Examining Success Factors of Hungarian SMEs During Multiple Crises

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Abstract The aim of this paper is to shed light on the effects of the crises on the SMEs and to identify the strategies that have proved resilient. The analyses are based on two representative surveys on Hungarian SMEs – the first conducted just after the first wave of COVID-19 pandemic in May of 2020, while second during the energy crisis and the Ukrainian war in 2022. The results show that although almost half of the SMEs' operation were affected by COVID-19 after the first wave in 2020, they focused on retaining their employees. In addition, companies that were better prepared (e.g. with a contingency plan) and those that were in a better situation before the pandemic were able to react more smoothly to the new situation or even benefit from it. Nonetheless, firms did not have enough capacity to engage in digitalisation projects. In the case of the war in Ukraine, the logistic regression model shows that the effect on firms are affected by (1) the previous situation of the business, (2) the available business opportunities, (3) the respondent's opinion on the significance of luck in business success, and (4) the change in the amount of bank loans.

1   Introduction

Crises such as shutdowns and supply chain disruptions related to the COVID-19 pandemic, inflation, extreme volatility in energy prices, or even uncertainty related to the war in Ukraine will challenge the resilience of the whole economy in the 2020s. While corporations generally have established formal processes, expertise, and financial capacity to deal with abnormal situations, small businesses may find it difficult to cope. Nevertheless, small and medium-sized enterprises (SMEs) can be considered the backbone of the economy of the European Union employing almost two-thirds of the non-financial sector's workforce and generating more than half of the total value added (Eurostat, 2022). This means that understanding the success factors in this sector is crucial for effective policy making. Thus, our aim is to shed light on the effects of the crises on the SMEs and to identify the strategies that proved as resilient. Accordingly, our research questions are the following:

Q1: How the SMEs were affected by the recent crises (COVID-19 pandemic, inflation, Ukrainian war)?

Q2: What characteristics could ensure SMEs to be more resilient?

COVID-19 and the ensuing lockdowns forced the reinvention of business models. While demand in some sectors (i.e. in tourism or personal services) virtually evaporated, others achieved massive growth (Alicke et al., 2021). Furthermore, the lockdowns showed the true sensitivity of supply chains which means that maintaining competitiveness requires becoming more resilient (Hamel & Välikangas, 2003). To support corporate resilience, Bughin et al. (2021) highlight agility, the importance of innovation, the transformation of the investment twins (digitalization and sustainability), and active play in business ecosystems.

Agenda 2030, a 15-year United Nations framework, was launched in 2015 and signed by 193 member states with the aim of promoting sustainable development around the world. The Agenda has developed a system of specific goals (Sustainable Development Goals, SDGs), targets and indicators, thus it can be considered the most comprehensive program for both developed and developing countries (United Nations, 2015). As the SDGs are the result of a political process, the framework has some shortcomings: (1) there are overlaps and correlation between goals and targets

(Guijarro & Poyatos, 2018; Szennay et al., 2019); (2) developed countries have already met 70 percent of the criteria at the beginning of the Agenda (Muff et al., 2017); (3) due to the number, complexity and interconnectedness of the SDGs it is not easy for companies, especially SMEs to explore which SDGs they are affected by and to which SDGs they can contribute to; (4) although the SDGs cover social, environmental and economic domains of sustainability; Ritala et al. (2021) suggest that economic domains are generally over-emphasized in value creation processes due to institutionalized asymmetries.

However, another aspect economic sustainability (see SDG 8 Decent work and economic growth) could mean saving workplaces, which contributes to the well-being and financial security of households, in other words, societal sustainability (see SDGs 1-5).

2   Methodology

Our analysis is based on the Budapest Business School SME Surveys of 2020 and 2022. Both surveys done by a professional market research company and consisted of 500 items and were representative of the Hungarian SMEs with between 3 and 99 employees. In other words, the population, on which the samples are based, is similar, but samples are cross sectional, so longitudinal analyses cannot be conducted in an easy way. The original aim of the survey was to provide a statistically based estimate of the number of Hungarian family businesses, but also included questions on some additional topics, such as financial literacy, innovation, family business governance and succession or even sustainability activities. As the 2020 survey was conducted immediately after the first wave of the COVID-19 lockdown, while the second one was conducted during the energy crisis and the Ukrainian war in 2022, some other questions were added to the questionnaire to better understand the reactions of the businesses to the ongoing crises. In case of the pandemic, the new questions concerned the impact on the business (what kind of measures was done to cope the pandemic, how was the firm affected, etc.) and its possible positive outcomes (e.g., new products or services, new processes, digitalization, etc.). Similarly, the questionnaire comprises of question on the general effect of the war on businesses measured on a five-point Likert-scale and detailed questions to analyze on what channel (e.g., rising input prices, volatility of foreign exchange rates, uncertainty concerning energy prices, etc.) were they affected. Our findings are based

on statistical analysis which was conducted using the SPSS 27 software. Descriptive statistics such as frequencies, cross-tabulations between variables and correlation analyses were used to gain a better understanding of the survey data. Furthermore, a multinomial logistic regression model was calculated to explore the factors that could influence the impact of the COVID-19 crisis in 2020, while a bivariate logistic regression model was calculated in the case of the dual crisis of war and pandemic. A multinomial logistic regression model was considered the most appropriate method as it allowed the effects of more variables to be tested in one model and the survey included variables on a nominal scale. The use of a bivariate logistic model can be explained by the fact, that only a subsample of impacted firms was used with a relatively small number of observations (n=95) and the independent variable is bivariate, namely whether the crisis had a positive or negative impact on the firm.

3   Results

The results show that almost half (49.1%) of Hungarian SMEs' were affected by COVID-19 after the first wave in 2020, while 5.7 percent reported a positive impact on their business activities. Nonetheless, a significant number of them had to partially close down (35.0%) or completely cease operation (8.8%). Not surprisingly, the impacts are sector specific – there is a significant ($p<0.001$) correlation between sector and the impact of the pandemic on business operations, with two sectors (tourism and hospitality, other consumer services) being the most affected. The survey examined expected annual turnover, but only in the case of those respondents, who reported that the pandemic had affected their business operations (48.7%). In this case, however, there is no significant difference among sectors ($p=0.371$), these SMEs expected on average 76.78 percent of their annual turnover. This could be explained by the market situation of the firms just before the pandemic, but there is no significant correlation ($p=0.870$) between this situation and the impact of the pandemic.

An important finding is that despite all the uncertainties regarding the future, only a small proportion (14.5%) of SMEs reported layoffs, while the others made attempts to maintain employment in some form, for example with mandatory holidays, wage or working hour reduction. In our opinion, it is the direct consequence of the labor shortage in the second half of 2010s, thus we suggest that the vast majority of SMEs are planning for the long-term and consider the pandemic as a temporary situation.

Although extensive use of remote working / home office is considered to be one of the main consequences of the pandemic, only 16.5% of SMEs reported introducing such measures, and these are regionally concentrated in the Central Hungarian region, including Budapest.

On a more negative note, 40.9 per cent of SMEs did not react at all to the pandemic, 42.5 per cent introduced stricter health rules, while less than 10 percent developed digital consumer service or online marketing channels (8.9%), introduced new payment methods (5.5%) or launched a special, pandemic-related marketing campaign (5.1%). Thus, although digitalization boomed during the lockdowns, the vast majority of Hungarian SMEs do not even attempt to keep up with global trends.

Table 1: Independent variables of the multinomial logistic regression model – how the COVID-19 pandemic affected the operation of the firms

Effect	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	836.421	.000	0	.
Situation of the firm just prior the pandemic	848.135	11.714	20	.926
Export activity	840.836	4.415	8	.818
Existence of a crisis management plan	841.953	5.532	4	.237
Existing portfolio of products and/or services is a good basis for long-term operation	900.784	64.363	40	.009
Sector	922.656	86.235	36	<.001
Annual turnover (2019)	858.241	21.820	16	.149

Source: Own elaboration

According to our multinomial logistic regression model (see Table 1), the impact of the pandemic situation on SMEs, as the dependent variable was determined by the sector and whether the existing portfolio of products and/or services was a good basis for long-term operation, while other predictor variables, namely (1) export activity (p=0.818), (2) situation of the firm just prior the pandemic (p=0.926), (3) existence of a crisis management plan (p=0.237) and (4) annual turnover of 2019 (p=0.149) proved to be insignificant as independent variables. Accordingly, we suggest that although COVID-19 could affect the whole economy, there was a

severe impact only in the tourism and hospitality sector, so this crisis can be considered a single-sector crisis.

The subsample analyzed in the case of the 2022 survey was constructed as follows. All enterprises were excluded from the analysis if neither the war, nor COVID-19 had any impact on their activities. If a firm reported a positive impact related to the war or COVID-19 in the survey, it was considered as positively affected, all other cases were categorized negatively affected. Thus, the subsample consisted of 95 cases, of which 79 (83.2%) were negatively and 16 (16.8%) positively affected.

The constructed bivariate logistic regression model is appropriate, as all independent variables have a significant effect and pseudo-R-square measures show rather high values (Cox and Snell R square=0.453, Nagelkerke R square=0.754). The results show that four variables determine how the firms were affected by the two crises: (1) the situation of the firm 2 years ago; (2) the available opportunities on the market; (3) the opinion of the respondents on the extent to which luck influences business success in Hungary and (4) the variation of bank debts in the last 5 years.

Firms in a more negative situation in 2020 were negatively affected, while growing ones reported positive impacts. Similarly, firms with new market opportunities correlate positively with the impact of the crises. An interesting finding is that the perceived extent of luck in business success is also positively correlated with the impacts. A decreasing trend of bank debt in the last 5 years could also positively influence the perceived effect of the war and the pandemic, which could be explained by the fact, that the National Bank of Hungary started a new monetary tightening regime in the summer of 2021, thus interest rates of non-subsidized loans were much higher than in the 2010s.

4   Discussion and Conclusion

Our paper examined the success factors of Hungarian SMEs during COVID-19 and the Ukrainian war. This approach is rather original, since – as we know – there has not been made a comprehensive study on the effects of the two recent crises on SMEs yet. The results show that COVID-19 could be considered a one-sector crisis as the effects were concentrated in the tourism and hospitality sector, while all other sectors were less intensely affected. Nonetheless, firms with more sustainable

product / service portfolios reported more positive effects on their business operations. In contrast, the effects of the Ukrainian war were more widespread. According to our model, the crisis had rather positive effects on the firms, if (1) the firm was in a better situation in 2020, (2) the firm saw available market opportunities, (3) the firm reduced its bank debts in the last 5 years and (4) the respondent perceived a high influence of luck on business success in Hungary. Therefore, our policy implications are twofold. First, in case of sectoral crises, countries should focus on saving workplaces in the affected sectors, while aid to other sectors could be limited. Second, successful SMEs may find business opportunities in more widespread crises, so they can be considered as future-proof. Therefore, policy should focus on supporting them.

Our paper has three major limitations. First, both surveys were conducted at the beginning of the crises, namely at the end of the first wave of COVID-19 and just a few months following the Russian intervention, so respondents may only have expectations about the real economic consequences of the crises. Second, national protectionism and related expectations may change the behavior of SMEs. Third, although energetic transformation was promoted by the various programs (e.g., subsidies for energetic retrofitting of buildings or for installation of photovoltaic panels), the survey does not reflect this issue. Nevertheless, it would be methodologically impossible to obtain a representative sample in this respect.

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