
Success of SMEs in the Era of Pandemics

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Abstract:

Purpose: The objective of this article is the identification of SMEs' business environment factors affecting success during a pandemic.

Design/Methodology/Approach: The research was based on a deductive approach and was conducted in the first months of the pandemic in 2020 in the Lower Silesia. The research technique used GOOGLE electronic survey questionnaire and the collected data were statistically processed (SPSS). Nonparametric tests were used to analyze the data.

Findings: The results of the collected data confirmed the previous literature analysis conducted in the theoretical part of the paper. The verification of the research hypotheses on the assumptions of the influence of the environment on the success of enterprises during pandemic did not confirm what may be the reason for the initial shock of the market and the lack of preparation of entrepreneurs for the new economic reality during pandemic. The verification of the specific hypotheses showed that the empirical approach adopted coincided with the conceptual approach formed based on the theoretical analysis of the literature on the subject.

Practical Implications: The analysis of the results is partially consistent with the literature studies on the impact of the environment on micro and small enterprises conducted before the pandemic. Nevertheless, the assumptions made at the stage of selecting the research sample, allow to formulate a thesis about the broader universality of the confirmed regularities, which should be confirmed in extended research.

Originality/value: The paper describes the diagnosed competence gap in the area of SMEs management in the current economic conditions of the pandemic. Which is an extremely complicated task due to the lack of precedents giving guidance to enterprises resulting from history and literature on the subject. In view of this, the identification of environmental factors leading to the maintenance of success in such unusual conditions is a desirable goal to achieve in scientific and practical aspects.

Keywords: Success, SMEs, environmental factors.

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1. Introduction

Now, with the COVID-19 pandemic persisting, most of the world's economies are in distress. The onset of the crisis was a decline in demand for goods and services in commodity markets around the world then the crisis has reached global proportions. At the same time, business and consumer confidence remains at a relatively low level (Stańczyk, 2020; Grima *et al.*, 2020; Khan *et al.*, 2020). The practices of state regulation of small business' development in developing countries are contradictory. On the one hand, the state uses various measures to support small businesses. On the other hand, the consequences of state regulation can negatively affect the operation and development of a small business (Kusakina *et al.*, 2016). Restrictive separation conditions introduced during the pandemic, often due to the haste in which they are created, cause interpretation problems (Flaga-Gieruszyńska, 2020). The aid proposed by the Polish government has had a short-term effect, with many companies still facing the specter of bankruptcy (Osińska and Zalewski 2020).

Managing an enterprise in the current economic conditions pandemic is an extremely complicated task due to the lack of precedents giving guidelines for enterprises resulting from history. The economic success of a business is contingent on providing important public assets (Spoz, Kotliński, Mizak, and Żukowska, 2020). Small businesses must take the lead in correlating business with society, thus basing their existence on shared values (Kagan, 2012). Iivari presented in 2006 a list of 15 factors that affect the maintenance of the existence of the company among which there is no parameter in which the current pandemic can enter (Investinwarmiaandmazury, 2021) Successful entrepreneurs are able to increase the per capita income of the local community and increase the national income (Laurentiu, 2016), (Mareš and Petrů, 2018) and thus counteract the effects of pandemics.

In view of this, the identification of management determinants leading to the maintenance of success in such unusual conditions, which are at the same time adequate to the dynamically changing environment, is a difficult goal to achieve in scientific and practical terms (Pavlenkov, Larionov, Voronin, and Pavlenkov, 2017). Due to the fact that these mechanisms should ensure the anticipatory response of the organization to the requirements of a turbulent environment (Perechuda, 2018) leading to the strengthening and adaptation to changes occurring inside and outside the market (Kulhánek and Sulich, 2018; Ministry of Economy, Department of Entrepreneurship, 2017). It should be emphasized that in an environment shaped by phenomena with a low probability of occurrence, and such is a pandemic, which suddenly and unpredictably increased the risk of the activity, building the success of the enterprise using commonly used tools is impossible because in such conditions the existing paradigms become outdated (Barczak, Dembińska, Marzantowicz, Nowicka, Szopik-Depczyńska, and Rostkowski, 2020). Therefore, there is a need to identify important factors of the environment affecting its nature.

The purpose of this paper is to identify the factors of the environment of SMEs influencing success during a pandemic. The research question is, if there is a statistically significant relationship between success and environmental factors under pandemic conditions.

2. Literature Review

Now in the midst of a pandemic, the SME sector is in exceptional need of a well-thought-out model and elaborated solutions that will allow favorable conditions for expansion despite the difficult period. These entities play a heightened social and economic role (Grego-Planer and Kus, 2020) and are a pacemaker for the sustainability of any indigenous economy. Entrepreneurs are the economic DNA (Pach and Solińska, 2010). An entrepreneur is a risk-taker who makes a career in business (Che Omar and Nor Azmi, 2015). Entrepreneurs not only create careers for themselves but also jobs for others (Mareš and Dlasková, 2016) which takes on special resonance during a pandemic. The economy is currently experiencing the deepest recession since the Great Depression. Even in countries such as Poland, where mitigation measures of the so-called "Crisis Shield" are in place, the economic and social impact of a pandemic is and will be enormous (Stańczyk, 2020).

On the other hand, however, the SME sector is the fastest to respond to changes in the environment and is able to assimilate to their effects. In most countries around the world, MSMEs are among the most important of the sectors, thus influencing economic growth (Anghel, Anghelache, Dumitrescu, and Ursache, 2016). Therefore, governments should focus on supporting and finding solutions to mitigate the effects of the pandemic on the SME sector (Tsuruta, 2020). The fact is that according to economic reports, the pandemic has caused the failure of many economic industries as exemplified by the hotel industry, but at the same time it has also contributed to the growth of the food trade industry.

The pandemic so far is not a momentary and short-lived phenomenon, and its effects and specifics, necessitate a new management approach. When COVID-19 finally comes to an end, nothing will be the same again, and entrepreneurship will inevitably change. Will businesses take advantage of the crisis on their way to success? It may turn out that the current crisis is not only a hard lesson but also a new opportunity. From a business owner's managerial point of view, a secure business can be defined as a state that ensures the stability of a given enterprise. This means that the company is able to identify all potential sources of risk, is prepared for their consequences, and can effectively counteract their adverse effects in order to ensure success. This is quite a practical challenge due to the fact that business success is a term very difficult to define unambiguously and even more difficult to verify in practice. It is a very complex process and it is difficult to create a clear recipe for achieving it. It is also a multidimensional and complex process, therefore it is not easy to express it by one criterion or quantified success factors (Skoczylas,

2012). Success is often associated with the successful economic performance of a company, with an increase in its profits and market value, at other times with expansion in markets and improvement of its image (brand), and still in other cases with a long period of operation and ability to overcome crisis situations. Success is difficult to measure and evaluate, especially in different time perspectives, forms of business, sectors, or economic regions (Lachiewicz, 2013).

In historical management theory, the success of an organisation is most often defined as its effectiveness in achieving its goals. However, there is no single, synthetic measure of this success, although the most frequently used measure is effectiveness in its broadest sense (Handy, 1999). Intended effects are then taken into account and the realization of set goals or maximization of obtained effects while minimizing expenses is emphasized (Mazurkiewicz, 2011), (Kotarbinski, 2000). Efficient management of a company depends on many factors, not only on the entrepreneur's knowledge and management skills (Mysova, Dovlatyan, Belikova, Kostyuchenko, and Troyanskaya, 2016), especially important in times of crisis but also on the environment in which the company operates and even on luck (Marshall, 1930).

Success is about working as hard as possible to get the best performance (Dweck, 2018), in such a context, survival on the market in the era of a pandemic can be considered a success. Therefore, the success of an enterprise is a desirable result of its effective management and can be traced back to various internal actions taken in interaction with the environment (Grabowski, 2016; Bogdanova, Kozel, Ermolina, and Litvinova, 2016) Thus, the success of an organization is strongly dependent on the ability to respond quickly to changes in the environment and inside the organization (Stabryła and Wawak, 2012). The success of the organization depends on the entrepreneur's ability to act in an integrated way that allows flexible adaptation to the requirements of the market and the environment, through flexible adaptation to the customer (Feeman, 2010; Drucker, 1995) in different phases of the company's life (April, 2018a; Frączkiewicz-Wrona, 2013; Peszko, 2002; Platonoff and Sysko-Romańczuk, 2003). Focusing employees on making changes is an extremely important factor in the process of creating and maintaining an asset that determines competitiveness, and therefore, as a consequence, the effectiveness of the organization on the market (Sewell, 2002) in pandemic conditions.

The success of an enterprise consists of successes achieved in many fields (Bondarenko, Isaeva, Orekhov, and Soltakhanov, 2017). Success in one area may preclude success in another. Identifying the factors that support the success of the company and influence the success of the business, helps the company to find the "market path" (Lemanska-Majdzik and Tomski, 2013) in difficult environmental conditions. Thus, the key success factors become ideas generated by employees (Skoczylas, 2014), which are antidotes to the difficult market situation. In particular, the achievements of any company should be measured by its ability to create added value, which is the difference between the market value of business results and the cost of inputs (Kay, 1993; Zimon, 2019). The awareness of the importance of the

brand for the success of a small organization does not always translate in companies taking actions that lead to investment in this type of asset category (Urbanek, 2012). In micro and small businesses, this success is often understood differently. For many micro and small business owners, profit is not at all the only or most important motive for action especially in the case of family businesses (Charupongsopon and Puriwat, 2017). It may be more important to obtain a level of revenue that allows them to maintain ownership and control of the business (Piasecki, 1998).

In unusual pandemic conditions, every micro and small entrepreneur needs a certain intellectual capacity, as well as entrepreneurial qualities, such as the ability to anticipate (Quintero, Andrade, and Ramírez, 2019). Predictive capacity depends on the specifics of the sector and the length of the production process, as well as on the type of consumer needs being met - the more basic the needs and the more predictable, the higher the probability of success (Knight, 1921) despite difficult market conditions. The pillar of the success of a small organization, especially in pandemic conditions, is its employees and their actions (Pavlenkov, Larionov, Voronin, and Pavlenkov, 2017; Steinerowska-Streb and Hunger, 2020). Their knowledge and competencies are a tool to improve the current efficiency and shape the potential of the organization (Gonera, 2016). Knowledge leads to understanding innovation as a complex process of organizational learning (Zastempowski, Glabiszewski, Krukowski, and Cyfert, 2020) in difficult market conditions.

Psychological capital and self-esteem increase the probability of success (Suroso, Anggraeni, and Andriyansah, 2017), (Hizam-Hanafiah, Yousaf, and Usman, 2017), which combined with market knowledge (Stańczyk, Stańczyk, and Szalonka, 2020) can be an antidote to the effects of pandemics. This situation makes it possible for a company to consolidate its ability to stay in the market in the long term (Lachiewicz, 2013).

Growth prospects depend on many factors, including how COVID-19 evolves, the duration of any downtime, the impact on business, and the realization of fiscal and monetary policy support. Diversification is therefore a lever for the long-term success of the company under such conditions (Nogalski and Niewiadomki, 2015). Proactive strategy in the pursuit of specific resources is an important element in the development of SME enterprises (Gancarczyk and Zabala-Iturriagoitia, 2015; Pakhnenko, Liuta, and Pihul, 2018). Complementary patterns emerging from unique combinations and organizational capabilities are difficult to imitate and synergistically lead to high firm performance (Charupongsopon and Puriwat, 2017).

3. Materials and Methods

The study was conducted by a team of researchers Parkitna and Paszkowski during the first months of the pandemic in April-June 2020 in Lower Silesia. The study used a non-random sample, which allows you to select a set of population elements. The total population in the study area of Lower Silesia is 365792 registered

companies, including, 355488 micro-enterprises and 10304 small enterprises. Therefore, to determine the sample size a research sample size calculator was used. On this basis, the minimum value of a representative sample was determined - 96 questionnaires, with a confidence level of 95% and a maximum standard error of 10%. The obtained research sample constitutes of 100 surveyed enterprises. The purposeful selection of the sample excluded the hotel and catering industry due to the legal suspension of operation of these entities. The survey covered the owners of business entities and was conducted directly. Data were recorded in the form of electronic GOOGLE form, then was estimated for SPSS processing. The collected empirical material was analyzed and interpreted gradually. Which served the scientific cognition of realistically and experientially existing realities and the description of the phenomenon (Dutkiewicz, 2001) of the success of the organization under pandemic conditions.

The conducted empirical exploration was aimed at finding answers to the set research problems, which took the form of the following questions that formed the basis for the research hypotheses (Rószkiewicz *et al.*, 2013).

Main Question- Q1: Does the success of a business under pandemic conditions depend on the factors of the environment? Q11 Are there interdependencies between the environmental factors?

Detailed Question-Q2: Are there significant relationships between success under pandemic conditions and: Q21 firm size, Q22 legal personality, Q23 firm location, Q24 age, and Q25 type of target market?

The following methods were used to answer the research questions: critical literature analysis method and quantitative methods. Grounded theory methodology was used, which involves theory building based on empirical data collected (Glaser and Strauss 2009). The reliability of the survey questionnaire indicates that the data collection technique used produced consistent and logical conclusions, and that similar observations by other researchers will result in similar conclusions, in terms of assessing the meaningfulness of the raw data analyzed and making conclusions available (Saunders, Lewis, and Thornhill, 2008). Since there is no universal rule for the estimation of the aforementioned coefficient (Zawisza *et al.*, 2010), the most common ways of assessing reliability consist of analyzing the internal consistency of a given scale and analyzing its absolute stability (Brzezinski, 2005).

Therefore, in order to examine the reliability, Cronbach's Alpha coefficient was used, which is the most commonly used among the techniques to measure the homogeneity of the scales used to describe the environment, and which were directly derived from the literature. Based on the calculations performed, the reliability of all 7 Scales on the question areas of the survey questionnaire was demonstrated. It was proved that the research tool in the form of constructed survey questionnaire should be considered reliable and suitable for further analysis of data obtained using it.

Table 1. Summary of Cronbach's coefficient for 7 Scales of the survey questionnaire (etiquette)

Scale	Cronbach's Value
Scale 1: Business environment (businesinpact)	0,950
Scale 2 Political and legal environment (politycipact)	0,891
Scale 3 Socio-cultural conditioning (soccultmpact)	0,890
Scale 4 Economic conditions of the market (economipatc)	0,733
Scale 5 Determinants resulting from the specificity of performed operations (deteroperatact)	0,773
Scale 6 Ecological-innovative conditions of conducting business activity (ekologinnovative)	0.864
Scale 7 Business conditions resulting from pandemics (impactpandemi)	0,881

Source: Original research results.

4. Empirical Results

For further research, in accordance with the adopted methodology, the variable described - success and 7 scales of variables describing the environment identified on the basis of the literature survey were used. It should be noted that the verification of research hypotheses, is carried out by verifying the statistical hypothesis (Rószkiewicz *et al.*, 2013). Therefore, before proceeding with the verification, each hypothesis was written in mathematical form.

$$H_1: \mu_{\text{factors surrounding}} \Leftrightarrow \mu_{SC}$$

$$H_0: \mu_{\text{facts surrounding}} \not\Leftrightarrow \mu_{SC}$$

H_{Q1} : There is a statistically significant relationship between success and environmental factors.

H_{0Q1} : There is no statistically significant relationship between success and environmental factors.

Since the sample was 100, both tests were used due to the fact that the Kolmogorov-Smirnov test is used for samples higher than 100 cases and the Shapiro-Wilk test is used for samples lower than 100 cases.

Table 2. Tests of normality of distribution of variables

	Kolmogorow-Smirnow ^a			Shapiro-Wilk		
	Statistics	df	Significant	Statistics	df	Significant
succes	.275	100	.000	.826	100	.000
businesinpact	.111	100	.004	.925	100	.000
politycipact	.073	100	.200*	.971	100	.025
soccultmpact	.095	100	.028	.970	100	.022
economipatc	.089	100	.049	.978	100	.089
deteroperatact	.119	100	.001	.985	100	.298
ekologinnovative	.102	100	.012	.978	100	.092
impactpandemic	.144	100	.000	.949	100	.001

Source: Original research results.

If the significance of the test is less than 0.05 then the distribution deviates from the normal distribution. Given the fact that not all variables have a normal distribution in order to verify the hypotheses, we used Spearman rank correlation, which is one of the non-parametric measures of monotonic statistical dependence between random variables for independent samples. This correlation makes it possible to determine both the direction and strength of the relationship (Kendall and Maurice, 1948).

Table 3. Pairwise correlations

rho Spearman		success	business impact	political impact	sociocultural impact	economic impact	deterioration	ecological innovation	impact pandemic
N		100	100	100	100	100	100	100	100
success	R	1.000	-.066	-.005	.091	-.080	.014	.125	.195
	P	.	.512	.960	.368	.431	.886	.216	.052
business impact	R	-.066	1.000	.529**	.037	.328**	.197*	.084	.081
	P	.512	.	.000	.714	.001	.050	.406	.425
political impact	R	-.005	.529**	1.000	.233*	.354**	.286**	.311**	.376**
	P	.960	.000	.	.020	.000	.004	.002	.000
sociocultural impact	R	.091	.037	.233*	1.000	.411**	.407**	.394**	.498**
	P	.368	.714	.020	.	.000	.000	.000	.000
economic impact	R	-.080	.328**	.354**	.411**	1.000	.473**	.277**	.399**
	P	.431	.001	.000	.000	.	.000	.005	.000
deterioration	R	.014	.197*	.286**	.407**	.473**	1.000	.325**	.498**
	P	.886	.050	.004	.000	.000	.	.001	.000
ecological innovation	R	.125	.084	.311**	.394**	.277**	.325**	1.000	.423**
	P	.216	.406	.002	.000	.005	.001	.	.000
impact pandemic	r	.195	.081	.376**	.498**	.399**	.498**	.423**	1.000
	p	.052	.425	.000	.000	.000	.000	.000	.

** - Correlation significant at the level of (two-sided). * - Correlation significant at the level of 0.05 (two-sided).
r - correlation coefficient, p- two-sided statistical significance

Source: Original research results.

In the view of the fact that the correlation coefficient between (Table 3) success and individual groups of environment factors did not show significant strong relationships and in all cases obtained $p > 0.01$ then there is no basis to reject the hypothesis

H_{0Q1} : There is no statistically significant relationship between success and the distinguished groups of factors.

The strength of most of the R pairwise spoliation is the domain of weak or no spoliation. The moderate relationship is only in the case of:

- business environment vs. influence of political-legal environment $R = 0.529$, $p = 0.000 < 0.01$,
- sociological-cultural factors vs. direct influence of pandemic $R = 0.498$, $p = 0.000 < 0.01$,

- sociological-cultural factors vs. economic factors $R = 0.411$, $p = 0.000 < 0.01$,
- interaction of factors resulting from specificity of operating activity vs. direct influence of pandemic $R = 0.498$, $p = 0.000 < 0.01$,
- impact of ecological and innovative factors vs. direct influence of pandemic $R = 0.423$, $p = 0.000 < 0.01$,
- interaction of factors resulting from the specificity of operations vs. socio-cultural factors $R = 0.407$, $p = 0.000 < 0.01$,
- interaction of factors resulting from the specificity of operations and economic factors $R = 0.473$, $p = 0.000 < 0.01$.

Therefore, in further groups of relationships, (for these pairs of cross-correlations) hypothesis H_{0Q11} should be rejected in favor of H_{Q11} . It should therefore be assumed that there is a statistically significant reciprocal relationship.

To verify the hypotheses arising from Research Question 2 Q2, we used the non-parametric Kruskal Willis Test for independent samples, which is a test that compares the distributions of a variable in $k \geq 3$ populations. The test does not assume the normality of the distributions. It is considered a nonparametric alternative to the one-way analysis of variance between groups (Kruskal and Wallis, 1952). Of course, it is important to keep in mind that rank-ordering eliminates much of the information that was collected in the study. The difference between consecutive observations (the magnitude of that difference) can be very important information that is eliminated in the rankings (Kendall and Gibbons, 1990).

Q21: Does success in a pandemic depend on the size of the business?

$H_{Q21}: \mu_{SCmicro} \neq \mu_{SCsmall} \neq \mu_{SCmidium}$

$H_{0Q21}: \mu_{SCmicro} = \mu_{SCsmall} = \mu_{SCmidium}$

H_{Q21} : Success between the distinguished activity size is significantly different.

H_{0Q21} : Success between the distinguished activity size is not significantly different.

Table 4. Kruskal-Willis test - rank value for the type of business

Ranks				Tested value ^{a,b}	
	Business size	N	Average rank	H Kruskala-Wallis	1.542
success	Micro enterprise	69	48.41	df	2
	Small enterprise	25	53.82	Asymptotic significance	.462
	Medium enterprise	6	60.67	a. Test Kruskala-Wallis	
	Total	100		b. Grouping variable: Business size	

Source: Original research results.

As the test value is 1.542 and $p = 0.462 > 0.05$, there are no grounds to reject the hypothesis H_{0Q21} in favor of H_{Q21} . Therefore, it should be assumed that the conducted research did not confirm the hypothesis H_{Q21} of significant differences in success during the pandemic in the studied groups of types of companies, that is, the success of the company in pandemic does not depend on the size of the company.

Q22: Does success in a pandemic depend on the type of legal personality of the business?

H_{Q22} :

$$\mu_{SCsole} \neq \mu_{SCcivil} \neq \mu_{SCgener} \neq \mu_{SCpart} \neq \mu_{SCgener} \neq \mu_{SCLimitpart} \neq \mu_{SCLimliab} \neq \mu_{SCjoin}$$

H_{0Q22} :

$$\mu_{SCsole} = \mu_{SCcivil} = \mu_{SCgener} = \mu_{SCpart} = \mu_{SCgener} = \mu_{SCLimitpart} = \mu_{SCLimliab} = \mu_{SCjoin}$$

H_{Q22} : Success in pandemic between the distinguished types of legal personality is significantly different.

H_{0Q22} : Success in pandemic between the distinguished types of legal personality is not significantly different.

Table 5. Kruskal-Willis test - rank value for the type of legal personality

Ranks				Tested value ^{a,b}	
	Legal personality of a business	N	Average rank	H Kruskala-Wallis	13.825
success	Sole proprietorship	49	47.72	df	6
	Civil partnership	17	56.97	Asymptotic significance	.032
	General partnership	3	67.83		
	Partner company	8	44.38		
	Limited partnership	5	15.50		
	Limited liability company	17	60.85		
	Joint-stock company	1	72.50		
	Total	100		a. Test Kruskala-Wallis	
			b. Grouping variable: Legal personality of a business		

Source: Original research results.

Therefore, $p = 0.032 < 0.05$, meaning we reject the null hypothesis H_{0Q22} of equality of distributions in the compared subgroups. *The hypothesis is accepted H_{Q22} .* There are statistically significant differences in success during pandemic between the distinguished types of legal personality of enterprises, which means that the level of success in enterprises with different legal personalities differs significantly among the groups so distinguished.

Q23: Does success in a pandemic depend on the location of the business?

$$H_{Q23}: \mu_{SCbig} \neq \mu_{SCLarg} \neq \mu_{SCmedium} \neq \mu_{SCsmall} \neq \mu_{SCsvillage}$$

$$H_{0Q23}: \mu_{SCbig} = \mu_{SCLarg} = \mu_{SCmedium} = \mu_{SCsmall} = \mu_{SCsvillage}$$

H_{Q23} : Pandemic success between the highlighted activity location types is significantly different.

H_{0Q23} : Pandemic success between the distinguished types of activity location is not significantly different.

Table 6. Kruskal-Willis test - rank value for the type of business location

Ranks				Tested value ^{a,b}	
	Company location	N	Average rank	H Kruskala-Wallis	11.994
success	Big city (more than 200,000 inhabitants)	48	59.65	df	4
	Large city (pop. between 100,000 and 199,900)	15	41.57	Asymptotic significance	.017
	Medium city (between 20,000 and 99,900 inhabitants)	13	43.73		
	Small town (less than 20,000 inhabitants)	11	32.77		
	Village	13	48.81		
	Total	100		a. Test Kruskala-Wallis	
				b. Grouping variable: Company location	

Source: Original research results.

As the test is 11.994, $p = 0.017 < 0.05$, meaning we reject the null hypothesis H_{0Q23} of equality of the distributions in the compared subgroups. The following hypothesis is accepted H_{Q23} . There are statistically significant differences in success during pandemic between the distinguished types of the location of enterprises, which means that the level of success of enterprises located in different types of cities and villages differs significantly in such distinguished groups.

Q24: Does success in pandemic depend on the age of the business in the market?

$H_{Q24}: \mu_{SC1year} \neq \mu_{SC1and5} \neq \mu_{SC5to10} \neq \mu_{SCmore10}$

$H_{0Q24}: \mu_{SC1year} = \mu_{SC1and5} = \mu_{SC5to10} = \mu_{SCmore10}$

H_{Q24} : Pandemic success between the distinguished types of enterprise age is significantly different.

H_{0Q24} : Pandemic success between the distinguished types of enterprise age is not significantly different.

Table 7. Kruskal-Willis test - rank value for age of activity

Ranks				Tested value ^{a,b}	
	Company age	N	Average rank	H Kruskala-Wallis	2.143
sukces	less than 1 year	15	49.70	df	3
	between 1 and 5 years	41	46.18	Asymptotic significance	.543
	5 years to 10 years	20	53.35		
	more than 10 years	24	56.00		
	Total	100			
				a. Test Kruskala-Wallis	
				b. Grouping variable: Company age	

Source: Original research results.

As the test is 2.143, $p = 0.534 > 0.05$, there is no reason to reject the hypothesis H_{0Q24} in support of H_{Q24} . Therefore, it should be assumed that the conducted research did not confirm the hypothesis H_{Q24} of significant differences in success across groups of companies.

Q25: Does success in a pandemic depend on the target market?

$H_{Q25}: \mu_{SCregio} \neq \mu_{SClnation} \neq \mu_{SCeu} \neq \mu_{SCintern}$

$H_{0Q25}: \mu_{SCregio} = \mu_{SClnation} = \mu_{SCeu} = \mu_{SCintern}$

H_{Q25} : Success in pandemic between the distinguished types of the target market of the business conducted is significantly different.

H_{0Q25} : Success in pandemic between the distinguished types of the target market for the business being conducted is not significantly different.

Table 8. Kruskal-Willis test - rank value for outlet type

Ranks				Tested value ^{a,b}	
	Market outlets	N	Average rank	H Kruskala-Wallis	6.469
sukces	Regional	22	46.41	df	4
	National	16	38.44	Asymptotic significance	.167
	European Union region	1	48.50		
	International outside the European Union	3	37.50	a. Test Kruskala-Wallis	
	Total	100		b. Grouping variable: Market outlets	

Source: Original research results.

Therefore, $p = 0.028 < 0.05$, that is, the null hypothesis is rejected H_{0Q25} of equality of distributions in the compared subgroups. *The following hypothesis is accepted* H_{Q25} here are statistically significant differences in the average levels of success between the distinguished types of markets in which companies operate.

5. Discussion and Conclusions

The results of the analysis of the collected data confirmed the previous literature analysis conducted in the theoretical part of the paper. The verification of the research hypotheses regarding the assumptions of the influence of the environment on the success of enterprises during the pandemic was not confirmed which may be the reason for the initial market shock and the lack of preparation of entrepreneurs for the new economic reality during a pandemic.

However, the pairwise correlations of the environmental factors confirmed that the empirical approach adopted coincided with the conceptual approach formed based

on the theoretical analysis of the literature on the subject. In addition, the verification of the specific hypotheses showed that there are statistically significant correlations between the variables describing 6 pairs, out of the seven Scales of describing variables, the magnitude of which was described in the research. On this basis, it can be presumed that the success of enterprises is possible under the conditions of pandemic and the research identifies the environmental factors influencing them and the characteristics of enterprises differentiating this influence, i.e., legal personality, location of business activities, market.

On this basis, it can be concluded that micro and small enterprises are the fastest to adapt to the changing environment and changing market conditions, have the ability to carry out rapid changes in the profile of economic activity. The analysis of the results obtained in the research is partly consistent with the research on the influence of the environment on the competitiveness of micro and small enterprises, which is also confirmed by Wolański's research (Wolański, 2013). The reason for this can be seen in the fact that micro and small enterprises included in the study easily assimilate to changing environmental conditions. Their survival in the market depends on their ability and skills to quickly adapt to changes in the external environment. As also confirmed by international literature, SMEs tend to adapt to regulations and rules as their protection strategy (Kortelainen, Ratinen, and Linnanen, 2012). Despite the achievements described above, the research conducted has some limitations, mainly due to the methodological approach adopted:

The first limitation is the main perspective that determined the theoretical reflections. First of all, the selection of the research sample was purposive, so the following results should be treated with caution since the data collected does not include industries limited during the pandemic temporarily or permanently types of activities.

Secondly, the results of the survey were conducted at the beginning of the pandemic, so the effects felt by entrepreneurs did not predict a deepening of the crisis - which is not a temporary state.

Third, the study refers only to a limited part of reality and allows for unambiguous verification of hypotheses in a given population. Nevertheless, the assumptions made at the stage of selecting the research sample allow us to formulate a thesis of broader universality of the confirmed regularities that should be confirmed in extended nationwide research. Which is an important contribution to further discussion and extended research in this area.

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