



















Poland. However, it is still unknown – there are not yet any studies result in this regard – how effective the support tools prepared and implemented by the Polish government turned out to be. Maybe it was the support provided to the enterprises that made it possible for them to maintain the financial liquidity. The financial result decreased in eight out of the sixteen sectors, whereas revenues dropped in six of them. It is in these two areas that the deterioration of the financial standing is the most noticeable. Profitability is an area that significantly differentiates the individual sectors. In eight of them, the situation improved, namely in: B (mining and extraction), C (industrial processing), D (production and supply of electric power, gas, steam, hot water and air for air-conditioning systems), E (water supply; waste and waste water management, and land reclamation activities), G (wholesale and retail trade; motor vehicle repair, including motorcycles), J (information and

telecommunication), M (professional, scientific and technical activity), Q (healthcare and social welfare). In four other sectors the profitability remained at a similar level as in the previous periods, namely in: F (construction industry), H (transport and warehousing), N (administrative and supporting services), P (education). Based on the scores assigned to the analysed areas of financial security (1, 0, or -1), at the next stage of the study a mean value for each sector was computed, which made it possible to draw up a matrix of sectors (Figure 1).

The segmentation of sectors based on changes in financial indicators was inspired by the work of Gourinchas [32], where quite similar sectors segmentation is employed. However, those studies regarded bankruptcy rate in the context of COVID-19. Based on chosen indicators values, the sectors were divided into three groups: mildly affected, moderately affected, highly affected [32].

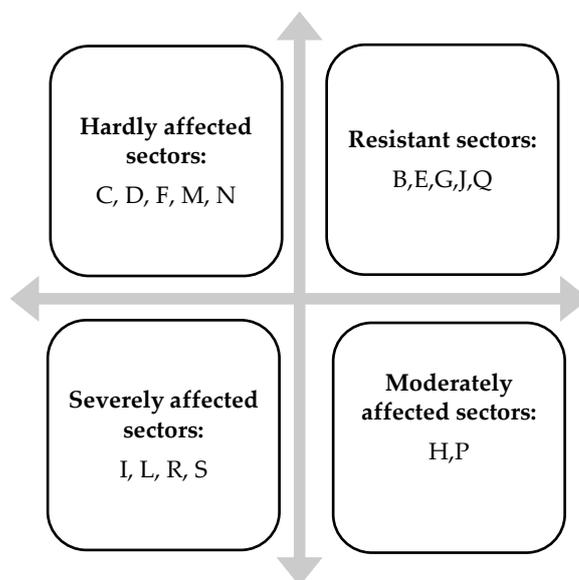


Fig.1: Matrix of responses of particular sectors of small enterprises to immediate effects of the Covid-19 pandemic.

Source: own work.

In our studies to be qualified as a resistant sector, it was necessary to obtain a mean score from 0.5 to 1 in the four analysed areas of financial security. Resistant sectors were: B (mining and extraction), E (water supply; waste and waste water management, and land reclamation activities), G (wholesale and retail trade; motor vehicle repair, including motorcycles), J (information and telecommunication), Q (healthcare and social welfare). The hardly affected sectors were the ones where the mean fell within the range of  $<0;0,5$ ) and they included: C (industrial processing), D

(production and supply of electric power, gas, steam, hot water and air for air-conditioning systems), F (construction industry), M (professional, scientific and technical activity), N (administrative and supporting services). The moderately affected sectors were the ones where the mean fell within the range of  $(-0,5; 0)$ , i.e.: H (transport and warehousing) and P (education). The sectors that were the most severely affected during the first phase of the pandemic were: sector I (accommodation and catering services), L (real property services), R (activities related to culture,

entertainment and recreation), S (other service activities).

#### 4 Discussion

The evolution of the pandemic has been the object of many research [56][57][58]. The number of publications regarding the impact of the Covid-19 pandemic on various aspects of enterprises functioning has been on the rise. Due to the short time since the beginning of the pandemic, most of the studies were based on fragmentary data with a quite limited scope. So far it was possible to look at the pandemic from a perspective of several months. Also, in this article the authors concentrated on a short term and decided to diagnose changes in the basic indicators of financial security of small enterprises, applying a sectoral approach. The influence of crisis on SMEs financial performance from the point of view of organizational resilience was studied by Pal et al [30]. Although in that paper one sector was taken into consideration, the importance of major conclusion that companies can “*develop their resilience potential by tuning their strategic assets and capabilities*” [30] can be adopted on all sectors. Crises can be seen as well as a chance, which is proved in educational sector [59]. Research showed that the educational sector can quite easily adopted to online reality [59], hence it is more that probable that also in other sectors the lockdown forced a shift towards inclusion of innovation.

In times of a crisis such as the Covid-19 epidemic, dependence of the whole SME sector on bank financing and inability to use in short-run other sources of finance may transform the temporary liquidity shortage into an insolvency problem [32]. Moreover, as other studies indicate, in comparison to larger firms’ small enterprises are more likely to report liquidity or cash flow problems due to COVID-19 consequently the longer the crisis persists, the more likely it is that decreased liquidity will lead to insolvency and firm exit [16]. Therefore, the issue of financial liquidity of enterprises appears to be of key importance. The results of the studies described in this article have shown that in the first phase of the pandemic the Polish small enterprises maintained secure levels of financial liquidity. The reason for the good level of liquidity may be the result of the governmental support. In Poland, similarly as in other countries, enterprises had the opportunity to use the support extended by the government [55][60][61], which certainly could be reflected in the results. The results of the surveys held among Japanese entrepreneurs [14] - who were

also seriously affected by immediate effects of the pandemic - have shown the need for the government support measures to keep balance between the epidemiological and economic goals (particularly in terms of long-term economic goals). Męcina [60] also underlines the need for long-term thinking in the context of the support measures taken by the government, indicating that they should take an at least 2-year perspective.

This research study pertains to the first period of the pandemic, but it is the first months that are of key importance for survival, which was confirmed by the studies completed by McKinsey Company [62] in August 2020, involving 2200 enterprises based in Germany, France, Great Britain, Italy and Spain. More than a half of the surveyed respondents already in the first phase of the pandemic thought that their enterprises might not survive more than 12 months, despite the fact that 20% of them had received subsidies from the government (and further 30% of them declared they were seeking such assistance). Individual governments have been providing various forms of support for SMEs, which to a large extent depends on the local market conditions. 70% of the surveyed companies declared that their revenues had dropped as a result of the pandemic. Among the industrial sectors, by far the most bankruptcies were anticipated by the logistics sector (22%), followed by agriculture, hotel and catering enterprises, retail and wholesale, though to a much smaller extent (13–15%) [62]. Another study indicated that most SMEs faced by an external shock were more willing to limit any negative cash flows or declare bankruptcy rather than to increase its debt-to-equity ratio [63], especially as the cost of credit and loans contracted during the crisis was much higher [64]. On the other hand, small companies may succeed in response to the COVID-19 pandemic since this group of entities have already showed great resilience [11]. Basically, it is quite sure that small companies cannot rely only on themselves, but they are dependent on governmental support, creditors policy and general macroeconomic environment.

The short-term approach, though biased in view of limited access to data, in the case of this pandemic seems to be rational. The Covid-19 crisis is more severe than any other crisis in history and its negative effects for the economy occurred immediately. 5 weeks after the onset of the crisis in the USA, the weekly number of lost jobs was higher than after several quarters in the case of other crises [65]. The study conducted in the USA in March 2020 and involving 5,800 small enterprises has shown that they extensively suffered immediate

effects of the pandemic. 43% of the surveyed companies had to be temporarily closed due to the Covid-19 pandemic. According to the respondents, the reason for the closing was a decreased demand and health problems of their employees [18]. What is more, negative moods among entrepreneurs in the USA did not improve despite the fact the governmental support was provided (CARES Act) [12]. The companies reported that they had reduced employment on average by 40%. The results of the research study completed in this paper seem to be consistent with the studies based on a sectoral approach, conducted in the USA. According to the results of the American studies, the most severely affected sectors were retail trade, arts and culture, personal services, catering and hotel services, where the reduction in employment exceeded 50%. Smaller disturbances were found in the financial sector, professional services and real estate agencies [18]. Hence, our finding consistent with the results of American economy can be useful in building sectoral approach in organizational resilience. The volatility, uncertainty, complexity and ambiguity of economic surrounding is paradoxical one certain thing [31] and as such build the challenges for firms. The studies carried out by the International Monetary Fund (IMF) in several countries and published in August 2020 focused on SMEs bankruptcies caused by the Covid-19 pandemic. The number of business failures across all countries was estimated to have doubled (an increase from 9.4% to 18.2%) [32]. That study also applied the sectoral approach. The research results have shown that the bankruptcy indicators vary significantly, depending on the sector, and the most severely affected sectors were the customer-oriented ones (accommodation, catering, arts, entertainment, recreation, education). This is consistent with the research results presented in this paper as well as in the studies completed by OECD [66]. In the study covering the G7 economies it was shown that in the case of the service-related sectors the mobility constraints and social distancing had a clearly negative impact on any activities involving travel, including tourism and direct contacts between customers and service providers, i.a. hair styling salons. Also, the study described in this article has qualified the “other service activities” sector as one of the severely affected sectors, i.e., one where the financial security level deteriorated due to the pandemic. Hence, it is not surprising that the lockdown hit the most all kind services that could not be transferred to digital world. Base on that the digital transformation although creates opportunities [38], cannot be taken for granted as an organizational resilience tool, since

it lacks the universal character. In case of sectors where personal contact is requisite the proper financial buffer seems to gain on importance as a factor of organizational resilience. Which is even more important in case of small companies suffering often financial constraints.

Summing up, the presented research results are coherent with the results of the hitherto published studies on the impacts of the Covid-19 pandemic on the financial standing of enterprise. Nevertheless, it seems that the levels of liquidity ratios reported by the assessed enterprises were better than expected based on the literature [6][16][48]. However, there are no studies that would make it possible to find out unequivocally whether the high liquidity level was due to subsidies provided by the government to the enterprises during the lockdown or whether that was the effect of cash resources accumulated in the previous periods. Anyway, the tools and measure to the liquidity improvement are not very sophisticated and basically demands the cash. Much more difficult is sales and financial results improvement. The drop in revenues and profitability ratios was not severe in most sectors, although according to the research studies results, the pandemic led to a systematic decrease in sales profitability ratios [54]. Nevertheless, deterioration of the financial standing was manifested by the drop in financial results, which was reported in eight sectors.

## 5 Conclusion

The considerations and research results presented herein make it possible to evaluate how the immediate effects of the Covid-19 pandemic were reflected in the financial security indicators of small enterprises in Poland in the first half of 2020. The study is actual, based on the newly published data, and focus not on whole group of small enterprises but the sectoral approach was employed. The study included only selected measures that made it possible to assess the response of enterprises to the first phase of the pandemic, which was the conscious assumption. The research results enable a positive verification of the hypothesis, showing the lower resilience in sectors where personal contact is required and there are no online-service possibilities. In these sectors the financial buffer is relevant in terms of economic resilience. Mostly the presented research results are coherent with the results of the hitherto published studies on the impacts of the Covid-19 pandemic on the financial standing of enterprise [11][18][32]. However the authors unlike cited other research focused on whole group of small companies hence the results are not

general but focused on resilience of small companies. Due to the still ongoing pandemic and multidimensionality of the described issues it is not yet possible to provide both unambiguous and complex evaluation. Most of the studies quoted in this paper are of a similar, fragmentary nature [18][12][13]. Nevertheless, the novelty of our research is not only sector approach but as well the orientation on chosen group of entities (small enterprises) and the application of the chosen indicators, which in the authors' opinion are the most appropriated for short-term effect. Without any doubts the pandemic situation is unprecedented and hardly comparable to previous crises studies. Hence it was essential to check the small enterprises financial reaction on it. The focus on four main financial areas: liquidity, sales, revenues and profit allow to assess the early reaction on pandemic

The research results presented in this paper have shown a considerable sectoral diversity of responses to the first lockdown. Hence, the authors recommend government and not-government support should apply different measures to each sector. The financial result as well profitability levels are the indicators that have deteriorated in the greatest number of sectors, what implies support in this area. Financial liquidity, however, turned out to be the most stable indicator. Information about deterioration of indicators in particular sectors may be helpful in targeting governmental financial support. Until now, government aid has been directed generally to enterprises without detailed distinction, but it would be worthwhile to target specific goals, including restructuring. Therefore, the analysis of immediate effects is needed as well in order to cope with the longer-term challenges. As Juergensen et al. indicated, policy interventions should be sensitive to the different types of SMEs, rather than adopting a one-size-fits-all approach [13], hence knowing the sectoral problems and needs is a key issue.

Our research is not free from limitations that we acknowledge. The research was highly dependent on access to data, as we were interested to find out whether some downturn symptoms were visible as early as in the first months of the pandemic. The authors' intention is to continue the research in a longer perspective. A two- or three-year perspective would make it possible to provide a multidimensional evaluation of not only the financial security, but also issues connected with enterprises profitability. Our findings can have implications in further, deeper studies on immunity and vulnerability of small enterprises to the COVID-19 crisis.

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### Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)

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