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ENTREPRENEURS' CONCERNS ABOUT THE CORONAVIRUS PANDEMIC AND ENTERPRISE'S SUSTAINABLE DEVELOPMENT*

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Abstract. The coronavirus pandemic, both in terms of its scale and impact on the economy and society, was a surprise to everyone and raised many concerns for entrepreneurs. Some of these concerns materialized while others did not, but still, these concerns impacted entrepreneurs' more conservative attitudes, seeking savings or limiting activities. This study aimed to answer whether entrepreneurs' concerns about the coronavirus pandemic and its impact on business have affected the sustainable development of enterprises – did it stop or limit the social and environmental activities of small and medium enterprises in Poland? To answer this question 177 interviews among owners and senior executives were conducted in September 2020, using the CATI method. The study results have shown that entrepreneurs' concerns about the pandemic did not negatively affect enterprises' sustainable development. Moreover, the study's results did not confirm a statistically significant correlation between the materialization of pandemic-related concerns and enterprises' sustainable development.

Keywords: sustainability; coronavirus; SMEs; concerns

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1. Introduction

The worldwide spread of the coronavirus designated COVID-19 that reached Poland in March 2020 has significantly affected the economies around the world. It has affected not only the personal lives of many people worldwide but also entire economies, industries and nations (UNIDO 2020). The coronavirus pandemic is one of humanity's most complex challenges since the last world war.

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However, both the short- and long-term effects of the pandemic do not only directly concern economic aspects, but due to the pace of development of the situation and the threat posed by the epidemic, the consequences are also social and environmental. After the pandemic caused by the COVID-19 outbreak, global issues such as poverty, hunger, social inequality, and environmental sustainability have worsened (Giannetti et al., 2023).

2. Literature review

2.1. Impact of the pandemic on the economy

Experts predict that in the economic sphere, the open, service-based economies that dominate the OECD will suffer more and longer due to the pandemic. According to the United Nations, between five and 25 million people worldwide lost their jobs in the first three months of the pandemic alone. Moreover, the pandemic's harmful effects have primarily affected or will affect vulnerable groups: youth, women, and low-wage workers Berchin and de Andrade Guerra, 2020).

The impact of the COVID-19 pandemic on businesses varies greatly. It depends on several factors, among which the most significant is the kind of industry in which a given business operates. Industries related to broadly understood new technologies or e-commerce experienced a renaissance during the pandemic's peak, while industries such as tourism, catering, and hotel businesses faced an arduous struggle.

For some industries, the pandemic's adverse economic effects are coupled with positive environmental effects, as happened with the transportation industry (Periokaite and Dobrovolskiene, 2021). In two years, the world has shifted from a debate about overtourism to a discussion on how to restart, for example, the global aircraft fleet. With movement and other restrictions in place – such as the obligation to show a negative COVID-19 test upon arrival in another country – tourism traffic died down, and consequently, transportation emissions have fallen. Notably, in the case of mobility, the long-term implications for sustainable development may also be linked to permanent changes associated with workplace digitization and other daily activities, which entails reduced mobility needs in the future (Kanda and Kivimaa, 2020).

The COVID-19 pandemic has affected the continuity of many industries and businesses and how we work with new technologies, which we now use much more as remote work has become a standard solution. Many organizations had begun to develop digital workplace strategies even before the pandemic. Still, its outbreak forced most to urgently implement new initiatives and actions, allowing them to accelerate digital workplace transformation. The rapid transition to remote work can present many challenges to employees and employers (Caligiuri et al., 2020; Stefan et al., 2020; Okunola and Fakunle, 2021). Given that some enterprises like Twitter already declared that they would allow their employees to work from home permanently if they so decide (Peng Jiang et al., 2021), we should prepare for these challenges appropriately.

2.2. Pandemic and sustainable development

"Sustainable development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs (World Commission on Environment and Development 1987, p. 41). It has been framed on the environmental ideology (Lélé, 1991; Balbinot and Borim-De-Souza, 2012), but it is a much broader concept and assumes sustainable development of the economy, society and environment. Concerning companies, researchers use corporate sustainability as an "outgrowth of earlier concerns expressed in CSR, sustainable development, and stakeholder theory" (Christofi, Christofi and Sisaye, 2012, p. 160).

Among many other effects, the pandemic may also impact changing priorities in the discourse on sustainable development. Currently, the world's attention is focused on environmental challenges. Still, we are also surrounded by many social challenges that, in the light of climate change or the problem of the availability of basic resources, have often been pushed to the background. The current situation shows that in times of public

health emergency, some goods and products are not sufficiently available (Sarkis et al., 2020). It also shows that even in developed economies, problems such as poverty and social inequalities, previously considered a problem of developing countries, are gaining importance.

The lack or limited availability of various types of products means that although both people and certain institutions currently have sufficient supplies of food and other products necessary for life, the needs of food banks are growing rapidly due to the increasingly difficult financial situation of many people (Sarkis et al., 2020). The difficult economic situation, bankruptcies of companies and growing unemployment may increase poverty and other social problems in individual countries and those where fundamental social issues such as poverty or hunger have long been solved. In the short term, the pandemic's positive effects can be indicated in the environmental dimension. Limited human activity, but above all, reduced industrial activity, limited mobility both by land and air, and the resulting more minor traffic jams in cities positively impact air quality. An apparent decrease in CO₂ emissions was observed during the first epidemic wave in the spring of 2020. At the end of April 2020, more than half of the global population (54%) was in some form of lockdown due to the pandemic, with significantly reduced mobility controlled by governments.

Mandatory household lockdowns, quarantines, and additional travel restrictions related to the epidemic have had a significant link to energy demand and greenhouse gas emissions (Sovacool, Del Rio and Griffiths, 2020). According to estimates, the downward trend related to the level of emissions may allow for significant decreases in CO₂ emissions compared to previous years (Jiang et al., 2021). The International Energy Agency (IEA) estimates that COVID-19 will decrease CO₂ emissions by 8% in 2020 compared to 2019, meaning that they will be at the level from 10 years ago. Lower emissions are linked to energy consumption. Its decline has caused the demand and prices of fossil fuels and electricity to fall dramatically. The biggest drop was in oil - 25% in April 2020.

Interestingly, the decline in demand was less affected by renewable energy, for which demand is expected to increase by 1% in 2020. As a result, the share of energy from renewable sources in the overall energy mix may increase over the next few years, above pre-pandemic expectations. The short-term impact is evident: an unprecedented decline in energy demand, especially oil, with a modest but significant fall in electricity demand and prices (Kuzemko et al., 2020).

It should be emphasized that these are short-term changes resulting from restrictions on mobility imposed by the governments of individual countries and may, but do not have to translate into permanent changes in social behaviour (Androniceanu et al., 2022). Maintaining positive environmental changes will depend on the return to the intensity of certain phenomena compared to the time before the pandemic (Berchin and de Andrade Guerra 2020). Therefore, in addition to the visible improvement in environmental indicators as a result of the restrictions introduced around the world, there are also concerns that the environmental consequences of the pandemic will be felt in the future, as the economic crisis results in reduced spending on environmental activities and investments. The IEA warns that the decline in 2020 could be followed by a massive increase in energy demand and related CO₂ emissions if the need for a low-carbon and carbon-free recovery is not emphasized in the development plans of individual economies. Climate-aware individuals and institutions see the current crisis as an opportunity and even an imperative for resilient, decarbonized and just structural change. According to many, including the UN secretary-general, the recovery from the pandemic crisis must lead to a different economy without attracting criticism (DeWit, Shaw, and Djalante, 2020).

2.3. Consequences of the pandemic for SMEs

Quarantine and the introduction of many restrictions to contain the COVID-19 pandemic have negatively affected all economies globally (Dečman et al., 2022). Notably, small and medium-sized enterprises (SMEs) were particularly affected by the pandemic and are the backbone of economies (Berchin and de Andrade Guerra, 2020; Chen et al., 2022).

SMEs have more limited resources, a vulnerable supply chain and relationships with contractors and customers and are much more exposed to pandemic risks than large companies (Levashenko and Koval, 2020). Companies are facing an unprecedented challenge. Their survival depends on the adoption of management strategies that will allow them to overcome the sharp decline in orders and cost pressures resulting not only from rents, wages and taxes, but also those related to the increase in raw material prices in an environment of a significant decline in suppliers (Wen, Wei and Wang, 2020).

According to Kaya's research, during the pandemic outbreak, SMEs' risk of insolvency increased by an average of 10% and by 21% throughout the pandemic (Kaya, 2022). That results in entrepreneurs' concerns about the future of their businesses but also in decisions on cost-cutting. Although financial performance during a coronavirus pandemic varies and depends on the industry in which the company operates, the results of many studies have confirmed the heavy blow of the pandemic on SMEs (Cepel et al., 2020; Dai et al., 2021; Yi et al., 2020; Androniceanu, 2020).

As SMEs still do not pay much attention to corporate sustainability (Artin 2022) or even are reluctant to that concept (Ernst et al., 2022), it seems reasonable that in the face of the negative impacts of the coronavirus pandemic – already existing or potential - the social and environmental activities may be the first to abandon. Instead of sustainable development, companies may decide to focus on financial performance only.

2.4. The gap in the existing body of knowledge

The coronavirus pandemic is an unprecedented phenomenon in this century and the second half of the previous century, resulting in larger business uncertainty for entrepreneurs (Rakshit et al., 2021) and a direct threat to the financial stability and survivability of enterprises, also in Europe (Androniceanu & Marton, 2021; Kaya, 2022). The pace of the pandemic's development, its global scope, and the consequences for entire economies and businesses caused great instability and uncertainty among entrepreneurs.

The above literature review confirms that some studies on the coronavirus pandemic and are' impact on SMEs, as well as the impact of the pandemic on sustainable development, has been carried out. However, to the best of our knowledge, there is no publication considering whether there is a correlation between entrepreneurs' concerns about the coronavirus pandemic and corporate sustainability. Therefore, essential questions that have not been answered so far are:

- Have entrepreneurs' concerns about the pandemic negatively affected enterprises' sustainable development?
- Has the materialization of pandemic concerns negatively affected the enterprises' sustainable development?
- Which dimension (social, environmental, economic) was the most negatively impacted by entrepreneurs' concerns about the pandemic?
- Which dimension (social, environmental, economic) was the most negatively impacted by the materialization of entrepreneurs' concerns about the pandemic?

3. Methodology

We assigned specific indicators to each dimension of sustainable development: social, environmental, and economical. We defined the indicators based on the aspects included in the GRI Standards, to ensure the completeness of analyzed measures (Table 1). The GRI standards were chosen as a reference point as these are the best-known and widely used sustainability reporting standards (Etzion and Ferraro, 2010). The standards consist of a set of indicators used by organizations for sustainability reporting to show an organization's sustainability performance and how they manage their impact on the economy, society and environment. GRI standards are constantly updated to reflect best the key areas of the organization's impact and areas of sustainable development.

Table 1. The applied GRI indicators in the economic, social, and environmental dimensions

Economic	Social	Environmental
<ul style="list-style-type: none"> Revenue (GRI 201, 2016) Sales (GRI 201, 2016) Operational expenses (GRI 201, 2016) Expenses (for: innovation, investment, marketing, IT; GRI 201, 2016) 	<ul style="list-style-type: none"> Employment (GRI 401, 2016) Salaries (GRI 202, 2016) Forced leaves (GRI 401, 2016) Payment terms for suppliers (GRI 204, 2016) Social and philanthropic spendings (GRI 413) 	<ul style="list-style-type: none"> Environmental investments (GRI 201, 2016) Resource consumption (electricity, water; GRI 302, 2016 GRI 303, 2018) Spendings on environmental activities (GRI 201, 2016)

Source: own elaboration

For each analyzed indicator, we defined a change that had to occur to conclude a negative or positive impact on a given indicator of concerns about the coronavirus pandemic or the materialization of these concerns (Table 2). We assumed that it was not the level of change that was important but its occurrence. If there was no change, we assumed the impact on the enterprise's sustainable development was neutral.

Table 2. Impact assessment indicators

Negative Impact	No Impact	Positive Impact
<ul style="list-style-type: none"> Revenue decrease Sales decrease Increased operating costs Expenses reduction (concerning: innovation, investment, marketing, IT) Employment decrease Reduction in salaries Introduction of forced leave Extension of payment terms for suppliers Reducing spending on social and philanthropic activities Halting environmental investments Failure to start planned environmental investments Increased resources consumption Reduction in spending on environmental activities 	<ul style="list-style-type: none"> Maintaining revenue levels Maintaining sales level Maintaining the level of operating expenses Maintaining the level of expenses (for: innovation, investment, marketing, IT) Maintaining the employment level Maintaining the level of salaries No forced leaves Maintaining payment terms for suppliers Maintaining the level of spending on social and philanthropic activities Ongoing environmental investments Launching planned environmental investments Maintaining the level of resource consumption Maintaining the level of spending on environmental activities 	<ul style="list-style-type: none"> Revenue growth Increase in sales Decrease in operating expenses Increased spending (on innovation, investment, marketing, IT) Increase in employment Increase in salaries Shortening suppliers' payment terms Increase in spending on social and philanthropic activities Decrease in resource consumption Increased spending on environmental activities

Source: own elaboration

To answer the research questions, we assumed the following.

In the case of the question: Have entrepreneurs' concerns about the pandemic negatively affected the enterprises' sustainable development?

- A negative impact on enterprises' sustainable development corresponds to a change in the indicator according to the "negative impact" column in Table 2, occurring in at least 51% of the indicators.
- An entrepreneur who had concerns was an entrepreneur who answered the question "to what extent did your concerns about the consequences of the pandemic's outbreak for your businesses' operation confirm?" differently than "I have no concerns."

In the case of the question: Has the materialization of pandemic concerns negatively affected the enterprise's sustainable development?

- A negative impact on an enterprise's sustainable development corresponds to a change in the indicator according to the "negative impact" column in Table 2, occurring in at least 51% of the indicators.
- An entrepreneur whose concerns materialized is one who, when asked, "to what extent did your concerns about the consequences of the pandemic's outbreak for your businesses' operation confirm?" answered "partially confirmed" or "fully confirmed."

In the case of the question: Which dimension (social, environmental, economic) was the most negatively impacted by entrepreneurs' concerns about the pandemic?

- The dimension with the highest negative impact was the dimension in which we observed the change for the highest percentage of indicators in the "negative impact" column in Table 2.
- An entrepreneur who had concerns was an entrepreneur who answered the question "to what extent did your concerns about the consequences of the pandemic's outbreak for your businesses' operation confirm?" differently than "I have no concerns."

In the case of the question: Which dimension (social, environmental, economic) was the most negatively impacted by the materialization of entrepreneurs' concerns about the pandemic?

- The dimension with the highest negative impact was the dimension in which we observed the change for the highest percentage of indicators in the "negative impact" column in Table 2.
- An entrepreneur whose concerns materialized is one who, when asked, "to what extent did your concerns about the consequences of the pandemic's outbreak for your businesses' operation confirm?" answered "partially confirmed" or "fully confirmed."

Research Method

The survey was conducted among small and medium-sized enterprises operating in Poland. We conducted the survey using computer-assisted telephone interviews (CATI) in September 2020 among owners or senior executives on the sample $n=177$.

4. Results

We conducted statistical analyses using the IBM SPSS Statistics 26 software to answer the research questions. In this way, we analyzed basic descriptive statistics with Kolmogorov-Smirnov tests, cross-tabulation analysis with Fisher's exact test, and the analysis of variance (ANOVA) for dependent samples. The significance level was $\alpha = 0.05$.

First, we removed from the dataset two extreme observations (greater than $Q3 + IQR \cdot 3$) in the scope of the dimension relating to negative environmental change, which could have negatively affected the results of the performed statistical tests.

In the first step of the analysis, we calculated the basic descriptive statistics with the Kolmogorov-Smirnov test, which examines the normality of the distribution for all quantitative variables, namely negative changes in the overall dimension, along with the economic, social, and environmental dimensions, understood as the percentage of indicators for which a negative change was observed (Table 3).

Table 3. Basic descriptive statistics of the studied variables with the Kolmogorov-Smirnov test for quantitative variables

	<i>M</i>	<i>Me</i>	<i>SD</i>	<i>Sk.</i>	<i>Kurt.</i>	<i>Min.</i>	<i>Max.</i>	<i>D</i>	<i>p</i>
Overall negative change (%)	24.34	23.53	19.55	0.87	0.46	0.00	88.24	0.14	<0.001
Negative change in the economic dimension (%)	37.59	42.86	27.54	0.27	-0.86	0.00	100.00	0.2	<0.001
Negative change in the social dimension (%)	18.74	20.00	23.08	1.29	1.28	0.00	100.00	0.27	<0.001
Negative change in the environmental dimension (%)	12.30	0.00	18.82	1.56	1.78	0.00	80.00	0.36	<0.001

Source: own elaboration

The result of the Kolmogorov-Smirnov test for all entered variables proved statistically significant, which means that the distributions of these variables deviated significantly from the normal distribution. However, the skewness of the distributions of all variables did not exceed the conventional absolute value of two, as postulated by George and Mallery (2010), which meant that the distributions were relatively symmetrical (George and Mallery 2010). Therefore, we decided to conduct the analysis based on parametric tests as long as their other assumptions were met.

Entrepreneurs' Concerns and Enterprises' Sustainable Development

In the next step, we checked whether entrepreneurs' concerns about the pandemic were associated with negative impacts on the enterprises' sustainable development for the overall economic, social, and environmental dimensions. Moreover, we performed cross-tabulations with Fisher's exact test to verify the correlation. Table 4 below shows the results.

Table 4. Correlation between entrepreneurs' concerns and the negative impact on enterprises' sustainable development in overall economic, social, and environmental dimensions

		Entrepreneurs' concerns						<i>p</i>	ϕ
		No		Yes		Total			
		<i>N</i>	%	<i>N</i>	%	<i>N</i>	%		
Overall negative change	No	13	86.7%	139	89.1%	152	88.9%	0.675	-0.02
	Yes	2	13.3%	17	10.9%	19	11.1%		
Negative change in the economic dimension	No	13	86.7%	105	67.7%	118	69.4%	0.154	0.12
	Yes	2	13.3%	50	32.3%	52	30.6%		
Negative change in the social dimension	No	15	100.0%	138	88.5%	153	89.5%	0.373	0.11
	Yes	0	0.0%	18	11.5%	18	10.5%		
Negative change in the environmental dimension	No	14	93.3%	146	93.6%	160	93.6%	1.00	0.00
	Yes	1	6.7%	10	6.4%	11	6.4%		

Note: as the occurrence of a negative impact, we considered a situation in which the change was assessed negatively for the minimum of 51% of indicators.

Source: own elaboration

The responses revealed that most entrepreneurs had pandemic-related concerns about its impact on all the analyzed dimensions. At the same time, the analysis showed no statistically significant correlations between the occurrence of entrepreneurs' concerns and negative changes in the overall economic, social, and environmental dimensions.

Materialization of Concerns and Enterprises' Sustainable Development

In the next step, we examined whether the materialization of pandemic concerns was associated with negative impacts on enterprises' sustainable development for the overall economic, social, and environmental dimensions. For this purpose, we performed cross-tabulations with Fisher's exact test (Table 5).

Table 5. The correlation between the materialization of concerns and the perception of negative impact in terms of the overall economic, social, and environmental dimensions

		Materialization of concerns						<i>p</i>	ϕ
		No		Yes		Total			
		<i>N</i>	%	<i>N</i>	%	<i>N</i>	%		
Overall negative change	No	35	94.6%	117	87.3%	152	88.9%	0.373	0.10
	Yes	2	5.4%	17	12.7%	19	11.1%		
Negative change in the economic dimension	No	34	91.9%	84	63.2%	118	69.4%	0.001	0.26
	Yes	3	8.1%	49	36.8%	52	30.6%		
Negative change in the social dimension	No	35	94.6%	118	88.1%	153	89.5%	0.368	0.09
	Yes	2	5.4%	16	11.9%	18	10.5%		
Negative change in the environmental dimension	No	36	97.3%	124	92.5%	160	93.6%	0.460	0.08
	Yes	1	2.7%	10	7.5%	11	6.4%		

Note: as the occurrence of a negative impact, we considered a situation in which the change was assessed negatively for a minimum of 51% of indicators.

Source: own elaboration

The analysis showed a statistically significant correlation only between the materialization of entrepreneurs' concerns and the perception of an adverse change in the economic dimension ($p = 0,001$; $\phi = 0,26$). In the group of entrepreneurs whose concerns materialized, 36.8% of respondents experienced a negative change in economic terms. In contrast, in the group of entrepreneurs whose concerns did not materialize, only 8.1% of respondents experienced a change in the economic dimension. For the remaining variables, the correlations were statistically insignificant, meaning that entrepreneurs felt negative changes similarly, regardless of the materialization of their concerns.

Entrepreneurs' Concerns and Negative Changes in the Economic, Social, and Environmental Dimensions

In this analysis, we compared three dimensions of negative change – the economic, social, and environmental dimensions – in a group of entrepreneurs concerned about the pandemic. For this purpose, we performed a one-factor analysis of variance with repeated measures, in which the within-subject factor was the type of change (economic, social, and environmental). We performed the analysis of variance in a univariate model. Table 6 below shows descriptive statistics for individual measurements.

Table 6. Descriptive statistics for negative change in economic, social, and environmental dimensions and the ANOVA results for the tested within-subject effect

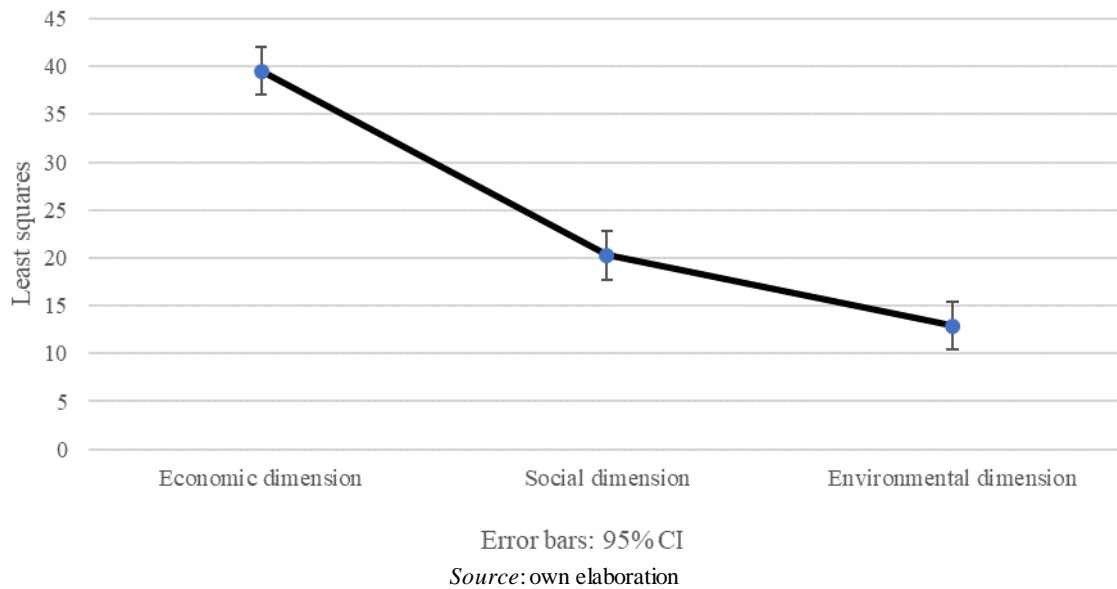
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>F</i> (2.308)	<i>p</i>	η_p^2
Negative change in the economic dimension (%)	155	39.54	26.69	99.64	< 0.001	0.39
Negative change in the social dimension (%)	155	20.26	23.57			
Negative change in the environmental dimension (%)	155	12.90	18.76			

Source: own elaboration

The analysis showed that the tested within-subject main effect was statistically significant. This means that the perception of a negative change differed according to the change type. The dimension for which we observed the highest percentage of negatively-rated indicators was the economic dimension ($M = 39.54$; $SD = 26.69$). To verify between which averages the differences were statistically significant, we conducted a paired (post-hoc) least significant difference (LSD) test comparison. The LSD test showed that the mean score for the economic dimension was higher than for the social dimension ($p < 0.001$) and higher than for the environmental dimension ($p < 0,001$).

Moreover, the score for the social dimension was higher than that for the environmental dimension ($p < 0.001$). The analysis results are further illustrated in Figure 1. Moreover, 39% of the variation in perceived change that was not explained by other factors could be explained by the change type. The observed effect could be considered strong.

Figure 1. Mean values with 95% confidence intervals for each dimension of change (economic, social, and environmental) in the group of entrepreneurs who had concerns about the pandemic



Materialization of Concerns and Negative Changes for Economic, Social, and Environmental Dimensions

In the final analysis, we compared the three dimensions of negative change (economic, social, and environmental) in the group of entrepreneurs whose concerns materialized. For this purpose, we performed a one-factor analysis of variance with repeated measures in a univariate model (Table 7).

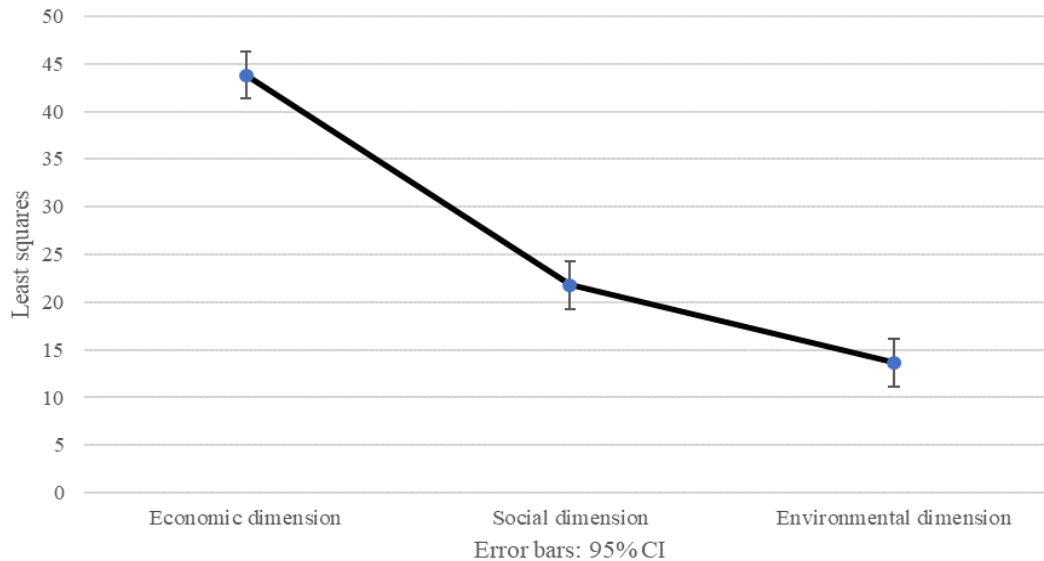
Table 7. Descriptive statistics for negative change in economic, social, and environmental dimensions and ANOVA results for the tested within-subject effect

	<i>N</i>	<i>M</i>	<i>SD</i>	<i>F</i> (2.264)	<i>p</i>	η_p^2
Negative change in the economic dimension (%)	133	43.82	25.62	116.05	<0.001	0.47
Negative change in the social dimension (%)	133	21.80	23.54			
Negative change in the environmental dimension (%)	133	13.68	19.29			

Source: own elaboration

The analysis showed that the tested within-subject main effect was statistically significant. We observed the highest percentage of indicators rated negatively in the case of the economic dimension ($M = 43.82$; $SD = 25.62$). A post-hoc LSD test showed that the average score for the economic dimension was higher than for the social dimension ($p < 0.001$) and higher than for the environmental dimension ($p < 0.001$). Furthermore, the social dimension score was higher than the environmental dimension ($p < 0.001$; Figure 2). Moreover, 47% of the variation in perceived change that was not explained by other factors could be explained by the change type. The observed effect could be considered strong.

Figure 2. Mean values with 95% confidence intervals for each dimension of change (economic, social, and environmental) in the group of entrepreneurs whose concerns materialized



Source: own elaboration

Discussion

Despite many pandemic-related concerns and a certain level of uncertainty about the pandemic's consequences, we should emphasize that crises such as war, famine, or pandemics change public and private institutions and can have a long-lasting impact on the crisis-affected societies, and not just a negative one. The financial crisis of 2007–2008 is a case in point, as it resulted in regulatory, technological, and cultural changes that emerged as a response to the gaps and problems that the crisis highlighted. In some dimensions, the current pandemic is also an opportunity to accelerate sustainable development transformation, especially in production and supply chain management (Sarkis et al., 2020).

Regardless of the industry, the pandemic accelerated digital transformation in all sectors. Moreover, in the short term, the pandemic made it more difficult to seek environmental sustainability development by some enterprises due to the financial risks that emerged and threatened enterprises' survival. This limited managers' willingness and ability to respond to environmental challenges, which, while providing short-term savings and liquidity, may have negative long-term consequences. According to Wellalage et al. (2022), enterprises' environmental activities positively impact performance even during a crisis such as a coronavirus pandemic because they lower business risk and increase access to financing (Wellalage et al., 2022). This is another reason why decisions to maintain environmental activities despite concerns and uncertainties among enterprises can be an essential factor in building long-term stability and competitive advantage.

The COVID-19 outbreak also highlighted the structural fragility of current societies and the urgent need for actions to review production and consumption patterns that are causing enormous environmental impacts on the ecosystems on which human depends (Ranjbari et al., 2021).

Conclusion

The study fills the identified gap in the existing body of knowledge, answering the questions on the correlation between entrepreneurs' concerns about the coronavirus pandemic and corporate sustainability.

Based on the results, we conclude that entrepreneurs' concerns about the pandemic did not negatively affect enterprises' sustainable development. Moreover, the study's results did not confirm a statistically significant correlation between the materialization of pandemic-related concerns and enterprises' sustainable development. Entrepreneurs experienced negative changes to a similar degree, regardless of the perceived concerns and their materialization. This may mean that concerns did not translate into entrepreneurs taking precautionary measures to prepare the enterprise to limit the pandemic's potential negative effects. Still, on the other hand, they did not translate into activity-reducing measures that could ultimately negatively impact enterprises' sustainable development.

In the case of entrepreneurs who had concerns and those whose concerns materialized, the analysis showed that the perception of negative change varied according to the change type. The dimension for which we observed the highest percentage of negatively-rated indicators was the economic dimension. In the social and environmental dimensions, the percentage of respondents whose concerns materialized was higher (88.1% and 92.5%, respectively) than the percentage of respondents in the economic dimension whose concerns materialized (63.25%). This may mean that entrepreneurs were much more concerned about severe consequences and negative changes for the economic dimension, which did not materialize, than about the social and environmental dimensions, in the case of which concerns materialized significantly.

A significant negative change in the economic area, with a smaller percentage of negatively-rated indicators in the social and environmental dimensions, may mean that active measures were not taken in these areas. As a result, even the materialization of concerns did not impact reducing them. However, a negative impact in the economic dimension may be reflected in the future and has a deferred effect. This means that the negative economic impact will translate into reduced spending only after a certain period, along with impacting activities in the environmental and social dimensions.

Regarding that, it can be concluded that it is recommended that managers not resign from social or environmental activities, which can bring long-term value, in light of the short-term crisis and concerns about financial performance. That approach can make the company more resilient if the deferred impact does not occur and will not limit the enterprise's chance for sustainable development while allowing for the potential reduction of such activities in the future if the financial situation requires that.

Limitations

We conducted the study before the second wave of the coronavirus pandemic in Poland, which was a time when several protective mechanisms for entrepreneurs were in place (the so-called Anti-Crisis Shield). To verify the relationship between entrepreneurs' concerns, their materialization, and enterprises' sustainability development, future research should repeat our study after the pandemic ends or after all state support measures cease. Moreover, as we mentioned, the negative impact on the environmental and social dimensions may be experienced later due to unfavourable changes in the economic dimension, which makes for yet another reason to repeat our study later.

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