BUSINESS CLOSURES AND THE CHANGING NUMBER OF SELF-EMPLOYED PEOPLE DUE TO THE COVID-19 PANDEMIC IN SLOVAKIA AND HUNGARY

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Abstract

Due to the rapid spread of COVID-19, many businesses all over the world have closed and just a smaller proportion of them have been able to reopen thanks to easing of restrictions. Regarding the hard economic situation and the fact that many people have lost their job, there arises the question whether the number of self-employers will rise in the next period. The data were gathered among Slovak and Hungarian citizens through surveys as a quantitative method. Mann-Whitney U tests were performed to analyse the formulated 2 hypotheses where before it was necessary to carry out normality tests. Concerning the new trends, the paper aims to give a comprehensive international comparison in terms of business closures and their reopens, and the number of entrepreneurs. The results of the examination showed that Hungarian respondents have not got a greater willingness to think that more than half of businesses closed due to the effects of the COVID-19 epidemic will reopen, than Slovak respondents. Against, according to the results it can be declared that Hungarian respondents have a greater willingness to think that the number of self-employed people will increase in the future, than Slovak respondents.

Key words: entrepreneurs, COVID-19, risk management plan, business reopens

JEL Code: E24, M21, J21

Introduction

Since the outbreak of the coronavirus, not only people have had to face a lot of difficulties but businesses too. Many of them have closed due to the strict restrictions to prevent the widespread of the virus, and just a few of them got a subsidy from the government as help to survive. Those companies who have had risk management plans before seem more likely to be able to reopen. The main reasons why they are unable to reopen are liquidity problems, changed consumer demand, lack of bankable projects, health problems, disruption in the supply chain, not enough capacity or budget to innovate which is mostly required at that time.

As many people have become unemployed, their shopping behaviour changed, they tried to reconsider their consumption and saving. Despite the serious consequences of COVID-19, many businesses had found an opportunity in closures and tried their luck by turning challenges into opportunities. It means that a lot of companies have started e-commerce and online distribution that meant the only solution to prevent bankruptcy. Besides, due to the changing demand, a lot of people have become entrepreneurs as a new option to earn income and achieve personal fulfillment.

This is the reason why it is important to analyse what people think, whether the number of entrepreneurs will arise or not and whether the half of closed businesses will be able reopen. According to Bartik et al., (2020), coronavirus disease caused a strong economic shock. Their research was conducted amongst 5,800 small businesses. It can be stated that almost half of the surveyed businesses had to temporarily close due to COVID-19. The main reasons were worries about employees' health and demand decrease. It can be stated that the strength of the shock can vary between industries as some of them were able to switch to remote working such as finance, professional services. On the other hand, some of them have fallen behind a bit or even could not switch, such as the arts and entertainment industry. In general, we hold the view that the epidemic has caused more vulnerability to those businesses that already were vulnerable. Many factors can influence the successful transition to remote work, such as the company's budget or the willingness of workers to make the transition. According to Calabrò et al. (2021), most of the closed businesses are family firms mainly from the catering, tourism, cosmetic and fashion industry or those who sell specific types of products or services which are not vital for living in the time of the pandemic. Here the question is, how can some family businesses be more resilient than others. Presumably, this fact is related to having a management plan that helps to survive in difficult economic situations. These two articles tackle topics in business closures and firms' resilience research, which include the importance of having a risk management plan, innovation, and coping with restrictions by bringing change to the business. Regarding the pivotal factors, they provide useful and effective ways for achieving success in business life and contribute to the firms' development in large amounts.

1   Theoretical overview

The new virus has created many difficulties and new challenges for companies, especially for smaller ones. To survive and continue to function, companies had to act extremely quickly,

and they had to decide they would either try to operate on an online platform or close for an undefined period. This opinion is supported by Zhang et al's (2021) research, as they claimed that whether the small businesses can adapt quickly to the new situation is questionable. For some businesses, it was essential to create pickup points or delivery. In general, the willingness to innovate is high in the case of small companies, which is a necessity to keep the required social distance. In this sense, it is important to mention that a change is very often influenced not only by willingness but also by a myriad of factors such as the budget, which is always finite. According to Giunipero et al. (2021), it is worth mentioning that smaller businesses only have limited access to public financial markets. In this case, the chance of a cash flow crisis is much more likely to happen. Dealing with these drops can often cause trouble to the companies, and the worst scenario is that a company can go bankrupt. Amankwah-Amoah et al's. (2020), opinion supports Bartik et al's opinion which was discussed in the introduction part of the research, as they hold the view that the COVID-19 pandemic caused major shock and damage to the small companies.As a result, we can observe a tangible decrease in the demand and supply of many products. To reduce the spread of the virus, governments introduced various restrictions that aimed to save people's lives. Nevertheless, it is important to mention that restrictions also led to closures. In this sense, the various subsidies are vital for companies to survive the hard times.

It was proved that thanks to the mandated business closures, people were less likely to become infected by the coronavirus, as they commuted less, and bought products online more often. As a result of changing shopping behaviour, people have started to buy domestic traders' products more frequently in Slovakia and Hungary too. (Machová et al., 2021) This fact is also supported by Zahra (2020), due to the closures all over the world, the global supply chain has changed as the relocation of production came to the fore. Domestic production will likely continue and as it was proved, a lot of customers will choose domestic products instead of foreign ones as they think they are safer from a hygienic point of view, and they are more willing to support the domestic economy.

As reported by Giunipero et al. (2021), we can talk about two major factors related to business failure. The first includes environmental circumstances which can not be influenced as they are unpredictable and are hefty to cope with or reduce their consequences. The other one can be found usually within the business and is related to lack of some skills or risk management plan, and could be influenced by investing time and money to prevent the crisis. The coronavirus belongs to the first category, as it has emerged unexpectedly and resulted in a crisis that was nearly impossible to prevent. According to Korcsmáros and Machová (2021),

SMEs in Slovakia have suffered from workforce retention. They have conducted a survey amongst 200 Slovak SMEs, and as a result, 68% of them have struggled with more than 15% workforce fluctuation. In this case, it can be considered as a huge loss for the company. From this fact, we can conclude that SMEs in Slovakia were struggling before the COVID-19 outbreak. The pandemic has made the day-to-day operations of companies even more difficult, and several factors caused by the pandemic can negatively affect the retention of the workforce today. The unforeseen COVID-19 pandemic has created a situation where business planning comes to the fore. According to Giones et al. (2020), planning is important for individual entrepreneurs, employers, and businesses too. Planning can be helpful to explore the available options. In case of a successful decision, the impact of the new situation can slightly be reduced, and it can help the entrepreneurs to be prepared for any further difficulties. Furthermore, it is important to mention that when it comes to decision-making, it may also be useful to take into account the experience gained during the past period. It enables the entrepreneurs to make a realistic decision that can positively contribute to the further operation. Fonseca (2021) in his work supports the thought that the unemployed are more likely to become entrepreneurs due to the COVID-19 pandemic. We are on the point of view that for a lot of people it can be nearly the only chance to earn income in the time of the recession. Despite this fact, it is pivotal to declare that it is not affordable for everyone. In addition, those who become entrepreneurs have to pay attention to the fact that a lot of people's income has decreased, and as a consequence of this their shopping habits have changed. Numerous entrepreneurs showed a great willingness of having opportunity-seeking behaviours as they had a strong motivation to adapt to the new circumstances. (Morrish and Jones, 2020) In our opinion, this can be considered as a positive statement, especially during these hard times where it is first and foremost to act at the right time to increase the chance of avoiding some fatal consequences of the pandemic, such as closures or downsizings. In the term of business closures, it is essential to take into account not only the differences between industries but also the gender of entrepreneurs. As stated by Fairlie (2020), according to the losses, the gender inequality in business ownership will continue to rise as the economic inequality is likely to rise too. Presumably, one of the reasons behind this fact is that there are a lot of women entrepreneurs in the fashion and cosmetic industries who had to close and face up to many difficulties.

2   Methods

The main objective of the research is to gather information about business closures and the changing number of self-employed people based on the Hungarian and Slovak respondents' opinions. In this sense, we tried to give an international comparison between Slovakia and Hungary. According to our aims, the analysed groups were the Hungarian and Slovak citizens. A cross-sectional method was chosen as a research method because we have taken a single sample of the population once. The data collection took place between January 2021 and March 2021. During this time, we have collected 862 responses, of which 40.37% were received from the Hungarian and 59.63% from the Slovak respondents. The survey was available both in an online and paper-based form. The survey contained 24 closed questions. To analyse the main objectives of the research we used 5 of them. In order to ascertain the representativeness of the research, it is vital to calculate the optimal sample size. According to Wiley (1999), we used the following formula:

$$n = \frac{Z^2\,P(1-P)}{d^2}$$

(1)

where n = sample size = 15190136 according to ŠÚSR (2020) and KSH (2021), critical value at 95% confidence level, Z = 1.96, P = expected prevalence or proportion = 40% =0.4, and d = precision = 5% = 0.05. Based on the previous calculation, 369 answers could be enough to derive meaningful inference. Based on this fact, it can be stated that our research is representative with the 862 answers.

We formulated the following hypotheses:

H1: The Hungarian respondents are more willing to think that the number of self-employed people will increase.

The Hungarian respondents are not more willing to think that the number of self-employed people will increase.

H2: The Hungarian respondents are more willing to think that More than half of businesses closed due to the effects of the Covid-19 epidemic will reopen.

H0: The Hungarian respondents are not more willing to think that more than half of businesses closed due to the effects of the Covid-19 epidemic will reopen.

For the two formulated hypotheses, it was essential to carry out Kolmogorov-Smirnov tests to analyse whether the scores are likely to follow a normal distribution or not. In our case, the variables follow non-normal distribution as the value of asymptotic sig is less than 0.05 in

both cases, thus, we can use the nonparametric Mann-Whitney U test to determine the significant differences between the analysed variables.

3   Results

In the following part of the research we will introduce the hypotheses analysis. The following table contains the results of normality tests for both hypotheses for Slovakia and Hungary.

Tab. 1: Normality Tests – Kolmogorov Smirnov

		Statistic	df	Sig.
More than half of businesses closed due to the effects of the Covid-19 epidemic will reopen	Hungary	0.252	348	0.000
	Slovakia	0.256	514	0.000
The number of self-employed will increase	Hungary	0.279	348	0.000
	Slovakia	0.283	514	0.000

Source: own editing in the SPSS software based on the primary data collection

The Kolmogorov-Smirnov test indicates that all the examined dependent variables follow a non-normal distribution. In case of non-normal distribution the non-parametric Mann-Whitney U test is used to determine the significant differences between an ordinal dependent variable and a dichotomous independent variable. The following table illustrates the ranks of the analysed variables.

Tab. 2: Ranks – Hypothesis 1

	Country	N	Mean Rank	Sum of Ranks
More than half of businesses closed due to the effects of the Covid-19 epidemic will reopen	Hungary	348	438.37	152554.00
	Slovakia	514	426.85	219399.00
	Total	862		

Source: own editing in the SPSS software based on the primary data collection

The Table 2 indicates that the Hungarian group had a little higher value of Mean Rank. For this reason, it is worth examining if the Hungarian respondents' willingness is significantly greater than Slovak respondents or not. The next table illustrates the value of the Mann Whitney U test.

Tab. 3: Mann Whitney U – Hypothesis 1

	More than half of businesses closed due to the effects of the COVID-19 epidemic will reopen
Mann-Whitney U	87044.000
Wilcoxon W	219399.000
Z	-0.690
Asymp. Sig. (2-tailed)	0.490

Source: own editing in the SPSS software based on the primary data collection

The Mann-Whitney test indicated that Hungarian respondents (Mdn = 4) are not more willing to think that more than half of businesses closed due to the effects of the COVID-19 epidemic will reopen, than Slovak respondents (Mdn = 4), U = 87044.0 Z = -0.690 p= 0.245 (1-tailed) as we devided the 2-tailed value by 2 because we assumed the greater willingness for one group.

In the case of the second hypothesis, we also used Mann Whitney U test. The Table 4 indicates that the Hungarian group had a little higher value of Mean Rank. For this reason, it is worth examining if the Hungarian respondents' willingness is significantly greater than Slovak respondents or not.

Tab. 4: Ranks – Hypothesis 2

	Country	N	Mean Rank	Sum of Ranks
The number of self-employed will increase	Hungary	348	391.88	136372.50
	Slovakia	514	458.33	235580.50
	Total	862		

Source: own editing in the SPSS software based on the primary data collection

The following table illustrates the value of Mann Whitney U test.

Tab. 5: Mann Whitney U – Hypothesis 2

	The number of self-employed will increase
Mann-Whitney U	75646.500
Wilcoxon W	136372.500
Z	-4.002
Asymp. Sig. (2-tailed)	0.000

Source: own editing in the SPSS software based on the primary data collection

The Mann-Whitney test indicated that Hungarian respondents (Mdn = 4) are more willing to think that the number of self-employed people will increase in the future than Slovak respondents (Mdn = 4), U = 75646.500 Z = -4.002 p < 0.001 (1-tailed) as we devided the 2-tailed value by 2 because we assumed the greater willingness for one group.

In case of a greater willingness, the effect size should also be determined. For this purpose we used the following formula:

$$r = \frac{Z}{\sqrt{N}} \qquad (2)$$

In this case we have divided the absolute value of Z by the square root of the sample size. The effect size is 0.136, which can be characterized as a small effect.

Conclusion

Thanks to the results of our examination, it is clear that Hungarian respondents are more willing to think that the number of self-employed people will increase in the future than Slovak respondents. The reason behind this could be that Hungary implemented the loan moratorium earlier, and people have had more options of subsidies and tenders for beginner entrepreneurs. This outcome is supported in the theoretical part of the article by Fonesca (2021) adding, that unemployed people are more likely to become entrepreneurs. On the other hand, it was proved that Hungarian respondents are not more willing to think that more than half of businesses closed due to the effects of the COVID-19 epidemic will reopen than Slovak respondents. Despite the presumption that the entrepreneurial spirit is still present, the financial and liquidity problems in many cases make it impossible to continue their business activity. From our standpoint, these problems could be prevented by preparing risk management plans and making reserves either to strengthen the business's financial position or use when unforeseen situations come up. For further research purposes, it would be intriguing to examine how many people who had lost their jobs due to the consequences of COVID-19 will become entrepreneurs. Moreover, regarding our present research, it would be important to analyse the proportion of reopened companies that had to close due to the effects

of coronavirus. It is essential to mention some research limitations. One of them is that we did not examine how many unemployed respondents will be willing to become entrepreneurs. Finally, it would be interesting to analyse in which industry is likely to emerge more entrepreneurs than before.

Acknowledgement

References

Amankwah-Amoah, J., Khan, Z., & Wood, G. (2021). COVID-19 and business failures: The paradoxes of Experience, scale, and scope for theory and practice. *European Management Journal*, *39*(2), 179–184. https://doi.org/10.1016/j.emj.2020.09.002

Bartik, A. W., Bertrand, M., Cullen, Z., Glaeser, E. L., Luca, M., & Stanton, C. (2020). The impact of covid-19 on small business outcomes and expectations. *Proceedings of the National Academy of Sciences*, *117*(30), 17656–17666. https://doi.org/10.1073/pnas.2006991117

Calabrò, A., Frank, H., Minichilli, A., & Suess-Reyes, J. (2021). Business families in times of crises: The backbone of family firm resilience and continuity. *Journal of Family Business Strategy*, *12*(2), 100442. https://doi.org/10.1016/j.jfbs.2021.100442

Fairlie, R. (2020). The impact Of COVID-19 on small business OWNERS: Evidence from the first three months after WIDESPREAD social-distancing restrictions. *Journal of Economics & Management Strategy*, *29*(4), 727–740. https://doi.org/10.1111/jems.12400

Galindo da Fonseca, J. (2021). Unemployment, entrepreneurship and firm outcomes. *Review of Economic Dynamics*. https://doi.org/10.1016/j.red.2021.07.003

Giones, F., Brem, A., Pollack, J. M., Michaelis, T. L., Klyver, K., & Brinckmann, J. (2020). Revising entrepreneurial action in response to Exogenous Shocks: Considering the COVID-19 pandemic. *Journal of Business Venturing Insights*, *14*. https://doi.org/10.1016/j.jbvi.2020.e00186

Giunipero, L. C., Denslow, D., & Rynarzewska, A. I. (2021). Small business survival and covid-19 - an exploratory analysis of carriers. *Research in Transportation Economics*, 101087. https://doi.org/10.1016/j.retrec.2021.101087

Korcsmáros, E., & Machová, R. (2021). Challenges of burnout prevention in slovac smes-focus on optimal employment. *Acta Polytechnica Hungarica: An international peer-reviewed scientific journal of Óbuda University, Hungarian Academy of Engineering and IEEE Hungary Section: journal of applied sciences. 18*(2), 87-104. DOI: 10.12700/APH.18.2.2021.2.5

KSH. (2021). *A népesség száma, január 1.report*. Hungary: Központi Statisztikai Hivatal. http://www.ksh.hu/

Machová, R., Korcsmáros, E., Esseová, M., & Marča, R. (2021). Changing Trends of Shopping Habits and Tourism During the Second Wave of COVID-19 – International Comparison. *Journal of Tourism and Services.* 22(12), 131-149. DOI: 10.29036/jots.v12i22.256

Morrish, S. C., & Jones, R. (2020). Post-disaster business recovery: An entrepreneurial marketing perspective. *Journal of Business Research*, *113*, 83–92. https://doi.org/10.1016/j.jbusres.2019.03.041

ŠÚSR. (2020b). *Stav obyvateľstva v SR k30. júnu 2020*. report. Slovakia: Štatistický úrad Slovenskej republiky. Stav obyvateľstva v SR k 30. júnu 2020 (statistics.sk)

Wiley, W, D. (1999). *Biostatistics: A Foundation for Analysis in the Health Sciences. 7th edition.* New York: John Wiley & Sons.

Zahra, S. A. (2021). International entrepreneurship in the POST Covid world. *Journal of World Business*, *56*(1), 101143. https://doi.org/10.1016/j.jwb.2020.101143

Zhang, T., Gerlowski, D., & Acs, Z. (2021). Working from HOME: Small business performance and the COVID-19 pandemic. *Small Business Economics*. https://doi.org/10.1007/s11187-021-00493-6

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