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IMPACT OF COVID-19 ON CORPORATE CULTURE*

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Received 14 October 2023; accepted 30 January 2024; published 30 March 2024

Abstract. The crisis associated with the global COVID-19 pandemic has had an impact on the economies of all countries in the world. The stoppage of production lines, insufficient demand, and layoffs were just some of the negative effects that Slovak enterprises also experienced as a result of the dynamically changing business environment. The aim of the research is to determine whether the perception of corporate culture in Slovakia was affected by the COVID-19 pandemic. It is achieved by identifying the type of corporate culture that dominated at the beginning and after the crisis caused by the COVID-19 pandemic. The methodology of Cameron and Quinn, based on the Organizational Culture Assessment Instrument, was chosen. Corporate culture was analyzed based on the opinions of employees working in the private sector in Slovakia during the period from 2020 to 2023. The significance of differences was tested using the Tukey HSD test. The novelty of the research is that the research results confirmed that changes existed in the perception of partial areas of corporate culture, as well as in the perception of the corporate culture type, over time in Slovakia. Furthermore, based on the results obtained, it can be concluded that clan corporate culture dominated in the private sector in Slovakia in 2020; however, hierarchy corporate culture dominated in 2023. The research results are valuable from the point of view of the development of knowledge in the area of corporate culture in Slovakia, understanding its development, and the impact of global trends on corporate culture.

Keywords: corporate culture; The Organizational Culture Assessment Instrument; COVID-19; private sector; Tukey HSD test

Reference to this paper should be made as follows: Lorincová, S. 2024. Impact of COVID-19 on corporate culture. *Entrepreneurship and Sustainability Issues*, 11(3), 99-117. [http://doi.org/10.9770/jesi.2024.11.3\(7\)](http://doi.org/10.9770/jesi.2024.11.3(7))

JEL Classifications: M21, M14, O15

* This research was supported by VEGA 1/0161/21 "Dependence of the type of corporate culture on the industries of Slovak enterprises and selected socio-demographic factors", KEGA 012UCM-4/2022 "Human Resources Management in a Digital World – A Bilingual (Slovak-English) Course Book with E-learning Modules based on Multimedia Content", APVV-20-0004 "The effect of an increase in the anthropometric measurements of the Slovak population on the functional properties of furniture and the business processes".

1. Introduction

Previous crises had a particular impact on society. Some had a significant microeconomic impact, while others had a macroeconomic impact. Not only production but also industries, trade, finance, and other sectors were affected. There was a decrease in consumption, the gross domestic product of individual economies, and an increase in unemployment or a decrease in wages and pensions. The crises were characterized by varying intensity, duration, and the extent of their impact on the functioning of individuals, the business sector, and society as a whole. The aim of the research is to determine whether the perception of corporate culture was affected by the COVID-19 pandemic.

2. Theoretical background

The first global economic crisis caused by the collapse of the New York Stock Exchange can be considered the Great Depression (1929-1933). The crisis itself was caused by a price bubble in the stock market, which, due to an optimistic mood, drove share prices to higher levels, while buyers had a lasting vision of profit from these shares in the form of dividends. However, the share prices did not reflect the actual state of the economy. Banks became illiquid and began to go bankrupt (Alcidi, Gros, 2011). The Great Depression affected almost every country in the world (Siegler, Van Gaasbeck, 2005). The most significant impact was on countries like the United States, Canada, Germany, Poland, Czechoslovakia, and the Netherlands. The United Kingdom, France, and Japan were also severely affected. All sectors of the economy were impacted, particularly mining, metallurgy, and lumbering. Production and demand declined. Other crises such as the Mexican Crisis, Asian Crisis, Russian Crisis, Brazilian Crisis, and Argentine Crisis were triggered by either a recurring cycle of rising and falling dollar exchange rates or a loss of foreign exchange reserves or currency devaluation (Frolov, 2020). The result of these crises was not only a halt in economic growth but also a decline in gross domestic product and rising unemployment.

The modern financial crisis can be considered a milestone among previous crises. Although it began in 2008 in the United States, it escalated into an economic crisis, gained momentum, and became a global economic crisis (Mateo, 2016). The crisis was caused not only by the failure of banks but also by the failure of the economic system itself and, above all, by the reaction of the economic system to this crisis. The crisis has resulted in rising unemployment, an exacerbation of poverty, and a decline in gross domestic product in almost every country in the world (Hagiwara, 2019).

Perhaps the most significant global recession since the Great Depression was caused by the COVID-19 pandemic, also known as the coronavirus pandemic, when the virus spread from China to several countries around the world in early 2020 (Olivia et al., 2020). The pandemic has led to the postponement or cancellation of most sporting, religious, political, and cultural events, as well as widespread food shortages caused by panic shopping. Consumer spending, industrial production, investment, trade, capital flows, and supply chains were significantly disrupted (Khan et al., 2021). The pandemic has become a global health threat with a direct impact on the global economy as well as society as a whole (Aktar et al., 2021). Governments around the world have used various tools to mitigate its effects. They have postponed the payment of taxes and levies, overpaid wages, guaranteed loans, and implemented similar measures (Tisdell, 2020). Restrictive measures have also affected the business sector in Slovakia, with some sectors being more affected than others. Businesses have faced a drop in demand and delays in payments from customers. There has been a decline in business income, and many enterprises have been under pressure to cut costs, which has resulted in redundancies.

The COVID-19 pandemic has been studied from various perspectives, including health and ecological aspects (Jankelová et al., 2021; Chen et al., 2021; Anderson et al., 2023; Dale et al., 2023; Khunti et al., 2023; Xu et al.,

2023). The economic impact of COVID-19 was examined in the research conducted by Mungmunpantipantip and Wiwanitkit (2023). Meyer et al. (2022) documented and evaluated how businesses are responding to the COVID-19 crisis. The aim of our research is to determine whether the perception of corporate culture was affected by the COVID-19 pandemic.

According to previous research (Ogbonna, Harris, 2000; Škerlavaj et al., 2011, Rezaei et al., 2016, Mullakhmetov et al., 2019; Vlaicu et al., 2019; Zhang et al., 2023), corporate culture is an important element of corporate management and serves as a tool that influences its functionality and viability of the enterprise. This area has been extensively studied due to its significant role in workplace behavior and business performance (Heritage et al., 2014). Corporate culture is defined as a system of values (Heinen, 1987) and informal rules (Deal, Kennedy, 1982) that guide people's behavior in most situations. It can vary. According to employees in the construction industry in Finland, these enterprises applied a clan and adhocratic corporate culture (Teräsväinen et al., 2018). In the Persian Gulf countries, a hierarchy corporate culture was typical for the construction industry (Jaeger, Adair, 2013). Turkish workplaces were perceived to have a hierarchy corporate culture (Caliskan, Zhu, 2019). Similarly, in Polish public universities, a hierarchy corporate culture was applied (Debski et al., 2020). In the health sector in Vietnam, a clan corporate culture was typical (Van Huy et al., 2020), while hotel enterprises in Mexico (Ibarra-Michel et al., 2019) and Greek banks (Belias et al., 2015) also dominated a clan corporate culture. Market corporate culture prevailed in universities in Kazakhstan (Dostiyarova, 2016). The presented research demonstrates that differences in corporate culture existed not only geographically but also in terms of the sectoral structure of enterprises. The aim of our research is to identify the type of corporate culture that dominated at the beginning and after the crisis caused by the COVID-19 pandemic, and to determine whether the perception of corporate culture was affected by the COVID-19 pandemic.

3. Research objective and methodology

In the context of effective management, it is important for the manager to understand the work values that their employees adhere to in terms of corporate culture. This is because work values can vary for various reasons. The aim of the research is to determine whether the perception of corporate culture was affected by the COVID-19 pandemic. It is achieved by identifying the type of corporate culture that dominated at the beginning and after the crisis caused by the COVID-19 pandemic. To define the corporate culture type, the Organizational Culture Assessment Instrument (Cameron, Quinn, 1999) was used. The methodology is widely used. The questionnaire consisted of six partial areas (dominant characteristics, organizational leadership, management of employees, organization glue, strategic emphases, and criteria of success) with four subareas (alternative A, alternative B, alternative C, and alternative D). Based on the chosen methodology, respondents expressed their opinions about each of the six areas by dividing 100 points to each area based on which one they believed reflected the state-of-the-art most accurately. In the area of dominant characteristics, respondents expressed their opinions about the characteristic features of the environment and atmosphere prevailing in the enterprise. In the following analyzed area, organizational leadership, respondents expressed their opinions about what leadership entails, followed by the characteristics of managerial style and management methods applied. In the subsequent areas, respondents expressed how the enterprise consolidates itself, what is emphasized within the enterprise, and how success is defined. Each of the six partial areas was divided into four subareas (Alternative A, Alternative B, Alternative C, and Alternative D). Each of these alternatives corresponds to one of the corporate cultures (clan, adhocracy, market, hierarchy). Alternative A corresponds to the clan corporate culture. The clan corporate culture is based on similarities with family-type businesses. Teamwork, participation, and consensus are considered to be of primary importance in the enterprise (Cameron, Quinn, 1999; Demski et al., 2016; Jaeger et al., 2017; Teräsväinen et al., 2018). Alternative B corresponds to the adhocracy corporate culture. It represents a very dynamic, entrepreneurial, and creative environment where employees are willing to take risks (Cameron, Quinn, 1999; Lau, Ngo, 2004, Jaskyte, 2014). Alternative C corresponds to the market corporate culture. Among the primary interests of the market corporate culture is the realization of transactions (exchanges, sales, and contractual

obligations) with other actors in order to create competitive advantages (Cameron, Quinn, 1999). Emphasis is placed on overtaking the competition and achieving a leading position in the market (Cameron, Quinn, 1999). Alternative D corresponds to the hierarchy corporate culture characterized by its formalized and structured work environment emphasizing procedures and regulations, in which the binding element is formal rules (Heritage et al., 2014).

In the initial step, the partial aspects of corporate culture were analyzed both before and after the crisis caused by the COVID-19 pandemic. Subsequently, the type of corporate culture was analyzed before and after the crisis. The analysis of corporate culture was based on the opinions of employees working in the private sector in Slovakia. The research sample consisted of over 3,800 respondents who participated in the research from 2020 to 2023. The detailed structure is presented in Table 1.

Table 1. Composition of the research sample

Indicator		Absolute frequency	Relative frequency
Year	2020	950	24.98%
	2021	1,165	30.63%
	2022	966	25.40%
	2023	722	18.99%
Total		3.803	100.00%

Source: Own research

The following hypotheses were tested:

- WH1: the type of corporate culture that dominated at the beginning and after the crisis caused by the COVID-19 pandemic changes in terms of time.
- WH2: there exist changes in the perception of partial areas of corporate culture in terms of time.

To verify the hypotheses, the Tukey HSD test was used. The test was used to determine the significance of differences. A significance level of 5% was utilized.

4. Results and discussion

The initial area of study focused on the dominant characteristics. Respondents provided their opinions on the characteristic features of the environment and atmosphere that dominated within the enterprise. The results reached are presented in Figure 1. The results obtained in the initial step of the investigation were further subjected to statistical analyses using the Tukey HSD Test. The results of the statistical analyses are presented in Table 2, with statistically significant differences being highlighted.

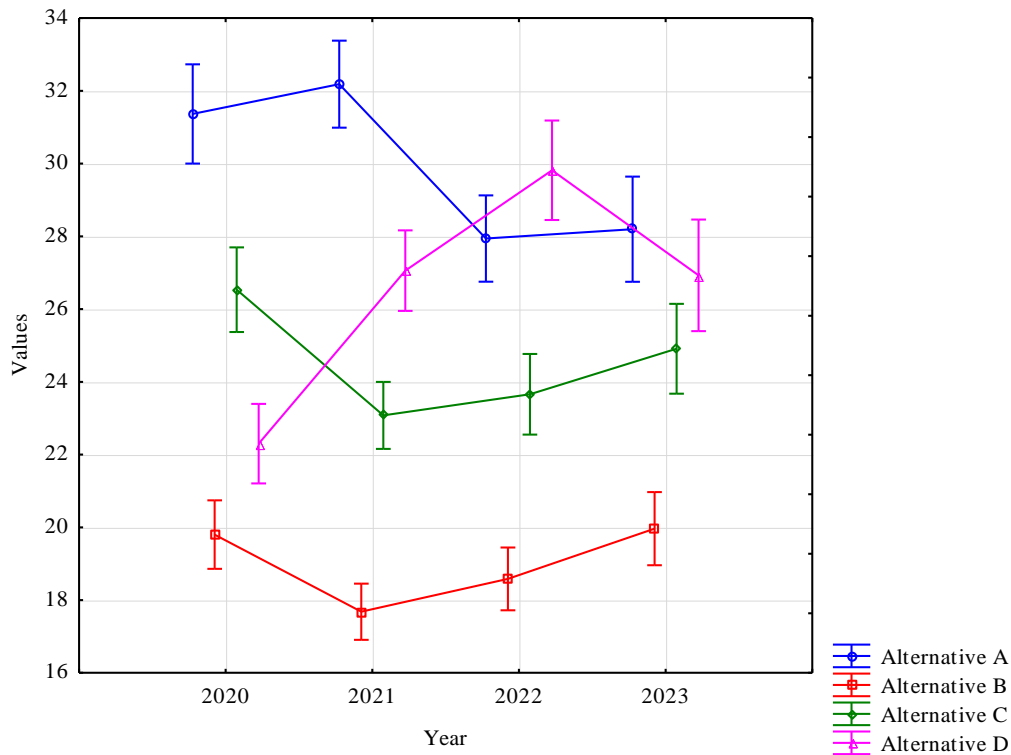


Figure 1. The development of dominant characteristics
Source: Own research

Based on the results obtained in the area of dominant characteristics, it was found that alternative A dominated in private sector in Slovakia in 2023. According to the findings, respondents attributed the highest level of importance to this alternative. Respondents perceived the enterprise as a very personal place, similar to an extended family. In 2022, there was a rapid decrease in the importance of alternative A. A statistically significant difference was observed when comparing 2021 and 2022 (Table 2). Table 2 presents additional statistically significant differences. Based on the obtained results, it can be concluded that the importance of alternative A grew from 2022 onwards. However, it did not reach the level observed at the beginning of the crisis.

From the perspective of alternative D, it was identified as the second most important alternative in 2023. A decline was observed when comparing 2022 and 2023. Respondents attributed lower importance to this alternative. According to the employees working in the private sector, the enterprises were perceived as less controlled and structured places. Formal procedures generally governed the actions and behaviors of individuals.

When analyzing the results of alternative B and alternative C, it is evident that the importance of these alternatives gradually increased from 2021. However, it should be noted that the average rating from 2021 did not reach the level observed at the beginning of the crisis. Respondents perceived the enterprises as highly dynamic and results-oriented entrepreneurial place, which are typical characteristics of alternative B and alternative C.

Table 2. Statistical analysis in the area of dominant characteristics

Indicator	Alternative A				Alternative B				Alternative C				Alternative D			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
2020		0.792	0.001	0.008		0.003	0.223	0.995		0.000	0.001	0.221		0.000	0.000	0.000
2021	0.792		0.000	0.000	0.003		0.442	0.003	0.000		0.864	0.109	0.000		0.007	0.999
2022	0.001	0.000		0.994	0.223	0.442		0.182	0.001	0.864		0.448	0.000	0.007		0.016
2023	0.008	0.000	0.994		0.995	0.003	0.182		0.221	0.109	0.448		0.000	0.999	0.016	

Source: Own research

Based on the analysis of the Tukey HSD test in the area of dominant characteristics presented in Table 2, it can be concluded that there existed statistically significant differences in perception of partial alternatives of corporate culture. This indicates that respondents perceived alternatives differently. In 2023, there were statistically significant differences in perception of alternative A and alternative D compared to 2020. However, it is important to note that alternative A, alternative B, and alternative C did not reach the level observed at the beginning of the crisis.

The organizational leadership was the second area studied using the methodology of Cameron and Quinn (1999). The results obtained are presented in Figure 2. The statistical analysis results can be found in Table 3.

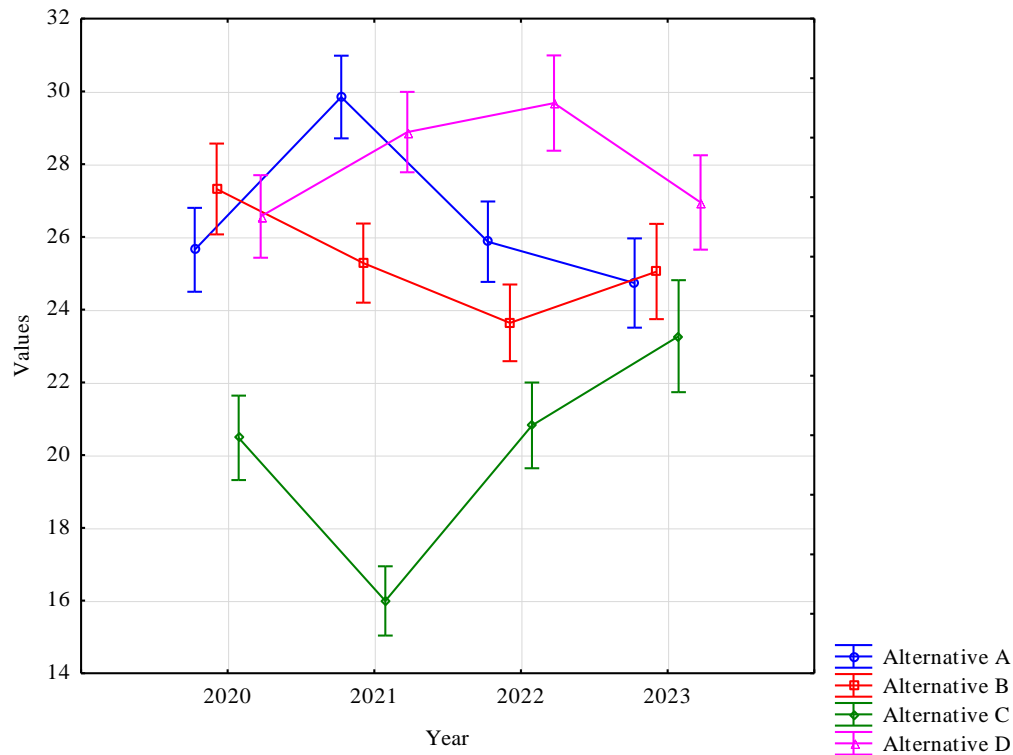


Figure 2. The development of the organizational leadership

Source: Own research

In the area of organizational leadership, alternative D received the highest rating in 2023. According to the employees working in the private sector in Slovakia, the leadership in the enterprises was generally perceived as exemplifying coordinating, organizing, or smooth-running efficiency. The Tukey HSD test confirmed statistically

significant differences in alternative D when comparing 2022 and 2023. Additional statistically significant differences are highlighted in Table 3.

Based on the results obtained, it can be concluded that there was a decrease in the perceived importance of alternative A. Starting from 2021, respondents gradually attributed lower importance to alternative A. According to their opinion, leadership in the enterprises was generally seen as less exemplifying mentoring, facilitating, or nurturing.

On the other hand, there was an increase in the importance of alternative B in 2023 compared to 2022. Respondents attributed more significance to it. Based on the obtained results, it can be concluded that leadership in the enterprises was generally perceived as exemplifying entrepreneurship, innovation, or risk taking.

Based on the results obtained, it can be concluded that the importance of alternative C gradually increased every year from 2021. Respondents perceived the leadership as exemplifying a no-nonsense, aggressive, and results-oriented focus.

Table 3. Statistical analysis in the area of organizational leadership

Indicator	Alternative A				Alternative B				Alternative C				Alternative D			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
2020		0.000	0.993	0.742		0.055	0.000	0.060		0.000	0.978	0.011		0.027	0.002	0.977
2021	0.000		0.000	0.000	0.055		0.168	0.993	0.000		0.000	0.000	0.027		0.770	0.139
2022	0.993	0.000		0.586	0.000	0.168		0.401	0.978	0.000		0.034	0.002	0.770		0.018
2023	0.742	0.000	0.586		0.060	0.993	0.401		0.011	0.000	0.034		0.977	0.139	0.018	

Source: Own research

The Tukey HSD test confirmed the existence of the highest number of statistically significant differences in the perception of alternative C. Respondents had different perceptions of this alternative in 2020 and 2023. Further, based on the results obtained, it can be concluded that there has been an increase in the importance of alternative C compared to 2020. Alternative A, and alternative B did not reach the level at the beginning of the crisis.

Figure 3 presents the obtained results in the area of the management of employees.

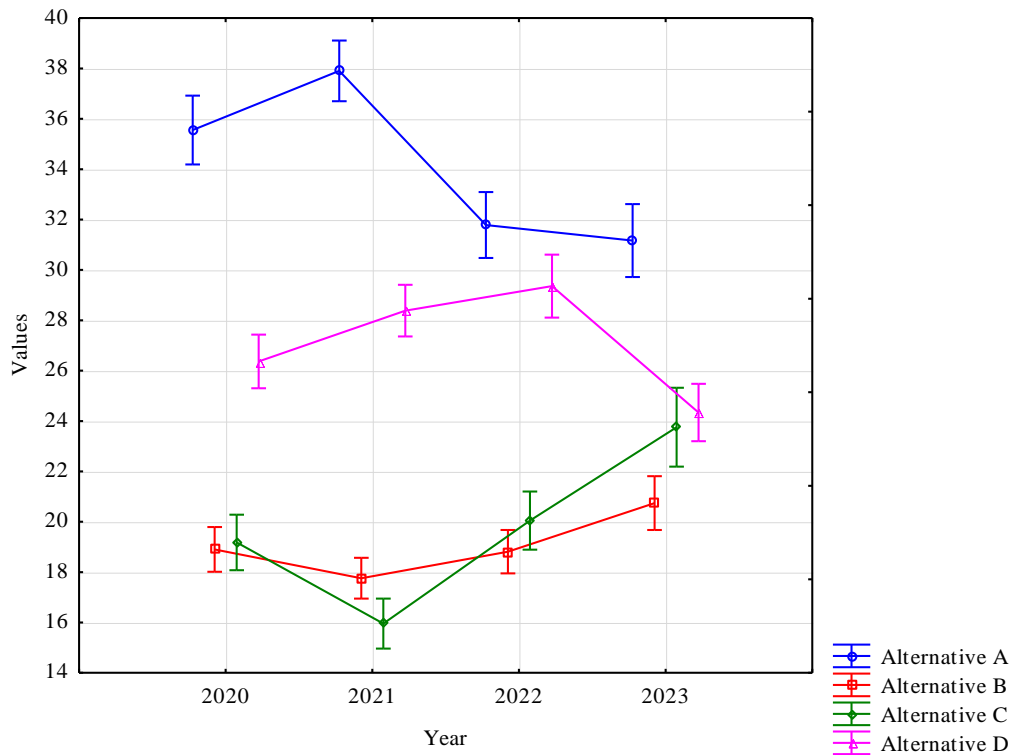


Figure 3. The development of the management of employees
Source: Own research

Following the results presented in Figure 3, it can be stated that alternative A consistently achieved the highest average rating each year. Despite the confirmation of statistically significant differences when comparing 2020 and 2023 (Table 4), the respondents still maintained the opinion that management of employees focused on teamwork, consensus, and participation.

Alternative D was the second most dominant alternative in the private sector in Slovakia at the beginning the period analyzed. Based on the methodology of Cameron and Quinn (1999) and the definition of alternative D, respondents perceived that the management style in the enterprises was characterized by security of employment, conformity, predictability, and stability in relationships. Similar to alternative A, alternative D experienced a decrease in importance in 2023 compared to the beginning of the crisis caused by the COVID-19 pandemic.

Further analyzing the results, it can be stated that the importance of alternative B and alternative C gradually increased from 2021. Respondents attached more importance to the management style characterized by individual risk taking, innovation, freedom, and uniqueness (alternative B), as well as to the management style characterized by hard-driving competitiveness, high demands, and achievement (alternative C).

Table 4. Statistical analysis in the area of management of employees

Indicator	Alternative A				Alternative B				Alternative C				Alternative D			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
2020		0.048	0.000	0.000		0.245	0.999	0.040		0.000	0.730	0.000		0.045	0.001	0.093
2021	0.048		0.000	0.000	0.245		0.313	0.000	0.000		0.000	0.000	0.045		0.586	0.000
2022	0.000	0.000		0.931	0.999	0.313		0.027	0.730	0.000		0.000	0.001	0.586		0.000
2023	0.000	0.000	0.931		0.040	0.000	0.027		0.000	0.000	0.000		0.093	0.000	0.000	

Source: Own research

Statistical analysis using the Tukey HSD test confirmed that there existed changes in the area of the management of employees in terms of time. The differences were observed in the perception of alternative A, alternative B, and alternative C when comparing 2023 and 2020. This indicates that respondents had different perceptions of these alternatives in 2023 compared to the beginning of the crisis caused by the COVID-19 pandemic. The results reached in the area of organization glue are presented in Figure 4. The results of the statistical analyses are presented in Table 5, with statistically significant differences being highlighted.

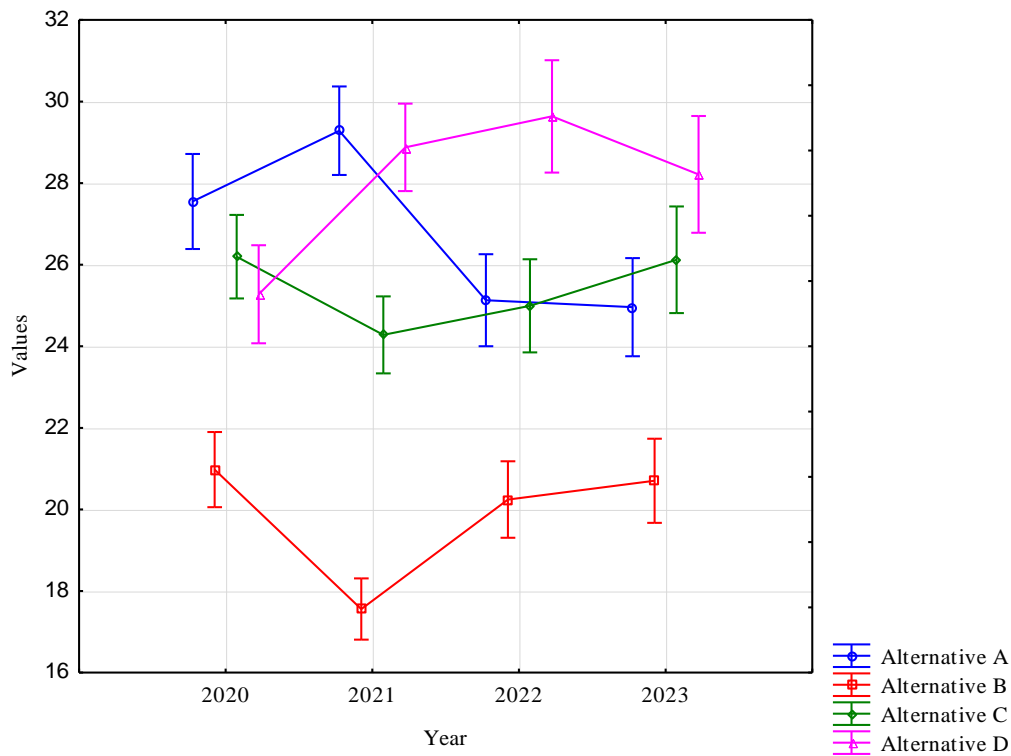


Figure 4. The development of the organization glue

Source: Own research

In the area of organization glue, respondents perceived that the glue that held the enterprises together was formal rules and policies. Maintaining smooth-running enterprises was important. Alternative D dominated in 2022 and 2023. The importance of alternative D gradually increased from 2020.

Based on the results obtained, it can be concluded that the importance of alternative C and alternative B has gradually increased. The factor that kept the enterprises united was their focus on achievement and goal

accomplishment (alternative C). Greater emphasis was given to the commitment to innovation and development (alternative B).

However, according to the results obtained, alternative A was given less importance. Loyalty and mutual trust (Alternative A) were not considered as important as formal rules and policies (alternative D).

Table 5. Statistical analysis in the area of organization glue

Indicator	Alternative A				Alternative B				Alternative C				Alternative D			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
2020		0.123	0.017	0.019		0.000	0.664	0.979		0.050	0.410	1.000		0.000	0.000	0.014
2021	0.123		0.000	0.000	0.000		0.000	0.000	0.050		0.772	0.102	0.000		0.813	0.893
2022	0.017	0.000		0.998	0.664	0.000		0.911	0.410	0.772		0.533	0.000	0.813		0.458
2023	0.019	0.000	0.998		0.979	0.000	0.911		1.000	0.102	0.533		0.014	0.893	0.458	

Source: Own research

According to the results obtained using the Tukey HSD test in the area of organization glue, it can be concluded that in 2023 there were statistically significant differences in perception of alternative A ($p=0.019$) and alternative D ($p=0.014$) compared to 2020. This indicates that respondents perceived alternatives differently in terms of time. The opinions of the respondents regarding the strategic emphases are presented in Figure 5. The results of additional statistical testing using the Tukey HSD test are presented in Table 6.

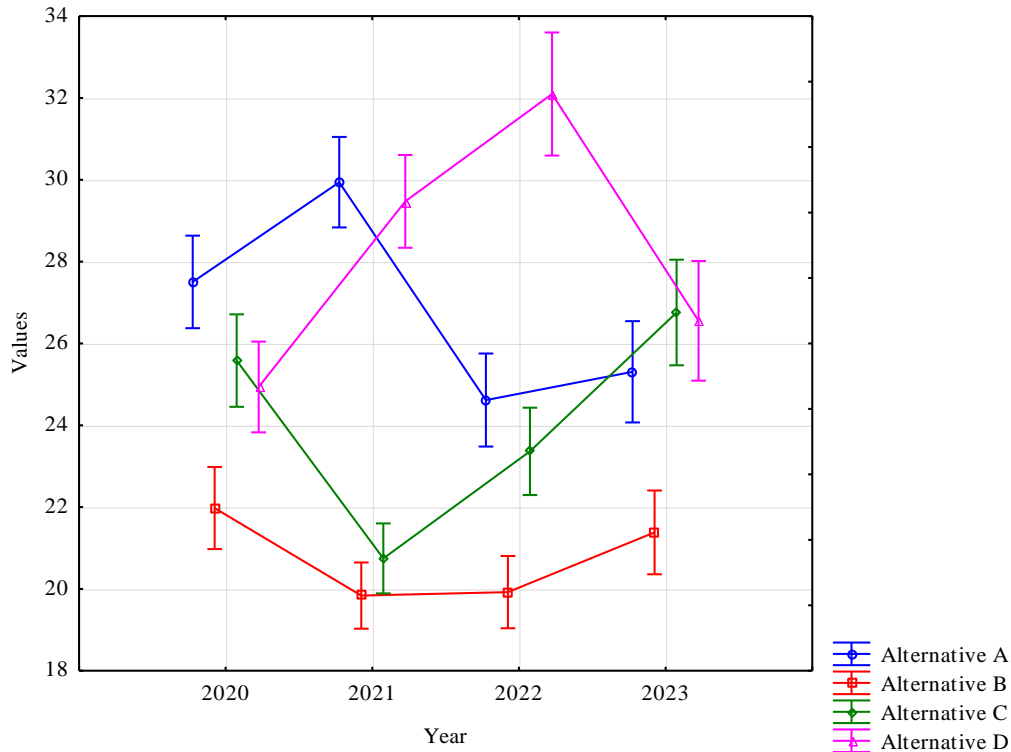


Figure 5. The development of the strategic emphases

Source: Own research

Alternative C achieved the highest rating in 2023. Its importance gradually increased from 2021. According to the respondents the enterprises emphasized competitive actions and achievement. Hitting stretch targets and winning in the marketplace were dominant.

Based on the research results, it is evident that alternative D received the highest rating in 2022. Enterprises placed emphasis on permanence and stability, prioritizing efficiency, control, and smooth operations.

A statistically significant difference was confirmed when comparing alternative A in 2021 and 2022, indicating a significant decrease. However, the research results also indicate an increase in the importance of alternative A when comparing 2022 and 2023. Further, it should be noted that alternative A did not reach the same high rating as at the beginning of the COVID-19 pandemic crisis in 2020.

Based on the research results, it can be concluded that the importance of human development, high trust, openness, and participation (alternative A) was not as high as that of competitive actions and achievement (alternative C)

Alternative B achieved the lowest overall rating. The enterprises did not emphasize acquiring new resources and creating new challenges.

Table 6. Statistical analysis in the area of strategic emphases

Indicator	Alternative A				Alternative B				Alternative C				Alternative D			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
2020		0.011	0.003	0.067		0.004	0.010	0.840		0.000	0.019	0.483		0.000	0.000	0.375
2021	0.011		0.000	0.000	0.004		0.999	0.109	0.000		0.002	0.000	0.000		0.016	0.013
2022	0.003	0.000		0.867	0.010	0.999		0.170	0.019	0.002		0.000	0.000	0.016		0.000
2023	0.067	0.000	0.867		0.840	0.109	0.170		0.483	0.000	0.000		0.375	0.013	0.000	

Source: Own research

According to the research results presented in Table 6, there were no statistically significant differences confirmed when comparing 2020 and 2023. This suggests that in 2023, respondents perceived the alternatives similarly to the beginning of the COVID-19 pandemic crisis.

The results obtained in the area of the criteria of success are presented in Figure 6. The results of the statistical analyses are presented in Table 7, with statistically significant differences being highlighted.

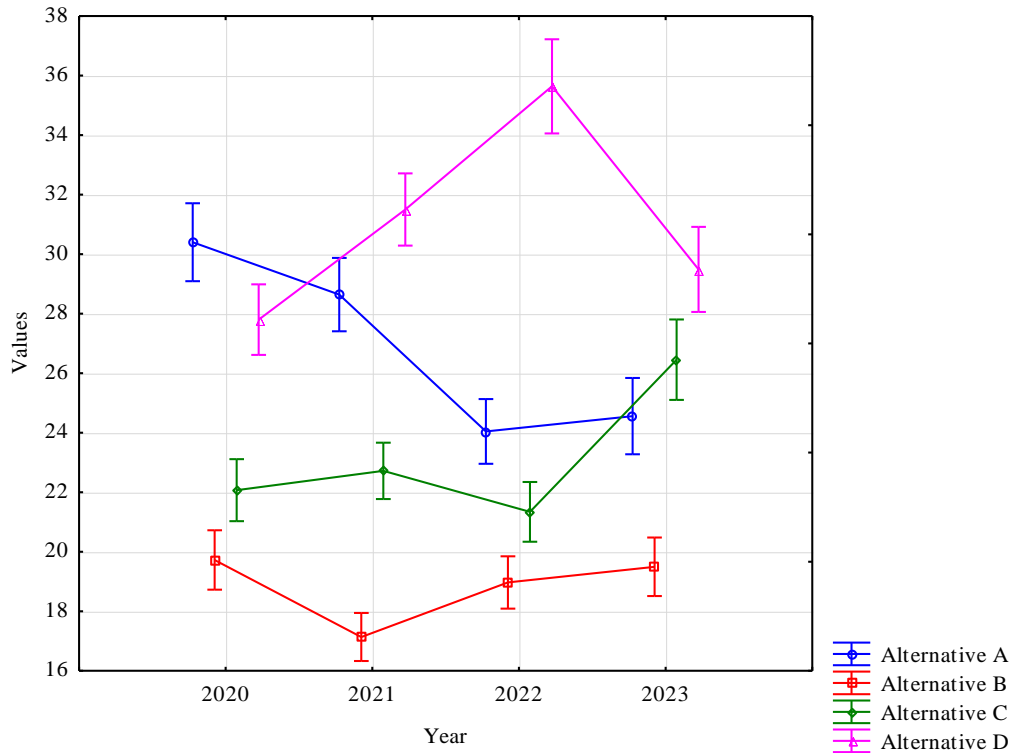


Figure 6. The development of the criteria of success
Source: Own research

In the area of criteria of success, alternative D was identified as the most significant alternative starting from 2021. According to the respondents, enterprises defined success based on efficiency, dependable delivery, smooth scheduling, and low-cost production, which were considered critical. Alternative C emerged as the second most dominant alternative in 2023. Based on the research results, it can be concluded that the importance of alternative C has increased since 2022. Enterprises defined success based on winning in the marketplace and outpacing the competition, with competitive market leadership being a key factor. However, the importance of alternative A has gradually decreased. Factors such as the development of human resources, teamwork, employee commitment, and concern for people were not considered as important as efficiency, dependable delivery, smooth scheduling, or low-cost production. Alternative B consistently received the lowest rating throughout the entire analyzed period. The enterprises assigned the lowest importance to success defined by having the most unique or newest products.

Table 7. Statistical analysis in the area of criteria of success

Indicator	Alternative A				Alternative B				Alternative C				Alternative D			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
2020		0.165	0.000	0.000		0.000	0.658	0.988		0.812	0.775	0.000		0.000	0.000	0.377
2021	0.165		0.000	0.000	0.000		0.017	0.003	0.812		0.231	0.000	0.000		0.000	0.192
2022	0.000	0.000		0.950	0.658	0.017		0.879	0.775	0.231		0.000	0.000	0.000		0.000
2023	0.000	0.000	0.950		0.988	0.003	0.879		0.000	0.000	0.000		0.377	0.192	0.000	

Source: Own research

Based on the analysis of the Tukey HSD test in the criteria of success, as presented in Table 7, it can be concluded that there were statistically significant differences in the perception of alternative A and alternative C. However, it

is important to note that the average rating of alternative A in 2023 did not reach the level observed at the beginning of the crisis.

Based on the achieved results, it can be concluded that assumption WH2, which assumes that changes in the perception of partila areas of corporate culture occur in terms of time, was confirmed by the Tukey HSD test at a significance level of 5%.

According to the methodology of Cameron and Quinn (1999), the type of corporate culture was analyzed in the final stage. The results obtained are presented in Figure 7. The results of the statistical analyses are presented in Table 8.

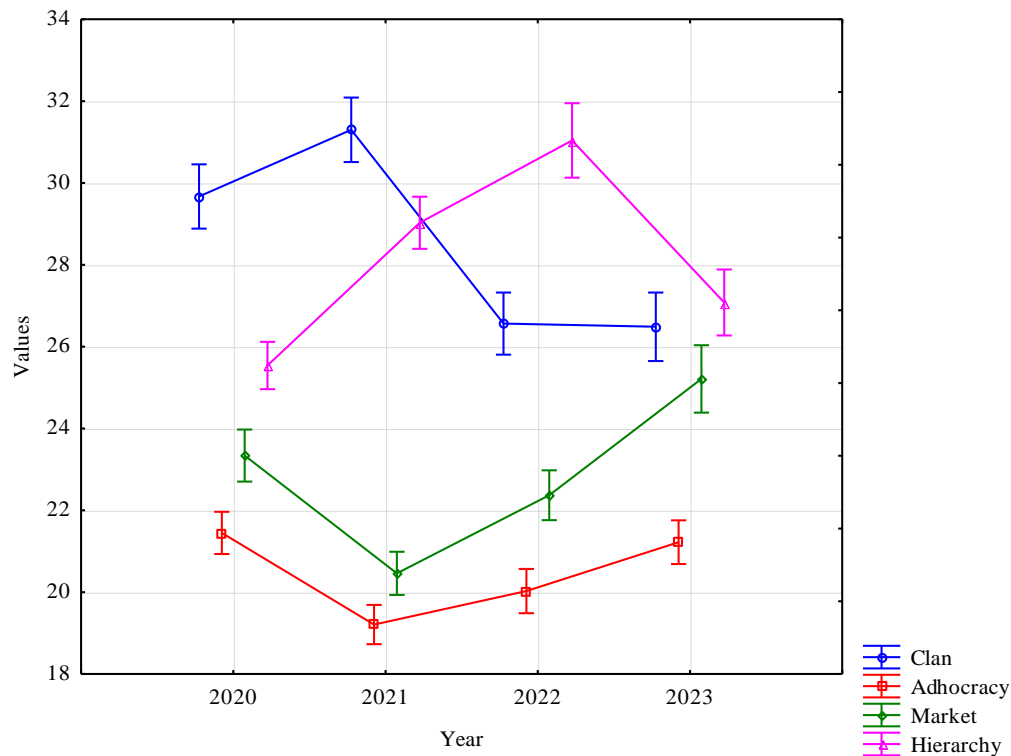


Figure 7. The development of the corporate culture
Source: Own research

Based on the results obtained, it can be concluded that there has been an increase in the importance of hierarchy corporate culture during the period from 2020 to 2022. Statistically significant differences were observed when comparing the entire period analyzed. Hierarchy corporate culture dominated in private sector in 2023. Based on the results obtained and the methodology of Cameron and Quinn (1999), it can be stated that effective leaders were characterized as good coordinators and organizers who prioritized maintaining the smooth functioning, stability, and efficiency of the organization. Success was defined by the reliability of deliveries, smooth fulfillment of schedules and low costs. Management of employees was primarily focused on ensuring employment security.

According to Figure 7, it can be observed that the importance of clan corporate culture gradually decreased over the period analyzed. In 2023, the average rating for clan corporate culture was lower compared to 2020. There was a decrease in emphasis on creating a friendly workplace where employees shared the same values. In

comparison to 2020, enterprises have shown a decreased emphasis on cementing loyalty and traditions. There was a decrease in devotion to the organization. Teamwork, participation, and consensus were not considered to be of primary importance in the organization.

As follows from the results, there was an increase in the importance of market and adhocracy corporate culture from 2021 to 2023. Competitiveness, and productivity dominated enterprises with market corporate culture. There was a higher emphasis placed on final results, market power, ambitious goals, and reliable clients. The enterprises were cemented by the orientation to the first place.

Throughout the entire analyzed period, adhocracy corporate culture received the lowest average rating. Enterprises with an adhocracy corporate culture were characterized by a highly dynamic, entrepreneurial, and creative environment. Employees were willing to take risks. There was a higher emphasis placed on the production of unique and original products, and services.

Table 8. Statistical analysis in the area of corporate culture

Indicator	Clan corporate culture				Adhocracy corporate culture				Market corporate culture				Hierarchy corporate culture			
	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023	2020	2021	2022	2023
2020		0.016	0.000	0.000		0.000	0.001	0.943		0.000	0.141	0.001		0.000	0.000	0.036
2021	0.016		0.000	0.000	0.000		0.097	0.000	0.000		0.000	0.000	0.000		0.000	0.002
2022	0.000	0.000		0.999	0.001	0.097		0.016	0.141	0.000		0.000	0.000	0.000		0.000
2023	0.000	0.000	0.999		0.943	0.000	0.016		0.001	0.000	0.000		0.036	0.002	0.000	

Source: Own research

The Tukey HSD test confirmed the existence of statistically significant differences in the perception of clan, market, and hierarchy corporate culture over time (Table 8). This suggests that respondents had different perceptions of these cultures in 2023 compared to the beginning of the crisis caused by the COVID-19 pandemic. Upon further analyses of the results, it can be concluded that clan corporate culture dominated in the private sector in 2020, whereas hierarchy corporate culture dominated in 2023.

The COVID-19 pandemic has affected social and economic life in all countries of the world. Measures taken by the governments of individual countries aimed at protecting the health of the population and slowing down the spread of the virus caused restrictions on the movement of the population, closure of establishments, restrictions on production, ban on international transport, etc. The COVID-19 pandemic quickly took on the dimensions of a global pandemic with a significant impact on the economic and financial spheres as well. For this reason, most of the previous research so far has focused primarily on examining its impact on the financial performance of enterprises. For example, Zheng et al. (2023) conducted research analyzing the impacts of the COVID-19 outbreak on the financial performance of 126 Chinese listed firms across 16 industries using quarterly data. Additionally, Sun and Li (2021) described the effects of the COVID-19 outbreak on the financial performance of Chinese listed firms, incorporating evidence related to corporate culture and corporate social responsibility.

Research that has been conducted abroad in the field of corporate culture has focused, for example, on investigating corporate culture during the COVID-19 lockdown in two different countries (Kazakhstan and Spain). This period presented a stressful social and work context that required entire working populations to telecommute from home (Díaz-Soloaga, Díaz-Soloaga, 2022). The research conducted by Zulfikar et al. (2021) in South Kalimantan, Indonesia, described the level of effectiveness of the contribution and ability of competitive advantage factors and corporate culture in improving the sustainable behavior of SMEs. Park et al. (2023) aimed

to investigate both management strategies and organizational culture, which may affect the performance of enterprises, and analyzed the influence of education and training investment.

Previous research that has been carried out in the area of corporate culture in Slovakia examined whether corporate culture has an impact on the work performance of employees through the mediators of leadership and work engagement (Michulek et al., 2023). Kosciárová et al. (2021) pointed out that leadership and motivation can be perceived as important aspects of the corporate culture in international enterprise.

Our research is motivated by the lack of existing research studies on the impact of COVID-19 on corporate culture in Slovakia. The research was carried out between 2020 and 2023. It was carried out on a sample of 3,803 respondents. The opinions of employees working in the private sector in Slovakia were examined. Based on the results achieved it can be concluded that the type of corporate culture that dominated at the beginning and after the crisis caused by the COVID-19 pandemic changed in terms of time. At the beginning of the pandemic, employees perceived that elements typical of clan corporate culture were being applied in the private sector (Übuis, Alas, 2009; Jones, Madey, 2014; Demski et al., 2016; Jaeger et al., 2017). Employees shared common views. They saw themselves as part of one big family that was active and engaged. The work environment resembled an extended family, where equal opportunities were created for every employee, while also promoting diversity in the workplace. Individuals' goals were aligned with corporate goals, based on their trust in the business. Leadership took the form of mentoring, with leaders playing the role of teachers, advisors, or parents. Loyalty and traditions were integral to the company's culture, and devotion to the company was high. Emphasis was placed on the long-term development of each individual. Great importance was attached to cohesion, morale, and the working environment. Success was understood in connection with the internal environment and the care of employees. Core values were rooted in teamwork, participation, communication, and consensus.

The research results also show that in 2023, a hierarchy corporate culture prevailed, characterized by the following features (Wallach, 1983; Cameron, Quinn, 1999; Heritage et al., 2014; Demski et al., 2016, Jaeger et al., 2017). Businesses were characterized by a formalized and structured work environment that emphasized procedures and regulations. Internal sustainability was emphasized, along with the need for stability and control. Regulations and order became the basic values of the company. Management was based on organized coordination and monitoring. Emphasis was placed on the efficiency of smooth operations, predictability, efficiency, and accuracy of management procedures. Values included consistency and uniformity. Top-down communication prevailed, and standardization was typical. The binding element was the formal rules. Effective leaders were good coordinators and organizers, for whom it was important to maintain the smooth running of the enterprise, its stability, and efficiency. Success was defined by the reliability of deliveries, the smooth fulfillment of schedules, and low costs. The management of employees primarily focused on ensuring job security.

Enterprises should create an appropriate corporate culture because, according to the research of Park et al. (2023), corporate culture can increase business performance. Additionally, according to Khan et al. (2023), it is a key aspect of sustainability. Foreign research confirms that despite the large negative impact of COVID-19 on the operations of enterprises, those with a strong corporate culture outperform those without (Li et al., 2021). Furthermore, Li et al. (2021) concluded that corporate culture is an intangible asset designed to meet unforeseen contingencies as they arise. Zulfikar et al. (2021) added that corporate culture has a substantial impact on the sustainable behavior of SMEs. Samad et al. (2018) stated that the better the company's performance, the more the corporate culture is shared by employees. Additionally, businesses that embrace and share a strong corporate culture encourage employee participation and adaptability, leading to greater employee commitment and motivation, which in turn leads to higher business performance. Moreover, if the values, norms, and patterns of behavior resulting from the corporate culture are shared to a high degree within the company, the corporate culture becomes strong and significantly impacts the company's functioning (Kotter, Heskett, 2011), success or

failure (Owoyemi, Ekwoaba 2014), competitiveness, social responsibility, innovation, and performance (Jafari et al., 2013, Kraśnicka et al., 2018).

Conclusions

The COVID-19 pandemic has gradually evolved into a global crisis. The Slovak Republic was not an exception and was also affected by the pandemic, with some areas of business being more heavily impacted than others. Measures such as the ban on international transport and the closing of borders, implemented by individual governments to protect public health and slow down the virus spread, resulted in a decrease in consumer demand, reduced production, increased unemployment, and the closure of some businesses. Other effects of the pandemic are being studied by various researchers. The aim of the research was to determine whether the perception of corporate culture was affected by the COVID-19 pandemic. It was achieved by identifying the type of corporate culture that dominated at the beginning and after the crisis caused by the COVID-19 pandemic. The research findings indicate that the pandemic has indeed influenced the perception of corporate culture in Slovakia. While teamwork, participation, and consensus were considered crucial in enterprises at the beginning of the pandemic, there is now an increased emphasis on procedures and regulations, where adherence to formal rules is important for businesses post-pandemic.

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Funding: This research was supported by VEGA 1/0161/21 “Dependence of the type of corporate culture on the industries of Slovak enterprises and selected socio-demographic factors“, KEGA 012UCM-4/2022 “Human Resources Management in a Digital World – A Bilingual (Slovak-English) Course Book with E-learning Modules based on Multimedia Content“, APVV-20-0004 “The effect of an increase in the anthropometric measurements of the Slovak population on the functional properties of furniture and the business processes“.

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