institutions could lead to improved economic results (Grabowski and Staszewska-Bystrova 2020).

Survey analysis allowed us to confirm our hypothesis (H1) that financial initiatives are the most important form of public support for Latvian SMEs for a successful digital transformation. The survey results show that, for all sizes of SMEs, direct financial support and tax incentives are the most important elements, which makes financial initiatives the main violin in the issue of public support needs of SMEs. The range of support required is rather wide, from staff training, mentoring and increasing the potential workforce to tax relief and direct financial support. Scientific literature does not provide sufficient evidence of the correlation between the need for specific measures along with the specific scale of SMEs' digital transformation support, and the size of an enterprise along with its level of digital adoption. However, in other areas of SME support the correlation of necessary measures with the size of the SME is extensively discussed (Johnson et al. 2007; Mole et al. 2017; Bennett 2008). Our study complements the approach to the assessment of the relationship between the methods of supporting SMEs, depending on various factors, namely the size of the company and its level of digital adoption.

Survey analysis and qualitative comparative analysis confirm our H2 that the size of a Latvian SME affects the form of support needed. We found that there are differences in the importance of support measures; for example, the need for public support to improve employee skills is higher for midsize companies than for small companies. There is a statistically significant difference in the need for public support by SMEs of different sizes when it comes to upgrading skills, expanding employment opportunities and conducting in-house research. Midsize companies appear to expect more support in all three forms of public support, which indicates greater government involvement in digital transformation. This is consistent with other findings that SMEs with higher levels of digital adoption need different support tools and are less likely to expect government support (Ulas 2019).

Our findings also confirm H3, that the need for public support for Latvian SMEs depends on their ability to manage their own digital transformation. The Kruskal–Wallis test results show there are significant differences in some support measures between the two groups, such as mentoring, research conducted in-house, upgrading skills and enhancing safety. The results are generally the same as for classifying SMEs by size, but one additional support measure—enhancing safety—is statistically significant. For these four support measures, Group 1 expects more public support than Group 2, which means that SMEs that can independently manage digital transformation are on the rise in their digital journey. In addition, an ordinal logistic regression analysis confirms that there is a difference between SMEs that are capable of managing digital transformation independently (Group 1) and SMEs that are unable to do so on their own (Group 2). We found that the probability to earn higher revenues is greater for Group 2 and SMEs with greater needs for skills upgrading. In addition, for Group 2, tax incentives, mentoring and public funding for research provide a higher likelihood of greater revenue. The results of this method clearly show which types of public support come first; that is, where the higher long-term profitability of tax money will be (since higher revenues entail higher taxes).

Various programs to support the digitalization of SMEs are not new; such programs have existed for several years both at the national level and at the EU level. According

to OECD study (OECD 2021) SMEs have been provided targeted financial support and technical assistance, often taken in the form of small-scale and place-based initiatives, in order to conduct technology and problem-solving diagnostics and implement new e-business solutions. A 2020 Ministry of Environment protection and Regional Development (VARAM) survey found that only 3% of 715 companies in Latvia have taken advantage of government-funded support programs to implement digital solutions within the company, or train employees in IT technologies. Most companies (54%) failed to see the importance of these programs, and 43% do not have enough information (VARAM 2020). This indicates the ineffectiveness of the existing program of public support for digital transformation.

Based on our analysis, it becomes clear that it is necessary to form various approaches to support enterprises, depending on size. Taking into account the differences in risks and methods of support needed, it can be assumed that there are significant disparities in the set of required support measures. To ensure that the support is neither too broad nor too narrowly focused, it is necessary to consider each enterprise as a unique object of estimation. Consequently, the support program for a particular SME should be based on individual testing of levels of digital readiness. Currently, the development of a model for assessing digital readiness is one of the most popular areas of research (Nasution et al. 2018; Voß and Pawlowski 2019); however, in the Baltic States there is no generally accepted model implemented in the field of public support. As a result, the above-mentioned situation arises when enterprises do not apply for support, being unable to identify their own problems independently. Therefore, establishing a common model of assessment of digital readiness should become the first step towards the efficient support of SMEs in their digital journey.

5.1. Technological Support

Small businesses often miss out on the opportunities that new digital tools offer, or they think the advance expenses are too high to upgrade towards more advanced digital technologies. The means by which the government can help SMEs vary, with a combination of financial and non-financial support ranging from financial initiatives to non-financial support in the form of consultations being used. For instance, in Lithuania, from 2014 to 2023 the government is providing high-level specific business development consultations for Lithuanian businesses (EIF 2021). As part of its commitment to digital disruption and robotics, Estonia provides financial assistance to the manufacturing and mining industries (OECD 2020). Such valuable solutions as establishing the digital championship programme can be implemented also as far as these activities can improve the digital uptake by SMEs.

5.2. Training and Education

According to our survey data, the main types of support needed are upgrading digital skills and expanding the potential workforce. These goals should be achieved via improving the system of training and education at all levels.

As with all change management initiatives, digital transformation brings multiple stakeholders into the picture, which must be coordinated effectively in order for the project to succeed. The training of new employees and the provision of ongoing professional support to existing ones are two of the most overlooked aspects of digital transformation. For SMEs to succeed in implementing a digital transformation strategy in the next few years, they must ensure that their employee training programs meet best practices. When properly trained, the employees go beyond simply learning how to do their jobs; they also gain a better understanding of their role in company culture and a sense of ownership in the company's success.

It is typically harder for SMEs to attract and retain skilled employees than it is for large companies due to their limited networks and capacity to identify and access talent as well as their generally lower pay and working conditions. Furthermore, tailored training is more expensive for SMEs due to the smaller number of employees and the lack of opportunity to release workers for training. Apprenticeship programmes are being studied as a means to

better connect education and employment in many OECD countries. Public and stakeholder organizations are being used by countries to raise awareness of the importance of skills development in SMEs.

Considering the above-mentioned factors, we conclude that an increase in the efficiency of public support should be achieved by:

- establishing ICT training programmes for groups with insufficient digital deployment;
- focusing on higher education programs that include ICT training;
- enhancing employer participation in work-based learning;
- expanding the availability of informational resources on maintaining ICT equipment;
- establishing training vouchers for employees funded out of an employer's contribution on gross wages and simplifying procedures to grant firms support for on-the-job training.

Methods of strengthening the interrelationship between vocational schools and firms employing ICT specialists should be also reconsidered.

5.3. Strengthening Management

To assist SMEs in building management skills, governments can use several tools such as digital diagnostic tools, training and workshops, and more intensive methods such as management coaching. In addition to excellent project management skills and a solid understanding of the way in which modern companies operate, digital transformation managers must demonstrate competency in managing change. This includes not only technical skills, but also soft skills such as communication, teamwork, and the ability to realize the actual processes of the company.

5.4. Raising Confidence in the Digital Environment

Despite the robust foundations able to address the challenges and opportunities of digital security (the Latvian Computer Emergency Response Team (CERT.LV), Cyber Security Strategy (2019–2022) adopted by the Latvian Ministry of Defence (MoD), the Latvian National Information Technology Security Council (NITSC) established in 2011), digital security policy in Latvia is still narrowly focused on national security, with insufficient attention paid to the economic and social dimensions of digital security (OECD 2021). As our research indicates, Latvian SMEs also suppose safety upgrades to be one of their support issues.

The highest levels of government must take the main incentive in promoting the digital security strategy, while the involvement of ministries with a cross-cutting mandate must be in place. In addition, the digital security strategy should be better integrated with various action plans related to the digital transformation processes, such as the Latvian Digital Transformation Guidelines. Certain directions of cooperation may be facilitated, for example, professional training and workforce-sharing programmes between public institutions, multi-stakeholder interaction on digital security policy making through trust-based partnerships, and finally international engagement in the area of digital security for economic and social prosperity, in particular with other Baltic countries.

6. Conclusions

This study complements the academic literature on public support for and digital transformation of SMEs. The purpose of this study is to identify the necessary public support measures for SMEs and provide policy makers with guidance on how to facilitate a successful digital transformation. To achieve our purpose, we conducted a survey to collect authentic data from Latvian SMEs. As a result, we managed to obtain answers from 433 companies from Latvia; eight companies, as large companies, were excluded from our sample.

Based on our analysis, it is becoming clear that it is necessary to take various approaches to supporting an enterprise, depending on its size. Taking into account the differences in risks and methods of support needed, it can be assumed that there are sig-

nificant disparities in the set of required support measures. To ensure that the support is not either too broad or too narrowly focused, it is necessary to consider each enterprise as a unique object of estimation. Consequently, the support program for a particular SME should be based on individual testing of levels of digital readiness. Currently, the development of a model for assessing digital readiness is one of the most popular areas of research (Nasution et al. 2018; Voß and Pawlowski 2019); however, in the Baltic States there is no generally accepted model implemented in the field of public support. As a result, the above-mentioned situation arises when enterprises do not apply for support, being unable to identify independently their own problems. Therefore, establishing a common model of digital readiness assessment should become the first step towards the efficient support of SMEs' digital journeys.

Given that the development and provision of essential types of support can be carried out at different levels of government, it is necessary to apply a systemic approach and ensure close interaction between the participants of the process as well as awareness of the role of each participant in achieving a common goal. Last but not least, the negative aspect of digitalization, namely possible employment problems due to the massive crowding out of human labour, must be constantly kept in mind. In the context of this problem, along with the provision of support, the prompt introduction of a digital tax is also necessary.

Our research has some limitations. It would be beneficial to include SMEs from other countries in future studies on more effective public support for small businesses since this study is mostly based on Latvian SMEs and partly on Lithuanian and Estonian SMEs. Even though the response rate from Latvian SMEs is acceptable, it would be useful if other countries were included. It would be interesting to continue monitoring the financial performance of small and medium-sized enterprises capable of self-driving digital transformation as well as those in need of public support.

Author Contributions: Conceptualization, R.R.-A. and L.B.; methodology, R.R.-A. and K.P.; formal analysis, R.R.-A. and L.B.; investigation, R.R.-A. and L.B.; data curation, R.R.-A.; writing—original draft preparation, R.R.-A. and L.B.; writing—review and editing, R.R.-A. and L.B.; visualization, R.R.-A. and L.B. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by LATVIAN COUNCIL OF SCIENCE, grant number LZP-2020/2-0061, project DigiSMEs.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Data is available from authors upon reasonable request.

Acknowledgments: We would like to thank all the companies who took part in the survey.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Table A1. Descriptive statistics of survey data.

	Variable Name	Min.	Max	Median	Std. Deviation	Skewness		Kurtosis	
		Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
S_emp_qua	upgrading skills	1	7	6	1.204	−0.720	0.118	0.538	0.236
S_cyber	upgrading safety	1	7	5	1.391	−0.693	0.118	0.163	0.236
S_empl_incr	expanding potential workforce	1	7	5	1.402	−0.652	0.118	0.079	0.236

Table A1. *Cont.*

	Variable Name	Min.	Max	Median	Std. Deviation	Skewness		Kurtosis	
		Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
S_research	conducting in-house research	1	7	5	1.373	−0.471	0.118	0.061	0.236
S_mentoring	mentoring	1	7	5	1.417	−0.311	0.118	−0.293	0.236
S_tax_relief	reduced taxes and fees	1	7	6	1.388	−1.004	0.118	0.616	0.236
S_dir_sup	company's direct external financial support	1	7	6	1.369	−1.142	0.118	1.043	0.236
DT_indep	Ability to perform digital transformation independently	1	2	2	0.492	−0.380	0.118	−1.865	0.236
Size	Size of the company by number of employees	1	3	2	0.693	0.506	0.118	−0.835	0.236
Revenue	Revenues per year	1	7	2	1.337	1.030	0.118	0.400	0.236

Source: authors' work.

Table A2. Multicollinearity test results.

Dependent Variable	S_emp_qua	S_cyber	S_empl_incr	S_research	S_mentoring	S_tax_relief	S_dir_sup
Independent Variable	**VIF**	**VIF**	**VIF**	**VIF**	**VIF**	**VIF**	**VIF**
S_cyber	1.451	NA	1.677	1.641	1.491	1.672	1.655
S_empl_incr	1.744	1.863	NA	1.559	1.862	1.825	1.858
S_research	2.103	2.062	1.764	NA	1.828	2.092	2.091
S_mentoring	1.709	1.524	1.713	1.487	NA	1.707	1.710
S_tax_relief	2.348	2.341	2.300	2.330	2.338	NA	1.380
S_dir_sup	2.242	2.299	2.323	2.311	2.324	1.369	NA
S_emp_qua	NA	1.432	1.549	1.652	1.650	1.655	1.593

Source: authors' work based on modelling results.

Table A3. Regression results for SMEs unable to manage digital transformation on their own.

Parameter Estimates										
		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval		Odds ratio	
							Lower Bound	Upper Bound	Lower	Upper
Threshold	[Revenue = 1]	1.187	0.561	4.475	1	0.034	0.087	2.287	3.27	1.09	9.84
	[Revenue = 2]	2.546	0.580	19.300	1	0.000	1.410	3.683	12.76	4.09	39.74
	[Revenue = 3]	4.012	0.609	43.374	1	0.000	2.818	5.206	55.25	16.74	182.33
	[Revenue = 4]	4.193	0.614	46.620	1	0.000	2.989	5.396	66.21	19.87	220.61
	[Revenue = 5]	7.929	1.158	46.864	1	0.000	5.659	10.199	2776.3	286.806	26,875.02

Table A3. *Cont.*

Parameter Estimates											
							95% Confidence Interval				
		Estimate	Std. Error	Wald	df	Sig.	Lower Bound	Upper Bound	Odds ratio	Lower	Upper
Location	[S_emp_qua = 1]	1.987	3.587	0.307	1	0.580	−5.044	9.018	7.29	0.006	8248.91
	[S_emp_qua = 2]	0.312	2.151	0.021	1	0.885	−3.903	4.528	1.36	0.02	92.57
	[S_emp_qua = 3]	1.212	0.979	1.534	1	0.216	−0.706	3.131	3.36	0.49	22.88
	[S_emp_qua = 4]	−0.279	0.612	0.208	1	0.649	−1.479	0.921	0.75	0.23	2.51
	[S_emp_qua = 5]	−0.092	0.590	0.024	1	0.876	−1.249	1.065	0.91	0.29	2.90
	[S_emp_qua = 6]	−0.921	0.540	2.907	1	0.088	−1.981	0.138	0.39	0.14	1.15
	[S_emp_qua = 7]	0			0				1.00		
	[S_cyber = 1]	1.447	1.799	0.647	1	0.421	−2.078	4.973	4.25	0.12	144.41
	[S_cyber = 2]	0.024	0.837	0.001	1	0.978	−1.616	1.663	1.02	0.19	5.27
	[S_cyber = 3]	−1.313	1.003	1.715	1	0.190	−3.279	0.652	0.26	0.03	1.92
	[S_cyber = 4]	−0.143	0.609	0.055	1	0.814	−1.337	1.051	0.87	0.26	2.86
	[S_cyber = 5]	1.369	0.615	4.956	1	0.026	0.164	2.575	3.93	1.17	13.12
	[S_cyber = 6]	0.402	0.579	0.483	1	0.487	−0.732	1.536	1.49	0.48	4.64
	[S_cyber = 7]	0			0				1.00		
	[S_empl_incr = 1]	3.997	1.852	4.658	1	0.031	0.367	7.627	54.43	1.44	2052.94
	[S_empl_incr = 2]	1.438	1.199	1.439	1	0.230	−0.912	3.789	4.21	0.40	44.19
	[S_empl_incr = 3]	2.000	1.040	3.696	1	0.055	−0.039	4.038	7.38	0.96	56.71
	[S_empl_incr = 4]	1.945	0.842	5.331	1	0.021	0.294	3.596	6.99	1.34	36.45
	[S_empl_incr = 5]	1.570	0.798	3.872	1	0.049	0.006	3.134	4.80	1.00	22.95
	[S_empl_incr = 6]	1.824	0.777	5.501	1	0.019	0.300	3.347	6.19	1.3	28.42
	[S_empl_incr = 7]	0			0				1.00		
	[S_research = 1]	−0.414	1.678	0.061	1	0.805	−3.703	2.876	0.66	0.02	17.74
	[S_research = 2]	1.208	1.330	0.825	1	0.364	−1.398	3.814	3.36	0.24	45.35
	[S_research = 3]	0.544	1.096	0.246	1	0.620	−1.605	2.693	1.72	0.21	14.77
	[S_research = 4]	−0.958	0.793	1.459	1	0.227	−2.513	0.597	0.38	0.08	1.81
	[S_research = 5]	−0.729	0.788	0.855	1	0.355	−2.274	0.816	0.48	0.10	2.26
	[S_research = 6]	−0.248	0.761	0.106	1	0.745	−1.740	1.244	0.78	0.17	3.47
	[S_research = 7]	0			0				1.00		
	[S_mentoring = 1]	−2.630	2.266	1.348	1	0.246	−7.070	1.810	0.07	0.00	6.11
	[S_mentoring = 2]	−2.978	1.214	6.015	1	0.014	−5.357	−0.598	0.05	0.05	0.55
	[S_mentoring = 3]	−0.219	0.876	0.063	1	0.802	−1.936	1.498	0.80	0.14	4.47
	[S_mentoring = 4]	0.685	0.600	1.304	1	0.253	−0.491	1.861	1.98	0.61	6.42
	[S_mentoring = 5]	0.684	0.627	1.188	1	0.276	−0.546	1.914	1.91	0.57	6.77
	[S_mentoring = 6]	−0.290	0.654	0.196	1	0.658	−1.572	0.993	0.749	0.20	2.69
	[S_mentoring = 7]	0			0				1.000		
	[S_tax_relief = 1]	−18.929	2.711	48.747	1	0.000	−24.243	−13.616	0.000	0.00	0.00
	[S_tax_relief = 2]	1.869	1.480	1.594	1	0.207	−1.032	4.770	6.48	0.35	117.90
	[S_tax_relief = 3]	−0.511	1.091	0.220	1	0.639	−2.650	1.627	0.60	0.07	5.08
	[S_tax_relief = 4]	−0.349	0.605	0.333	1	0.564	−1.534	0.836	0.70	0.21	2.30
	[S_tax_relief = 5]	0.327	0.559	0.342	1	0.558	−0.769	1.423	1.38	0.46	4.14
	[S_tax_relief = 6]	0.230	0.444	0.269	1	0.604	−0.640	1.100	1.25	0.57	3.04
	[S_tax_relief = 7]	0			0				1.00		
	[S_dir_sup = 1]	20.730	0.000		1		20.730	20.730	1.0×10^9	1.0×10^9	1.0×10^9
	[S_dir_sup = 2]	−0.233	2.348	0.010	1	0.921	−4.835	4.370	0.72	0.08	79.08
	[S_dir_sup = 3]	0.704	0.943	0.558	1	0.455	−1.144	2.552	2.03	0.39	12.88
	[S_dir_sup = 4]	0.500	0.582	0.740	1	0.390	−0.640	1.640	1.69	0.57	5.18
	[S_dir_sup = 5]	0.842	0.560	2.258	1	0.133	−.256	1.940	2.30	0.74	6.97
	[S_dir_sup = 6]	−0.104	0.481	0.047	1	0.829	−1.046	0.838	0.92	0.35	2.33
	[S_dir_sup = 7]	0			0				1.00		
		Number of obs = 254 LR chi2(3) = 93.617 Prob > chi2 = 0.000							Log likelihood = 551.654 Cox and Snell Pseudo R^2 = 0.310 Test of Parallel lines *p* value = 1.00		

References

Abel-Koch, Jennifer, Leath Al Obaidi, Sabrina El Kasmi, Miguel Fernández Acevedo, Laetitia Morin, and Anna Topczewska. 2019. Report The Challenges Facing European SMEs 2019. European SME Survey 2019. Available online: https://smebanking.news/resources/17593-the-challenges-facing-european-smes/ (accessed on 15 November 2021).

Aggarwal, Gaurav. 2021. Council Post: Seven Major Obstacles To Digital Transformations. *Forbes*. Available online: https://www.forbes.com/sites/forbestechcouncil/2021/02/11/seven-major-obstacles-to-digital-transformations/ (accessed on 26 October 2021).

Ahdika, Atina. 2017. Improvement of Quality, Interest, Critical, and Analytical Thinking Ability of Students through the Application of Research Based Learning (RBL) in Introduction to Stochastic Processes Subject. *International Electronic Journal of Mathematics Education* 12: 167–91. [CrossRef]
Ardito, Lorenzo, Simon Raby, Vito Albino, and Bernardo Bertoldi. 2021. The Duality of Digital and Environmental Orientations in the Context of SMEs: Implications for Innovation Performance. *Journal of Business Research* 123: 44–56. [CrossRef]
Bagozzi, Richard P., and Youjae Yi. 1990. Assessing Method Variance in Multitrait-Multimethod Matrices: The Case of Self-Reported Affect and Perceptions at Work. *Journal of Applied Psychology* 75: 547–60. [CrossRef]
Bennett, Robert. 2008. SME Policy Support in Britain since the 1990s: What Have We Learnt? *Environment and Planning C: Government and Policy* 26: 375–97. [CrossRef]
Bygstad, Bendik, and Egil Øvrelid. 2021. Managing Two-Speed Innovation for Digital Transformation. *Procedia Computer Science* 181: 119–26. [CrossRef]
Cabinet of Ministers of Latvia. 2021. Par Digitālās transformācijas pamatnostādnēm 2021–2027. gadam. LIKUMI.LV. Available online: https://likumi.lv/doc.php?id=324715 (accessed on 14 October 2021).
Checchinato, Francesca, Andreas Hinterhuber, and Tiziano Vescovi. 2021. The Key Challenges of Digital Transformation. Available online: https://www.routledge.com/blog/article/the-key-challenges-of-digital-transformation (accessed on 29 October 2021).
Chonsawat, Nilubon, and Apichat Sopadang. 2020. Defining SMEs' 4.0 Readiness Indicators. *Applied Sciences* 10: 8998. [CrossRef]
Cichosz, Marzenna, Carl Marcus Wallenburg, and A. Michael Knemeyer. 2020. Digital Transformation at Logistics Service Providers: Barriers, Success Factors and Leading Practices. *The International Journal of Logistics Management* 31: 209–38. [CrossRef]
Cooper, Barry, and Judith Glaesser. 2016. Qualitative Comparative Analysis, Necessary Conditions, and Limited Diversity: Some Problematic Consequences of Schneider and Wagemann's Enhanced Standard Analysis. *Field Methods* 28: 300–15. [CrossRef]
Denicolai, Stefano, Antonella Zucchella, and Giovanna Magnani. 2021. Internationalization, Digitalization, and Sustainability: Are SMEs Ready? A Survey on Synergies and Substituting Effects among Growth Paths. *Technological Forecasting and Social Change* 166: 120650. [CrossRef]
EIF. 2021. EU Support for Lithuanian Small and Microbusinesses through LCCU Credit Unions. Available online: https://www.eif.org/what_we_do/guarantees/news/2021/eu-support-for-lithuanian-small-and-microbusinesses-through-lccu-credit-unions (accessed on 21 October 2021).
European Commission. 2003. Commission Recommendation of 6 May 2003 Concerning the Definition of Micro, Small and Medium-Sized Enterprises (Text with EEA Relevance) (Notified under Document Number C(2003) 1422). Available online: http://data.europa.eu/eli/reco/2003/361/oj (accessed on 6 October 2021).
European Investment Bank. 2021. Digitalisation in Europe 2020–2021: Evidence from the EIB Investment Survey. p. 98. Available online: https://op.europa.eu/en/publication-detail/-/publication/522dae40-11de-11ec-b4fe-01aa75ed71a1/language-en (accessed on 12 October 2021).
Everett, Cath. 2021. How SMEs Can Cure Their Fear of Digital Transformation. *Raconteur (blog)*, June 16. Available online: https://www.raconteur.net/business-strategy/small-business-digital-transformation/ (accessed on 14 October 2021).
Fakhar Manesh, Mohammad, Massimiliano Matteo Pellegrini, Giacomo Marzi, and Marina Dabic. 2021. Knowledge Management in the Fourth Industrial Revolution: Mapping the Literature and Scoping Future Avenues. *IEEE Transactions on Engineering Management* 68: 289–300. [CrossRef]
Fanelli, Rosa Maria. 2021. Barriers to Adopting New Technologies within Rural Small and Medium Enterprises (SMEs). *Social Sciences* 10: 430. [CrossRef]
Frey, John. 2021. How Digital Transformation and Sustainability Can Flourish. *World Economic Forum*, March 11. Available online: https://www.weforum.org/agenda/2021/03/here-s-how-digital-transformation-and-sustainability-can-flourish-together/ (accessed on 13 October 2021).
Garson, David G. 2016. *Multicollinearity Analysis in Reflective Models in Partial Least Squares: Regression and Structural Equation Models*. Asheboro: Statistical Associates Publishers.
Gauthier, Thomas D., and Mark E. Hawley. 2015. Statistical Methods. In *Introduction to Environmental Forensics*. Amsterdam: Elsevier, pp. 99–148. [CrossRef]
Grabowski, Wojciech, and Anna Staszewska-Bystrova. 2020. The Role of Public Support for Innovativeness in SMEs Across European Countries and Sectors of Economic Activity. *Sustainability* 12: 4143. [CrossRef]
Gregurec, Iva, Martina Tomičić Furjan, and Katarina Tomičić-Pupek. 2021. The Impact of COVID-19 on Sustainable Business Models in SMEs. *Sustainability* 13: 1098. [CrossRef]
Grima, Simon, Ramona Rupeika-Apoga, Murat Kizilkaya, Inna Romānova, Rebecca Dalli Gonzi, and Mihajlo Jakovljevic. 2021. A Proactive Approach to Identify the Exposure Risk to COVID-19: Validation of the Pandemic Risk Exposure Measurement (PREM) Model Using Real-World Data. *Risk Management and Healthcare Policy* 14: 4775–87. [CrossRef]
Harpe, Spencer E. 2015. How to Analyze Likert and Other Rating Scale Data. *Currents in Pharmacy Teaching and Learning* 7: 836–50. [CrossRef]
Johnson, Steve, Don J. Webber, and Wayne Thomas. 2007. Which SMEs Use External Business Advice? A Multivariate Subregional Study. *Environment and Planning A: Economy and Space* 39: 1981–97. [CrossRef]
Kaur, Balijinder, Sood Kiran, Simon Grima, and Ramona Rupeika-Apoga. 2021. Digital Banking in Northern India: The Risks on Customer Satisfaction. *Risks* 9: 209. [CrossRef]

Kock, Ned, and Gary Lynn. 2012. *Lateral Collinearity and Misleading Results in Variance-Based SEM: An Illustration and Recommendations*. SSRN Scholarly Paper ID 2152644. Rochester: Social Science Research Network, Available online: https://papers.ssrn.com/abstract=2152644 (accessed on 9 October 2021).

Kogurt, Bruce. 2010. Qualitative Comparative Analysis of Social Science Data. In *The Oxford Handbook of Comparative Institutional Analysis*, 1st ed. Edited by Glenn Morgan, John L. Campbell, Colin Crouch, Ove Kaj Pedersen and Richard Whitley. Oxford: Oxford University Press. [CrossRef]

Laidroo, Laivi, Ekaterina Koroleva, Agata Kliber, Ramona Rupeika-Apoga, and Zana Grigaliuniene. 2021. Business Models of FinTechs—Difference in Similarity? *Electronic Commerce Research and Applications* 46: 101034. [CrossRef]

Marano, Pierpaolo. 2021. Management of Distribution Risks and Digital Transformation of Insurance Distribution—A Regulatory Gap in the IDD. *Risks* 9: 143. [CrossRef]

Marx, Axel. 2016. *Qualitative Comparative Analysis (QCA)*. Oxford: Oxford University Press. [CrossRef]

Matt, Dominik T., Vladimír Modrák, and Helmut Zsifkovits, eds. 2020. *Industry 4.0 for SMEs: Challenges, Opportunities and Requirements*. Cham: Springer International Publishing. [CrossRef]

Ministry of Economics Republic of Latvia. 2022. Entrepreneurship. Available online: https://www.em.gov.lv/en/entrepreneurship-0 (accessed on 3 January 2022).

Mole, Kevin, David North, and Robert Baldock. 2017. Which SMEs Seek External Support? Business Characteristics, Management Behaviour and External Influences in a Contingency Approach. *Environment and Planning C: Politics and Space* 35: 476–99. [CrossRef]

Morakanyane, Resego, Audrey Grace, and Philip O'Reilly. 2017. Conceptualizing Digital Transformation in Business Organizations: A Systematic Review of Literature. In *Digital Transformation—From Connecting Things to Transforming Our Lives*. Bled: University of Maribor Press, pp. 427–43. [CrossRef]

Nasution, Reza Ashari, Linda Sendy Lediana Rusnandi, Elis Qodariah, Devi Arnita, and Nila Armelia Windasari. 2018. The Evaluation of Digital Readiness Concept: Existing Models and Future Directions. *The Asian Journal of Technology Management (AJTM)* 11: 94–117. [CrossRef]

OECD. 2019. *OECD SME and Entrepreneurship Outlook 2019*. Paris: OECD. [CrossRef]

OECD. 2020. *Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard*. Financing SMEs and Entrepreneurs. Paris: OECD. [CrossRef]

OECD. 2021. *The Digital Transformation of SMEs*. OECD Studies on SMEs and Entrepreneurship. Paris: OECD. [CrossRef]

Official Statistics Database of Latvia. 2022. "Economically Active Enterprises by Main Kind of Activity (NACE Rev. 2)." Oficiālās Statistikas Portāls. Available online: https://data.stat.gov.lv:443/pxweb/en/OSP_PUB/START__ENT__UZ__UZS/UZS020/ (accessed on 3 January 2022).

Page, Matthew J., Joanne E. McKenzie, Patrick M. Bossuyt, Isabelle Boutron, Tammy C. Hoffmann, Cynthia D. Mulrow, Larissa Shamseer, Jennifer M. Tetzlaff, Elie A. Akl, Sue E. Brennan, and et al. 2021. The PRISMA 2020 Statement: An Updated Guideline for Reporting Systematic Reviews. *BMJ* 372: n71. [CrossRef]

Paula, Daina. 2021. Strengthening the Green Deal in Latvia: What Could We Expect from Electrical Mobility? *Makroekonomika*. April 20. Available online: https://www.macroeconomics.lv/strengthening-green-deal-latvia-what-could-we-expect-electrical-mobility (accessed on 13 October 2021).

Podsakoff, Philip M., Scott B. MacKenzie, Jeong-Yeon Lee, and Nathan P. Podsakoff. 2003. Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. *Journal of Applied Psychology* 88: 879–903. [CrossRef]

Priyono, Anjar, Abdul Moin, and Vera Nur Aini Oktaviani Putri. 2020. Identifying Digital Transformation Paths in the Business Model of SMEs during the COVID-19 Pandemic. *Journal of Open Innovation: Technology, Market, and Complexity* 6: 104. [CrossRef]

Radas, Sonja, Ivan-Damir Anić, Azra Tafro, and Vanja Wagner. 2015. The Effects of Public Support Schemes on Small and Medium Enterprises. *Technovation* 38: 15–30. [CrossRef]

Rupeika-Apoga, Ramona, and Irina Solovjova. 2016. Profiles of SMEs as Borrowers: Case of Latvia. *Contemporary Studies in Economic and Financial Analysis* 98: 63–76. [CrossRef]

Rupeika-Apoga, Ramona, and Stefan Wendt. 2021. FinTech in Latvia: Status Quo, Current Developments, and Challenges Ahead. *Risks* 9: 181. [CrossRef]

Saksonova, Svetlana, and Tatjana Papiashvili. 2021. Micro and Small Businesses Access to Finance and Financial Literacy of Their Owners: Evidence from Latvia, Estonia and Georgia. *Lecture Notes in Networks and Systems* 195: 667–77. [CrossRef]

Schaltegger, Stefan, Erik G. Hansen, and Florian Lüdeke-Freund. 2016. Business Models for Sustainability: Origins, Present Research, and Future Avenues. *Organization & Environment* 29: 3–10. [CrossRef]

Sebastian, Ina M., Kate G. Moloney, Jeanne W. Ross, Nils O. Fonstad, Cynthia Beath, and Martin Mocker. 2017. How Big Old Companies Navigate Digital Transformation. *MIS Quarterly Executive* 16: 197–213.

Spearman Rank Order Correlation. 2010. *Encyclopedia of Research Design*. Edited by Neil Salkind. Thousand Oaks: SAGE Publications, Inc. [CrossRef]

STAMFORD. 2021. Gartner Survey. Gartner, Inc., May. Available online: https://www.gartner.com/en/newsroom/press-releases/2021-05-05-gartner-finds-72-percent-of-data-and-analytics-leaders-are-leading-or-heavily-involved-in-digital-transformation-initiatives (accessed on 15 October 2021).

Tavakol, Mohsen, and Reg Dennick. 2011. Making Sense of Cronbach's Alpha. *International Journal of Medical Education* 2: 53–55. [CrossRef] [PubMed]

The Enterprisers Project. 2021. What Is Digital Transformation? Available online: https://enterprisersproject.com/what-is-digital-transformation (accessed on 12 October 2021).
The European Commission. 2021. DESI | Shaping Europe's Digital Future. Available online: https://digital-strategy.ec.europa.eu/en/policies/desi (accessed on 1 November 2021).
Truant, Elisa, Laura Broccardo, and Léo-Paul Dana. 2021. Digitalisation Boosts Company Performance: An Overview of Italian Listed Companies. *Technological Forecasting and Social Change* 173: 121173. [CrossRef]
Ulas, Dilber. 2019. Digital Transformation Process and SMEs. *Procedia Computer Science* 158: 662–71. [CrossRef]
VARAM. 2020. Latvian Digital Transformation Guidelines for 2021–2027—Accellation of Digital Capacities for Future Society and Economy. Available online: https://www.varam.gov.lv/en/article/latvian-digital-transformation-guidelines-2021-2027-accellation-digital-capacities-future-society-and-economy (accessed on 14 November 2021).
Verhoef, Peter C., Thijs Broekhuizen, Yakov Bart, Abhi Bhattacharya, John Qi Dong, Nicolai Fabian, and Michael Haenlein. 2021. Digital Transformation: A Multidisciplinary Reflection and Research Agenda. *Journal of Business Research* 122: 889–901. [CrossRef]
Vogelsang, Kristin, Kirsten Liere-Netheler, Sven Packmohr, and Uwe Hoppe. 2019. Barriers to Digital Transformation in Manufacturing: Development of a Research Agenda. Available online: https://aisel.aisnet.org/hicss-52/in/digital_transformation/3/ (accessed on 12 October 2021).
Voß, Franziska L. V., and Jan M. Pawlowski. 2019. Digital Readiness Frameworks: Current State of the Art and Research Opportunities. In *Knowledge Management in Organizations*. Edited by Lorna Uden, I-Hsien Ting and Juan Manuel Corchado. Communications in Computer and Information Science. Cham: Springer International Publishing, vol. 1027, pp. 503–14. [CrossRef]
WEF. 2021a. Bridging Digital and Environmental Goals: A Framework for Business Action. Available online: https://www3.weforum.org/docs/WEF_Bridging_Digital_and_Environmental_Goals_2021.pdf (accessed on 26 October 2021).
WEF. 2021b. Digital Culture: The Driving Force of Digital Transformation. Available online: https://www.weforum.org/reports/digital-culture-the-driving-force-of-digital-transformation/ (accessed on 12 October 2021).
Wengler, Stefan, Gabriele Hildmann, and Ulrich Vossebein. 2021. Digital Transformation in Sales as an Evolving Process. *Journal of Business & Industrial Marketing* 36: 599–614. [CrossRef]
Yamane, Taro. 1967. *Statistics: An Introductory Analysis*, 2nd ed. New York: Harper & Row. Available online: https://www.biblio.com/book/statistics-introductory-analysis-yamane-taro/d/1351382503 (accessed on 12 October 2021).
Ziółkowska, Marta Joanna. 2021. Digital Transformation and Marketing Activities in Small and Medium-Sized Enterprises. *Sustainability* 13: 2512. [CrossRef]