

The Economic Environment During the Covid-19 Pandemic from the Point of View of the Sustainability of Small and Medium-Sized Enterprises

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Abstract: Small and medium-sized enterprises (SMEs) are the pillar of the Slovak economy; they make up 99.9% of the total number of business entities. In the corporate economy, they provide 71.8% of job opportunities for the active workforce and 55.1% participate in the creation of added value. We conclude that they are an important pillar of the Slovak economy and therefore it is necessary to point out their sustainability not only during the pandemic but also after it. All the data with which we work are secondary quantitative data, which come mainly from the official statistics of the Slovak Business Agency and the Slovak Statistical Office. It is not a collection of data; for analysis, a combination and summary of data was required. The length of a time series or data period depends always on its availability, so the time of the selected indicator may be different (we mainly focus on the pandemic period – 2020 and 2021, if available). However, previous periods were mainly used to estimate indicators' development trends. The contribution will not only evaluate the sustainability of SMEs but in the conclusions will point out possible solutions in the future.

Keywords: small and medium enterprises; sustainability; innovations; COVID-19

JEL Classification: M21; O11

1. Introduction

Small and medium-sized enterprises (SMEs) are crucial to any country's economic acceleration. Their contributions (from a national economic point of view) are mainly based on their significant number, their adaptability, their flexibility in decision-making, and the resulting synergistic effect. There are many SMEs, much more than big enterprises. When taken into consideration, one small enterprise does not have a huge benefit to the economy, but many small enterprises have substantial benefits to the economy. (Carvalho & Costa, 2014; Gregova & Novikov, 2017; Haviernikova & Mynarzova, 2018).

In the long term, SMEs contribute significantly to total employment and economic growth. The importance of small and medium-sized enterprises can also be seen in the structure of economically active enterprises. During the monitoring period, COVID-19 pandemics were central to the economic environment. In general, the economic recession and its activity were observed not only in Slovakia but also in other countries. The overall performance of the European Union is weakened mainly by the collapse of the main economies. The impact of COVID-19 also reflects the economic performance of small and

medium enterprises. The unfavorable economic situation in Slovakia affected the SMEs' development of the monitored economic indicators. (SBA, 2021)

Businesses in SMEs around the world have recently been affected, especially by the COVID-19 pandemic. The impact of the pandemic has manifested mainly in the areas of economic, social, health, and technology at the national and global levels. The COVID-19 pandemic affected all economic units in the general classification of households, businesses, and states in terms of their behavior and decision-making. The pandemic is considered a systemic shock with profound consequences in the short, medium, and long term. (Engidaw, 2022).

The COVID-19 pandemic began in Slovakia in March 2020. Adopted anti-pandemic measures contributed to strong economic decline and unemployment. Other economic variables such as economic growth, public spending, production, household consumption, investment, and sales were significantly affected by the pandemic (Khan et al., 2021). Government regulations and changes in consumer preferences caused depression in the business environment (Kramarova et al., 2022; Martin & Roman, 2021; Ugurlu & Jindrichovska, 2022). Despite the stringent measures taken by the countries, it has had a negative impact on the economies of all countries. This is due to the interconnection of current economies, so external environmental developments have a significant impact on one country or another. (Caplanova, 2021). In general, the strictness, duration, and nature of the COVID-19 anti-pandemic measures around the world were relatively heterogeneous.

In the future, small and medium enterprises will become the most important catalysts for economic growth (Henderson & Weiler, 2010). In Slovakia, SMEs account for more than 99% of all long-term enterprises, including the three-year analysis period (2019-2021). (Slovak Business Agency, 2022). For example, by 2021, small and medium-sized enterprises provide employment opportunities in the corporate economy to nearly 3/4 of the active workforce (74%) and contribute to more than half of the creation of additional value (55%).

In Slovakia, 94% of small and medium-sized enterprises experienced sales declines during the first and second wave of the epidemic. If we want to highlight the problems of large companies as a result of the crisis in Slovakia, the Slovakian automotive industry has been severely affected, particularly during the first wave of the epidemic. The automotive industry, as well as other representative sectors, is generally a typical representative of the globalization sector and is still struggling to meet demand in the COVID-19 crisis. All four Slovakian car manufacturers (Volkswagen, Peugeot, Kia, Jaguar Land Rover) closed production in March 2020. This has led to most automotive suppliers in Slovakia reducing production significantly or closing down their operations due to a lack of automotive components (Slovak Business Agency, 2022).

2. Methodology

The main purpose of this paper is to evaluate the state of SMEs and their development during the pandemic COVID-19 in Slovakia. This was realized in the paper by examining historical data on the composition, legal form, and industry of SME businesses. The first feasible step in the research was the detailed acquisition and study of basic theoretical knowledge from the literature to create an analysis of the state of SMEs in Slovakia.

Subsequently, by organizing the data based on time series, we processed the data into graphs and tables, the results of which are presented in the paper. All the data we used were secondary quantitative data mainly from Slovak Business Agency reports and official statistics of the Slovak Statistical Office. The Slovak Business Agency performs regular monitoring and research of the business environment in Slovakia, focusing mainly on the SME sector.

A small and medium enterprise is defined in the European Commission report no. 2003/361/Es and European Commission Regulation No. 651/2014 as any entity engaged in economic activity, irrespective of its legal form. Based on this definition, it can include also self-employers, free professions, and self-employed farmers. For legal entity to be categorized as an SME, it must meet these criteria:

- number of employees fewer than 250 persons,
- annual turnover not exceeding 50 million euros,
- annual balance sheet total not exceeding 43 million euros.

The main criterion is the number of employees. Then the enterprise is an SME if it meets the annual turnover and/or the annual balance sheet limit.

3. Results

The dynamic development of SMEs is one of the basic prerequisites for the healthy development of the country. During the pandemic, the Slovak economy recorded a drop in GDP, as did other countries. Of course, this was also reflected in the SME sector, where as a result of anti-pandemic measures, the growth in the number of SMEs stopped. COVID-19 interrupted the growth of all important economic indicators of SMEs. Despite the measures, many SMEs were unable to maintain jobs or employment. This decrease occurred in 2020 for the first time since 2014 when it recorded an annual increase. Slovak companies' competitiveness depends mainly on the environment they develop their activities. Changes in the business environment also reflect changes in the number of business sectors over time.

3.1. Evaluation of the State of the SMEs Sector During the Pandemic Crisis

The impact of coronavirus pandemic had a negative impact on the creation of new SMEs in Slovakia during 2020. According to data processed from the Register of Organizations of the Statistical Office of the Slovak Republic, in 2020 the trend of year-on-year increase in the number of established entrepreneurs stopped, in a year-on-year comparison, the number of established SMEs decreased by 2%. The effects of the crisis were also reflected in the decline of other forms of business, as shown in Table 1.

The annual increase of SMEs in the pre-crisis period was influenced by several factors, the most important of which was the reduction of the tax burden, the increase of flat-rate expenses of self-employed persons from 40% to 60% of the total income, and other significant changes, such as the reduction of the income tax rate from 21% to 15% for legal entities and self-employed persons with annual income of up to EUR 100,000, an increase in the nontaxable part of the tax base or a further increase in the deduction of research and

development expenses came into force at the beginning of 2020. In the case of SMEs – legal entities, a positive change was the cancellation of tax licenses that came into force at the beginning of 2018. In addition to the factors mentioned above, the growth in the number of new SMEs was also accompanied by the positive development of the global economy or the growth of domestic and foreign demand. However, another development, which is mainly influenced by the corona crisis, was questionable. In Slovakia, the SME environment has long been characterized as unsatisfactory and deteriorated for the business of the most vulnerable groups of entrepreneurs, such as self-employers and microenterprises.

Table 1. Development of the number of established SMEs according to legal forms for the years 2018-2021 (SBA, 2022)

Legal form	2018	2019	2020	Index 2019/2020	2021	Index 2020/2021
<i>Legal entity</i>	22,626	25,139	22,740	90.5 (decrease)	19,771	86.9 (decrease)
<i>Self-employed</i>	50,938	54,225	54,592	100.7 (increase)	67,528	123.7
<i>Self-employed farmers</i>	490	230	310	134.8 (increase)	250	80.6
<i>Free professions</i>	4,021	5,289	5,532	104.6 (increase)	4,989	90.2
Total	78,075	84,883	83,174	98.0 (decrease)	92,538	111.3

3.2. The Impact of the Corona Crisis on the Development and Functioning of SMEs

The corona crisis brought interesting findings, mainly that the interest in starting a business decreased mainly in the industrial sectors, which represented a year-on-year decrease of 12.3%, and services, where this decrease was by 7.7%. The following Table 2 also indicates interesting impacts.

Table 2. Development of the number of established SMEs by industry based on data from the Slovak Registry of Social Affairs in 2018-2020 (SBA, 2022)

Industry	2018	2019	2020	Index 2019/2020	2021	Index 2020/2021
<i>Agriculture</i>	3,097	3,033	2,925	96.4 (decrease)	2,945	100.7 (increase)
<i>Industry</i>	11,687	11,913	10,452	87.7 (decrease)	11,152	106.7 (increase)
<i>Construction</i>	18,262	20,757	20,524	98.9 (decrease)	25,188	122.7 (increase)
<i>Commerce</i>	6,100	6,689	7,218	107.9 (increase)	7,836	108.6 (increase)
<i>Transporting and information</i>	7,672	8,343	8,410	100.7 (increase)	9,744	115.9 (increase)
<i>Accommodation and food service activities</i>	2,145	2,517	2,467	98.0 (decrease)	1,856	75.2 (increase)
<i>Business services</i>	23,618	25,599	25,613	100.1 (increase)	28,891	112.8 (increase)
<i>Other services</i>	5,494	6,026	5,565	92.3 (decrease)	4,926	88.5 (decrease)
Total	78,075	84,883	83,174	98.0 (decrease)	92,538	111.3 (increase)

As can be seen in Table 2, it seems that the corona crisis was also an opportunity because the sudden change in the functioning of the company created space for innovation and the emergence of a new generation of entrepreneurs. New business opportunities were able to be used by budding entrepreneurs mainly in sectors such as transport and information, mainly due to the rapid development in the field of courier services, warehousing, and auxiliary activities in transport. The number of new SMEs in commerce also increased by 7.9%, contributed by retail outside stores, including the online store. According to statistics, one third more new companies were created in the fourth quarter of 2020 than in the same period of 2019. This development creates a decent prerequisite for the recovery of the SME

sector, which can become even more competitive and resistant to similar crises in the future through transformation. A similar development was also recorded in other European countries, such as France and Great Britain.

At the end of 2021, almost one-third (29.9%) of the total number of active small and medium enterprises were less than 3 years old. The share of established SMEs that have been operating on the market for 4 to 10 years since their establishment also represented almost one third (31.8%). 38.3% of active SMEs have been operating in Slovakia for more than 10 years. 14.3% of small and medium companies that have been operating on the market for more than 20 years are also a stable part of the business environment in Slovakia. This structure is also shown in Figure 1.

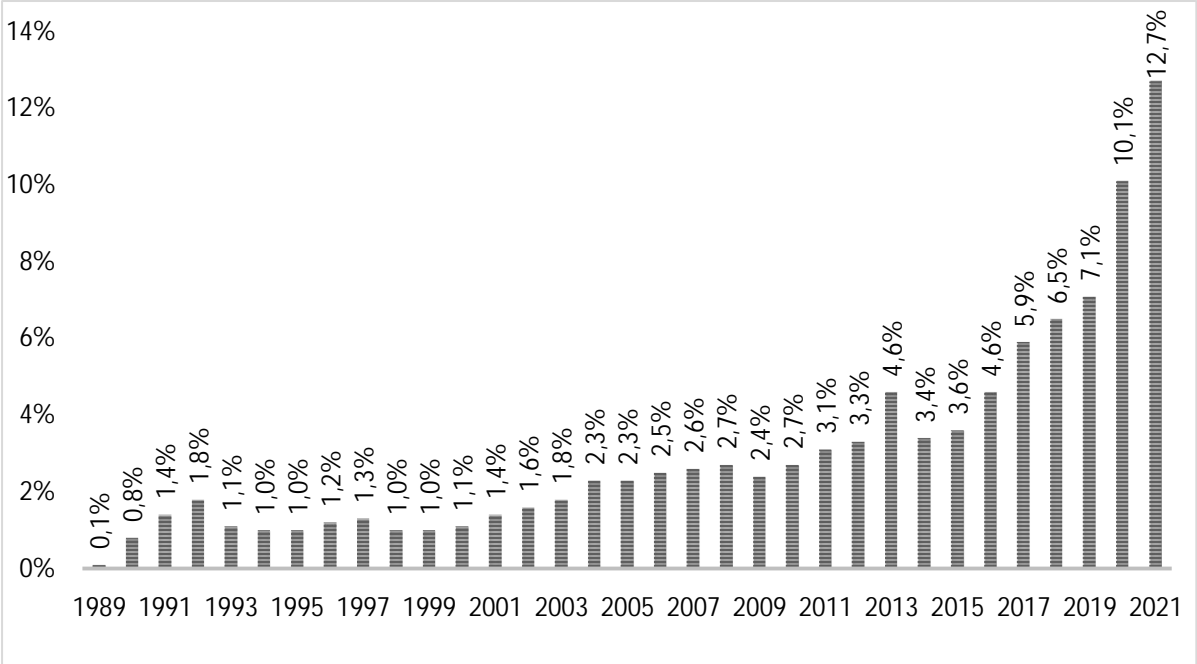


Fig.1: Structure of SMEs by date of establishment (SBA, 2022)

Despite the threat of COVID-19, which brought with it great threats in the form of closed operations and limited business opportunities, SMEs in Slovakia tried and are trying to deal with the given situation. During 2020, 47,648 business entities closed their business, which represents 5.4% of all registered entities in Slovakia. The highest percentage was self-employed, up to 82.1%. Other operating entities did not experience such a large decrease.

In a year-on-year comparison (2019/2020), the number of total defunct business entities paradoxically decreased by 15.1%. According to these data, the number of defunct of enterprises in 2020 Slovakia exceeded expectations. In 2020, the fewest enterprises closed their operations in the past decade. The most significant decrease in the number of demises occurred in the case of independent professions, year-on-year by almost a third (32.1%). This is followed by self-employed people with a decrease of 14.5% and self-employed farmers, where a year-on-year decrease of 7.3% was recorded. In 2020, the defunct of enterprises – legal entities developed without significant change. In addition to the negative impacts, we can state that the measures taken by the state also brought positive results in the form of the

implementation of support measures. The main goal was to maintain all existing business entities, even though many would have disappeared anyway in a normal situation.

The sectoral structure of defunct business entities reflects the overall sectoral structure of SMEs in Slovakia. Of all defunct business entities in 2020, most of them (25.7%) operated in the business services sector. This is followed by companies in the construction industry (23.8%) and in trade (15.5%). Only 2.7% of the closed companies were engaged in accommodation and food services and 4.7% in agriculture (SBA, 2022).

In 2021, the number of demised business entities increased to 51,724, which represents an annual increase of 8.6%. Legal entities had the greatest impact on growth, where the increase compared to 2020 was 133.2%, representing the most defunct companies in the last ten years. The number of defunct SMEs decreased by 5.8% year-on-year. Detailed data are shown in Table 3.

Table 3. The number of defunct business entities based on legal forms (SBA, 2022)

Legal form	2018	2019	2020	2021	Index 2021/2020
<i>Legal entity</i>	5,442	4,497	4,467	10,419	233.2 (increase)
<i>Self-employed</i>	41,417	45,754	39,132	36,856	94.2 (decrease)
<i>Self-employed farmers</i>	453	328	304	285	93.8 (decrease)
<i>Free professions</i>	4,856	5,518	3,745	4,164	111.2 (increase)
Total	52,168	56,097	47,648	51,724	108.6 (increase)

4. Discussion

A basic prerequisite for the development of SMEs is a high-quality business environment. Just like other areas of social life in Slovakia, the business environment has undergone fundamental changes over the past 20 years. Slovakia's problem is the long-term absence of a systemic approach aimed at continuously improving business conditions. After joining the EU, Slovakia dynamically approached the economic level of the original EU members. Unfortunately, this process has slowed down significantly in recent years, or we can talk about stopping the catch-up of the most developed countries of Western Europe. Since the end of the financial and economic crisis, small and medium-sized enterprises in Slovakia have benefited mainly from advancing globalization, changes in economic policies, and the rapid development of the world economy.

Due to the different natural, economic, and social conditions, or historical contexts, the conditions for doing business also differ in individual regions of Slovakia. Ultimately, they contribute to the uneven development of regions, including small and medium-sized businesses. If we were to focus in more detail on the evaluation of selected quantitative indicators of SMEs at the level of individual regions and districts of Slovakia, we must state that the highest concentration of SMEs is in the territory of the Bratislava region. In 2020, approximately one in five active small and medium enterprises (22.7%) had their headquarters in this region. It is followed by the Žilina Region, where 13.5% of all active SMEs are located, and the Prešov Region with 13.0%. In the other regions, the representation of SMEs is more even. The smallest, only 9.3%, of SMEs were registered in the Trenčín region.

In connection with the corona crisis, the number of active SMEs decreased year-on-year in most regions. The most significant decrease occurred in the Banska Bystrica region by 2.8% and the Trenčín region by 1.5%. The specificity of the Bratislava region is the persistent increase in the number of SMEs even during the corona crisis. Compared to the precrisis year 2019, the number of SMEs in the region increased by 3.7%, indicating that entrepreneurs are constantly finding enough opportunities in the region and suitable conditions for the implementation of new business activities. The higher resistance of business entities based in the Bratislava region to adverse conditions is also confirmed by the development during the previous global financial and economic crisis when their number also increased (SBA, 2022).

5. Conclusions

The development and operation of SMEs in Slovakia have been affected by the corona crisis in the same way as in all surrounding countries. Many of them survived and are trying to continue their activities. The current situation related to the energy crisis and the spread of the coronavirus in Slovakia in recent years is a burdensome test for all. Entrepreneurs in the category of SMEs will feel the impacts the most. As already mentioned, SMEs are the pillar of the Slovak economy, they make up 99.9% of the total number of business entities, provide job opportunities in the corporate economy for almost 75% of the active workforce, and participate in more than 50% of gross production and creation of added value. However, it will be questionable how they will function when not only the corona crisis, the energy crisis, and high inflation cause problems for the survival of operating entities.

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References

- Caplanova, A. (2021). Economic impacts of COVID 19 pandemic: Country and global perspective. In *Rethinking Media and Socio-Cultural Change: India and the Globe in Times of Pandemic* (pp. 3–18). London: HP Hamilton Limited. https://sekarl.euba.sk/ar1-eu/sk/detail-eu_un_cat-0278413-Economic-Impacts-of-COVID-19-Pandemic/
- Carvalho, L., Cagica, M., & Costa, T. (2014). Small and Medium Enterprises (SMEs) and Competitiveness: An Empirical Study. *Journal of Management Studies*, 2, 88–95.
- Commission regulation No 651/2014 of 17 June 2014. *Declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty*. European Commission. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0651&from=HR>
- Engidaw, A. E. (2022). Small businesses and their challenges during COVID-19 pandemic in developing countries: In the case of Ethiopia. *Journal of Innovation and Entrepreneurship*, 11(1). <https://doi.org/10.1186/s13731-021-00191-3>
- Gregova, E., & Novikov, V. A. (2017). Business Environment in V4 Countries in the Context of Globalization. In *17th International Scientific Conference Globalization and Its Socio-Economic Consequences* (pp. 549–556).
- Haviernikova, K., & Mynarzova, M. (2018). The motivation of small and medium enterprises towards cluster cooperation from the point of view of human resources. *Socialno Ekonomicka Revue*, 4, 86–93.
- Henderson, J., & Weiler, S. (2010). Entrepreneurs and Job Growth: Probing the Boundaries of Time and Space. *Economic Development Quarterly*, 24(1), 23–32. <https://doi.org/10.1177/0891242409350917>

- Khan, A, Khan, N., & Shafiq, M. (2021). The economic impact of COVID-19 from a global perspective. *Contemporary Economics*, 15(1), 64–76.
- Kramarova, K., Svabova, L., & Gabrikova, B. (2022). Impacts of the COVID-19 crisis on unemployment in Slovakia: A statistically created counterfactual approach using the time series analysis. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 17(2), 343–389. <https://doi.org/10.24136/eq.2022.012>
- Martin, J. C., & Roman, C. (2021). The effects of COVID-19 on EU federalism. *Eastern Journal of European Studies* 12, 126–148. <https://doi.org/10.47743/ejes-2021-SI06>
- Slovak Business Agency. (2022). *Malé a stredné podnikanie v číslach v roku 2021*. http://monitoringmsp.sk/wp-content/uploads/2022/07/MSP_v_cislach_2021_final.pdf.
- Ugurlu, E., & Jindrichovska, I. (2022). Effect of COVID-19 on International Trade among the Visegrad Countries. *Journal of Risk and Financial Management*, 15(2), 41. <https://doi.org/10.3390/jrfm15020041>