

# Digital tools and digital solutions in the practice of Hungarian SMEs

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## Abstract

The digital wave of the 21st century has reached and affected all sectors of the economy. The IT developments that started after the turn of the millennium have brought a level of change to organisations that was unprecedented in previous years. The pandemic has given a new impetus to this process. While larger companies were prepared for these challenges well in advance, it was only during the pandemic, and thanks to the shutdowns, that small and medium-sized enterprises made a significant shift towards digitalisation. The digital imperative has created many obstacles for businesses. In many cases, there is a lack of skills, knowledge and capability, as well as considerable resistance to the processes at both organisational and employee level. The aim of our study is to present the digital aspirations of SMEs after the pandemic, covering the tools used, the applicability of online solutions, the barriers and obstacles to their adoption, based on the results of a primary research conducted in Hungary.

*Keywords: digitalisation, SMEs, pandemic, change*

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## 1. Introduction

The changes of the 21st century have raised awareness of the importance of digitalisation, which the pandemic has only reinforced. In a 2017 study, the OECD pointed out long before the pandemic that the uptake and use of digital technologies was particularly low among SMEs. During the pandemic, digitalisation was a high priority in many areas of business operations, which led to changes in a large proportion of organisations. The pandemic situation forced many businesses to switch to teleworking, with online communication tools and virtual workspaces enabling employees to perform their tasks from home, thus minimising direct face-to-face contact. The epidemic has forced many businesses to close or restrict face-to-face shopping, which for many SMEs has meant the loss or reduction of their only source of income. As a result, online shopping and access to services through digital platforms has become extremely important. This digital shift has allowed businesses to continue to operate and reach their customers through the spaces provided by the internet. Digital tools, such as online conference calls and social media platforms, have

allowed businesses and their customers to stay connected, despite distance and isolation. All of these challenges were a huge challenge for many SMEs, which were perceived and valued differently. The aim of this paper is to describe the digital transformation of Hungarian SMEs in the light of the pandemic.

## **2. Literature review**

The digital switchover is forcing many organisations to change and adapt. Leading change involves the task of keeping the business motivated, prepared or ready to act for as long as possible (Kotter, 2008; 2012). In many organisations, they do not always know what the right solution or action to take is when change occurs in the firm's environment. This is partly the fault of the leadership, but the responsibility of the organisational culture should not be ignored (Varga - Csiszárík-Kocsir, 2017). The success of a change depends to a large extent on the degree of support and identification of the stakeholders (Klein - Kozlovski, 2020). The human factor is a key moment in making change successful. Besides leadership, the commitment of the employees should be highlighted (Ficara et al, 2021). Willingness to act may be lower in firms where the importance of change is not understood or for some reason cannot be identified (Kotter, 2012). However, this is not the only reason why will to act may be low (Kotter, 2008). Our past successes and achievements may make us more prone to become complacent and it may be harder to mobilise the organisation again. One thing is certain, however. We must never stand still, because the business environment of the 21st century is not about slowing down - on the contrary - it is about accelerated processes and change, and no company can afford to ignore the need to monitor and manage change. This is also true for the operation of small and medium-sized enterprises. Although they are smaller in size, they are equally affected by environmental changes and challenges (Varga, 2021). Behind the need to manage and cope with change is the desire to constantly strive for a better position or better results. To strive for excellence, change projects are needed (Collins, 2021; Blaskovics, 2016; 2018). To want to improve and achieve better results, the right steps must be taken. The right action can only be developed in an environment that supports change. An enterprise must be shaped to be change-ready, have the right organisational culture, people who are committed to the company and to change, free from uncertainty and fear, and supportive of managers in their change strategy. However, most change initiatives fail mainly because of a lack of strategy and vision, lack of leadership commitment and support, lack of trust, ineffective communication, lack of change management skills and strong resistance to change.

Digitalisation processes in businesses can also be seen as change, as transformation. Many SMEs have faced and continue to face the problem that the biggest obstacle to digitalisation processes is the people themselves, the employees

or even the customers. However, digitisation has many advantages (Morgan - Thomas, 2016; Audretsch, et al, 2015). The introduction of digital tools and processes allows for the automation of manual tasks, easier management of data and reduction of administrative burden. This increases the efficiency and productivity of the business, by shortening processes and reducing the number of control procedures. The introduction of digital technologies can help to reduce costs in several areas of business operations (online communication, document management, automation, scrap production, etc.). Digitalisation enables SMEs to be more competitive in the market (Varga et al, 2022; Varga - Csiszárík-Kocsir, 2016). With an online presence, digital marketing and sales channels, businesses can reach and serve customers more easily (Ainin et al, 2015). In addition, digitalisation can help to tailor products and services, provide a better customer experience, and deliver faster and smoother service. Digital technologies enable businesses to better adapt to the changing market environment and collect, store and analyse data more easily, which also leads to better customer service and retention.

However, in order to take advantage of these benefits, SMEs need the right infrastructure (Ferreira, 2019), which involves significant one-off and ongoing costs, and then the skills and knowledge of employees to use it properly. Employees need to learn the new systems, which requires time and resources. Digitalisation can also bring security risks. Storing data online and communicating over the Internet can compromise the confidentiality of a company's information. The rise of cybercriminals and data theft makes it important to ensure data protection and cyber security, which also entails additional costs (Dobos, 2022). In addition to all this, it must be taken into account that the development of digital technologies has accelerated at an incredible rate, with the constant emergence of new tools, software and trends. This rapid pace of change poses a huge challenge for many SMEs, especially if they have limited resources to upgrade technology and adapt to new systems.

### **3. Material and methodology**

The theoretical basis of this study is the trend of digitalisation, a trend that has a significant and complex impact on consumer society. Digitalisation is a generator of complex changes. The information society, the trend towards digitalisation, is influencing and reshaping our everyday lives in many ways. The focus of our research is to analyse the impact of the digitalisation trend on small and medium enterprises and micro-enterprises. The results presented in this study are partial results of a two-stage quantitative survey among domestic enterprises. We repeated the sampling in 2022 and 2023 with the same questionnaire and the same sampling technique to ensure comparability of the data over time. In both cases, a pre-tested, standardised questionnaire survey was used, with an arbitrary sampling technique. 161 assessable

questionnaires were processed in 2022 and 72 in 2023, in both cases the population was defined as registered enterprises in the country. The questionnaire contained only closed questions, with bivariate, multivariate and scaled (Likert and semantic differential) questions. In addition to descriptive statistical tests, the primary results were evaluated using the One-Way ANOVA analysis of variance technique to compare metric and non-metric scales. A limitation of the research is the anomaly of voluntary sampling, which will be replaced by quota sampling in the continuation of the research, so in order to compensate for this limitation and to analyse the results in a more sophisticated way, a post-qualitative survey in the form of expert interviews is planned.

#### 4. Results

For the first time, we analysed the extent to which the digital solutions we studied were used by businesses in 2022 and 2023. The results show that IT tools and digital communication solutions were the most common features of businesses in both 2022 and 2023.

Table 1. Digital tools and digital solutions in 2022 and 2023 (Source: own research, 2022, N = 172, 2023 N = 72)

2022, N = 161 (1 = not at all typical. 4 = fully typical)					
	IT tools	Digital work tools	Digital communication channels	Artificial intelligence	Robotisation
Average	3,14	2,79	3,16	1,68	1,59
Scatter	0,99911	1,13143	0,96112	0,94606	0,91837
2023, N = 72 (1 = not at all typical. 4 = fully typical)					
Average	3,41	3,18	3,39	1,49	1,33
Scatter	0,92036	1,07156	0,89618	1,08393	0,90921

However, it is also an important finding that the rise of digitalisation is permeating the lives and everyday life of businesses, as the two most used digital solutions showed a much higher uptake in a year, according to the responses of businesses. It seems that the uptake of digital solutions is also being observed at the level of small and medium enterprises and micro-enterprises, and that their uptake is increasing even after one year.

We also wondered whether the length of time businesses have been in operation influences opinions on the use of digital solutions. This was investigated using analysis

of variance. No association was found between the size of the business and its operating time in 2022 and the adoption of any digital solution (sig < 0.05).

Table 2.: Correlation between digital adoption and business size in 2022 (Source: own research, 2022, N=161, One Way ANOVA)

(1 = not at all typical. 4 = fully typical))		Sum of Squares	df	Mean Square	F	Sig.
IT tools	Between groups	3,922	2	1,961	1,989	0,140
	Within groups	155,792	158	0,986		
	Total	159,714	160			
Digital work tools	Between groups	3,752	2	1,876	1,474	0,232
	Within groups	201,068	158	1,273		
	Total	204,820	160			
Digital communication channels	Between groups	2,066	2	1,033	1,120	0,329
	Within groups	145,736	158	0,922		
	Total	147,801	160			
Artificial intelligence	Between groups	2,522	2	1,261	1,416	0,246
	Within groups	140,683	158	0,890		
	Total	143,205	160			
Robotisation	Between groups	4,466	2	2,233	2,704	0,070
	Within groups	130,478	158	0,826		
	Total	134,944	160			

We also examined whether the situation has changed for the new survey in 2023. Based on the data obtained, we found that in this case there was no significant impact on the length of time businesses have been in operation on the adoption of digital tools in any of the cases.

Table 3.: Correlation between the use of digital solutions and business uptime in 2023 (Source: own research, 2022, N=161, One Way ANOVA)

(1 = not at all typical. 4 = fully typical))		Sum of Squares	df	Mean Square	F	Sig.
IT tools	Between groups	0,971	2	0,485	0,483	0,618
	Within groups	158,744	158	1,005		
	Total	159,714	160			
Digital work tools	Between groups	1,944	2	0,972	0,757	0,471
	Within groups	202,875	158	1,284		

	Total	204,820	160			
Digital communication channels	Between groups	2,048	2	1,024	1,110	0,332
	Within groups	145,753	158	0,922		
	Total	147,801	160			
Artificial intelligence	Between groups	5,224	2	2,612	2,991	0,053
	Within groups	137,981	158	0,873		
	Total	143,205	160			
Robotisation	Between groups	0,496	2	0,248	0,291	0,748
	Within groups	134,448	158	0,851		
	Total	134,944	160			

The main reason for this, in our view, is that the impact of digitalisation is universal, not differentiated by the size of the business or its operating time. In 2023, the only digital solution that showed a significant relationship ( $\text{sig}=0.001$ ) with the time of operation of the firm was robotisation. Robotisation was most prevalent for businesses that had been operating for a longer period of time, which we believe can be explained by the cost of the tool and the need for the organisational development tasks it entails.

Table 4. The link between time to business and digital solutions (Source: own research, 2023 N=72, One Way ANOVA,  $\text{sig}=0,001$ )

Digital tool, solution	Period of operation of the enterprise	average	scatter
robotisation	Less than 5 years	1,06	0,47476
	Between 5-15 years	1,75	1,03510
	More than 15 years	2,29	1,60357
	Total	1,33	0,90921

## 5. Summary, conclusions

Digitalisation is an inevitable phenomenon in all segments of the economy. The business sector is not immune to digitalisation processes, and the challenges of the 21st century are forcing organisations to use them. The implementation of each digitisation effort is a change in the organisation, with many factors working against or for it. In many cases, digitisation processes can make life easier or even more difficult for businesses, presenting them with a number of challenges. The aim of this study was to examine the digitalisation efforts in Hungarian SMEs in the wake of the pandemic, identifying the areas where they have the greatest impact. We were also interested to see how more mature businesses are responding to these digitalisation challenges, as opposed to younger, possibly less experienced businesses. Overall,

digitalisation is more of an internal drive in the lives of businesses, and is not influenced by how long they have been operating or how much operational experience they have. In any case, it is important to emphasise that processes are inevitable, which is why it is important to raise awareness of the importance of digitalisation and its efficiency-enhancing potential for all businesses. This is why it is very important to hold awareness-raising events, events and training courses that focus on this, so that domestic businesses can also contribute to the competitiveness of the country and the national economy and to improving it.

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