The COVID-crisis and Serbia's SMEs: Assessment of Impact and Outline of Future Scenarios

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Summary

This study focuses on the impact that the COVID crisis has had so far on Serbia's MSME sector. The goal is twofold: to throw light on the needs of MSMEs as a distinct and very important segment of the economy, as well as to develop a useful segmentation, grouping them by sector and size, to encourage the development of the targeted policies they need to thrive. This is important because MSMEs play an outsize role in Serbia's economy. As elsewhere, they are key to the generation of employment as well as having become an important generator of innovation and ICT and other new technology jobs. However, in Serbia they also account for the bulk of the domestically owned economy, they are an important generator of manufacturing know-how, skills, and jobs, and they are highly integrated in the regional as well as international economy.

The severe lockdown[1] imposed in March-April dealt a strong blow to MSMEs, especially those in what we call the "lockdown sectors"—whose operation was administratively blocked (mainly HORECA, entertainment, passenger transportation and personal services). Based on a representative survey of MSMEs conducted in early May, we estimate that during the lockdown MSMEs suffered a 18-44% average shortfall in revenues relative to expectations, the greater the shortfall the smaller the size category. This is consistent with what official statistics estimates was an 11% drop in GVA for the business sector over the course of the entire second quarter of the year (Q2) relative to a year earlier, considering that the expectations included a growth momentum, and that there was a strong rebound after the lockdown in the second half of the quarter.

Operation under COVID circumstances has involved learning -- both on the side of businesses and policy-makers. A second wave of the epidemic jumpstarted by pre-electoral policies late in June, was put under control without recurrence to extreme measures. Already during the lockdown the majority of companies were able to re-organize work to secure social distance and work from home. Obstacles in the transport of goods, especially internationally, were also gradually alleviated. However, the main obstacle during the lockdown remained shortened work-hours due to the curfew – and this was only partly alleviated by the issuance of special permits. Also, the range of lockdown-created obstacles was particularly blocking to the operation of micro-enterprises. For example, many micro-construction companies were not able to work on home refurbishments; micro-companies were less likely to obtain permits for movement during curfew hours and they are more likely to be blocked by a critical employee's absence-- if, for example, he/she is older than 65, or not able to secure transport to work. These factors were all absent or much more lightly present during the second wave.

Overall, MSMEs have shown striking resilience so far. Only 1% of interviewed companies, including those in the lockdown sectors, felt they would need some debt forgiveness to ensure sustainability if business returned to normal after the lockdown. Except for hotels and rent-a-car companies, there were virtually

[1] The pandemic control measures involved a state of emergency with curfews that severely limited citizen movement and a partial lockdown of the economy ("lockdown", in further text). Hotels, restaurants and catering (HORECA), public and intercity transport, shopping malls, entertainment and gambling and personal services such as hairdressers and gyms were under full lockdown (the "lockdown sectors"). Cultural institutions, schools and pre-school childcare were also closed, but fall outside the scope of this study as they are overwhelmingly public institutions.

no cuts in formal employment during the lockdown. In fact, nearly a fifth of surveyed businesses expected to increase employment in June if normalization of business activities continued, and according to the labor statistics they did. Formal employment increased throughout May-July although informal employment did decline. This resilience seems to be based on an MSME habit of maintaining reserves and diversified business portfolios, even when they are small. Two thirds of the 75% of companies for whom the lockdown brought about increased financial difficulties, were able to draw on personal or family reserves to weather the crisis. This factor deserves to be further studied.

A key lesson of the second wave of the epidemic, however, has been that a full rebound/normalization of activity would not be sustainable. The growth momentum evidenced at the start of the year may continue to support some sectors. The growth of most manufacturing, construction, and parts of smart services (ICT and some of the more sophisticated professional services) has been driven by the government's investment in infrastructure and what seems to be a rather resilient export demand. By end-July cumulative output of most industrial sectors had nearly caught up with 2019 levels and monthly exports have overtaken the levels of the summer months in 2019 (although not yet made up for the shortfalls incurred during Q2). We see no indication of a difference in how these have affected large and MSME businesses.

However, the activity of companies in most lockdown sectors will have to be carefully managed to protect the nation's health, and are likely to remain subdued for the duration of the pandemic. The fluctuations in their activity as well as of those dependent on them for business—such as the production of food and beverages, or creative and urban services related to tourism—will remain a drag on the economy, and particularly MSMEs. According to our estimates, the activity of the lockdown sectors is likely to remain between 19% and 30% lower in Q4 2020 compared to a year earlier, as well as drag down the income of the overall economy by 1.3-2.6% in 2021. The outcome depends on how much more difficult it proves to control the epidemic during the winter months, and how well the lessons imparted by the first two waves have been learned. We also assume that policies will not allow massive bankruptcies and layoffs in the relevant sectors.

We argue that the government's assistance packages have been less helpful to short-term liquidity or even employment retention –two of the goals they aimed for—but have been critical to the medium-term sustainability of the most affected businesses, and also for the continued development and adaptation of those whose survival may not be under threat but have nevertheless been impaired. These are overwhelmingly MSME sectors whose reserves are currently being drawn down. However, this assistance has come at an unnecessarily high cost. Broad and untargeted policies will undermine the government's capacity to provide the sustained and effective support these business segments will need throughout the length of the crisis. Our illustrative simulations suggest that under the pessimistic health scenario, administratively implementable targeting would allow the rescue of as many as three times more businesses, while still helping others in some reasonable proportion to their needs. Such assistance would cost close to Eur 1 billion over 5 quarters (to end 2021), 0.5 billion less than if the current untargeted package were to be maintained. Alternatively, if only the most affected sectors were targeted, the package would cost Eur 260 million over 5 quarters.

I Introduction

This report presents an assessment of the impact of the COVID-crisis on Serbia's MSME sector distinguished by business segment, with the key goal of bringing to the attention of policymakers the needs of MSME segments. In addition to a rather detailed account of the impact of the lockdown, it offers an indicative analysis of the factors likely to affect the performance and needs of MSMEs in the short- to medium-term, the impact of government policies thus far, and the range of possible effects of the government's management of health policies on the most affected MSMEs and the economy through 2021. Particular attention is paid to MSME business segmentation, by (sub)sector and size.

Not all MSME segments are "equal". **An understanding of the MSME sector and a distinction between business segments is necessary to facilitate the prioritization of policy action.** It has become clear that the effect of the pandemic is going to be protracted, and that the risks of further fallouts are still high. As the consequences of the blow that the pandemic has dealt the national and international economy continue to unfold, business' and citizens' needs for help will grow. However, the resources available to meet them will shrink. The maintenance of the costly nearly completely horizontal and undifferentiated distribution of assistance adopted in the two packages of government policy measures implemented so far is not sustainable. Instead, the Government will need to target its actions to produce the biggest impact on the economy within a narrower envelope of resources.

In the current crisis-environment it becomes even more important to diversify the government's development policies--currently almost solely focused on the attraction of FDI—towards actively supporting the development of existing domestic business. As few domestic enterprises are large, this means focusing on support to MSMEs, and especially as they play an outsize role in Serbia's economy. As elsewhere, they play a key role in the generation of employment and particularly in the case of vulnerable populations and have become an important generator of innovation and ICT and other new technology jobs. However, in Serbia they are also an important generator of manufacturing know-how and skills, as they have picked up and preserved a portion of Serbia's socialist legacy, much of which has otherwise have become lost. Hence, they account for 57% of total business sector production and contribute about 33% of the total value of the country's merchandise exports; the latter proportion is likely substantially higher in the case of services.

The research is based on a representative survey of Serbia's enterprises focusing on the March-April lockdown, supported by the World Bank, complemented with information from a survey of sole-proprietorships (SPPs) supported by the Serbia Inclusion and Poverty Reduction Unit of the Government of Serbia and the Swiss Development Corporation.[2] The Enterprise Survey covered MSME 994 units without cutoffs for size, 547 SPPs, as well as 88 large enterprises. It was conducted from end April to end May (27.04.2020-26.05.2020). It segments the enterprise sector into twelve sectors grouped by expected similarities in the effect of the lockdown, as well as by size.

[2] For an integrated report of the two surveys, see *Uticaj COVID-19 krize na zaposlenost: fokus na ranjive kategorije*, CEVES, supported by SIPRU, forthcoming (October 15, 2020). In this report, the SPP survey is referenced only when its findings are explicitly needed to complement – resolve a dilemma presented by—the enterprise survey. The findings of the two surveys are very closely aligned.

The research also incorporates information collected based on semi-structured interviews of 38 company representatives and other key informants, whereby another 17 interviews were conducted to assess the effects of the second wave of the epidemic. The data from the Survey have also been complemented with, and assessed in the light of, data on the economic turnout available for at end-August, mostly covering the second quarter of 2020 and some covering July.

This research prepares the ground for the necessary future monitoring and short-term projections of Serbia's real sector developments with a focus on the MSME sector. However, assessing more exactly the extent of the interdependence between Serbia's sector-size business segments, as well as the scope for policy action supporting MSME growth and resilience and the economy's diversification, both requires and merits further research.

II Serbia's Real Sector Structure by Sector and Company Size

Serbia's economy has relatively few large – mostly public or foreign owned – enterprises, whereas the vast majority of the landscape is characterized by micro, small and medium enterprises, mostly held by domestic capital. Sector-wise, Serbia's MSMEs dominate services and mid-technology good manufacturing – such as production of a broad array of metal products – construction, trade, personal and accommodation services. Serbia's MSMEs tend to be somewhat less export-oriented than the large companies.

MSMEs play an outsize role in Serbia's economy. With relatively few exceptions (mainly in agri-business), the bulk of Serbia's domestically owned private economy's production as well as employment is by MSMEs. Clearly, this is always true in terms of number of businesses (Table 1), but in Serbia MSMEs, including sole proprietorships, account for two thirds of formal business sector employment (Table 2) and 59% of GVA (Table 3). We are not able to exactly distinguish output by business ownership but there are very few large companies controlled by domestic capital. Serbia's SMEs are also unusually highly integrated in the international economy, accounting for one third of manufacturing exports and likely at least as much in the case of exports of services[3]. A sizeable share of these exports is likely to be to the CEFTA region, but probably less than one half. Nevertheless, relatively few MSMEs are core suppliers to global value chains, be it directly or through local FDIs.

The share of MSMEs in the economy would be even larger where it not for a small number of very large companies by Serbia's standards (a handful, among a total of 540, Table 1). These are primarily the publicly owned electric utility, and a few foreign owned companies such as the HBIS steel mill, the FAC automobile assembly plant, and the NIS oil extraction and refining company. Most of the other large companies are FDI, but it is interesting that even FDI is often in the form of SMEs.

[3] The share of MSMEs in exports is likely to be somewhat overstated because it is not possible to distinguish between true MSMEs and early/investment phases of large companies created through FDI.

Table 1 -- Number of businesses by incorporation and size, as of 2018

	Number of businesses		
	SPP	SME	Large
	absolute number		
Total economy	**272.969**	**102.873**	**540**
Business sectors	**272.969**	**102.873**	**540**
Industry, total	41.515	19.375	274
Manufacturing	40.620	17.293	232
Food	7.946	3.264	46
Mid-tech MSME>50%[1]	8.885	4.299	38
Rubber, plastics, electrical equipment & appliances	2.091	1.560	28
Other, MSME>50%[2]	14.091	5.135	35
Other, MSME<50%[3]	7.607	3.035	85
Construction	19.844	8.335	35
ICT	12.292	5.342	19
Professional services	43.579	18.187	62
Trade&transport[4]	95.140	40.121	124
Lockdown sectors[5]	47.524	6.524	17
ow HORECA[6]	24.432	4.851	4
Other sectors[7]	**13.074**	**4.989**	**9**

Source: SORS, CEVES estimates

1: Manufacture of metal products, computes, machinery, other vehicles, repair of machinery
2: Manufacture of leather, wood products, paper, printing, other non-metallic minerals, furniture, other manufacturing
3: Manufacture of motor vehicles, beverages, tobacco, textiles, clothing, coke and petrol derivatives, chemicals, pharmaceuticals, base metals
4: Wholesale and retail trade, transport & logistics
5: HORECA and tourist agencies, personal and other services
6: Accommodation, food and beverage catering, tourist agencies
7: Sectors not included in the structural business statistics – government/public services, financial services, and agriculture.

The sector breakdown in our analysis aims to group businesses by shared characteristics, both in the effect of/response to the COVID-19 crisis and comparative advantage and other factors likely to affect their performance. We are particularly interested in industries in which MSMEs play a more important role.[4] Overall, MSME exports are particularly present in the industries in which Serbia exhibits a comparative advantage more broadly, so the criterion of size and comparative advantage were not often in conflict.

[4] The business sector is comprised of enterprises as well as sole proprietorships (SPP)s and likely individuals working outside the agriculture sector. Public utilities are included in this table in the portion of industry outside manufacturing. The presence of public corporations in manufacturing is negligible, with the exception of chemicals (petrochemicals) and metals (military complex). Public entities are not covered by the survey described in the next chapter. Manufacturing companies in mineral processing, such as basic metals, were in principle covered by the survey, but their key very large representatives were not surveyed (for example the HBIS steel mill, or the Bor mines or NIS). Hence, by-and-large the survey is representative of MSME businesses in manufacturing excluding the last component, Table 1 footnote 3. The MSME survey also did not cover personal services, as it is overwhelmingly comprised of SPPs. Their behavior is described in Chapter V, based on the SPP survey.

As can be expected, the largest number of MSMEs (Table 1) and their highest contribution to employment (Table 2), is in the traditional service sectors—with commerce and transport sectors accounting for a little more than a third of all businesses and a little less than third of business employment. Of particular interest in the COVID environment are what in this paper we will call the "lockdown" traditional service sectors –those that involve personal contact or the gathering of larger number of people, and that were hence particularly affected by the anti-epidemic measures. These are extensively discussed later in this document. In the survey we also treat several components of commerce and transport separately.

The ICT and professional services sectors are heterogeneous sectors accounting for a surprisingly large share of GVA (each approximately 5%), and within which MSMEs play a particularly large role. In the case of ICT the latter is not so obvious --MSMEs holding a 46% share of the total industry—but it should be taken into account that among the only 19 large companies in this industry three are very large telecommunications companies and a few are sizeable call centers. However, two thirds of employment are generated by MSMEs. ICT exports have been growing very fast in recent years and anecdotal evidence as well as the enterprise survey suggests this is both by large and MSME including very small companies. Unfortunately, data on the activity of its subsectors or composition of exports are not readily available. Professional services are entirely provided by MSMEs[5], with as much as one third of their output being exported.

[5] Total sector production is based on SNA accounts, while MSME production is based on SBS statistics which allocate sector outputs by registration of company, not necessarily by true area of activity. As 100% of business in the professional services sector are MSMEs, the 104.7% share of MSMEs indicate that a about 5% of these businesses' production belongs to other sectors.

Table 2 -- Formal employment by sector and business type/size, as of 2018[6]

	Formal employent				Share in total economy
	Total	SPP	SME	Large	Sector employment
	absolute number				in percent
Total economy	**2.131.079**	**...**	**...**	**...**	**100,0**
Business sectors	**1.395.746**	**271.721**	**645.395**	**478.630**	**65,5**
Industry, total	521.715	71.030	207.510	243.175	24,5
Manufacturing	429.887	67.699	180.421	181.767	20,2
Food	87.718	26.280	36.519	24.919	4,1
Mid-tech MSME>50%[1]	77.925	9.149	43.417	25.359	3,7
Rubber, plastics, electrical equipment & appliances	51.435	3.650	19.300	28.485	2,4
Other, MSME>50%[2]	82.529	16.894	44.829	20.806	3,9
Other, MSME<50%[3]	130.280	11.726	36.356	82.198	6,1
Construction	85.448	13.579	55.774	16.095	4,0
ICT	52.454	3.778	31.559	17.117	2,5
Professional services	165.214	23.578	85.900	55.736	7,8
Trade&transport[4]	421.157	93.916	200.677	126.564	19,8
Lockdown sectors[5]	101.136	52.886	36.780	11.470	4,7
ow HORECA[6]	67.936	36.834	28.672	2.430	3,2
Other sectors[7]	**783.955**	**12.954**	**27.195**	**8.473**	**36,8**

Source: SORS, CEVES estimates

The share of manufacturing in Serbia's GDP has been growing in recent years, and although much of it has been by companies built through FDI, MSMEs still contribute about a half of manufacturing GVA and a third of its exports (Table 3). We distinguish five groups of manufacturing industries. Clearly, agri-business is a specific industry, especially for Serbia where food production alone contributes 3% of Serbia's GVA. This doubles if beverages and tobacco are added. MSMEs contribute one half of the GVA in food, and as much as 59% of its exports (Table 3).[7] However, beverages and tobacco are largely produced by large companies. We also consider separately the production of rubber and plastics and of electrical equipment and appliances, a combination of sectors showing particularly strong competitiveness – fast and sustained export growth by both large and SME companies. As the entry of foreign companies in these sectors has been marked, MSMEs contribute less than a half its GVA, but they still hold their ground with fast export growth, contributing one fifth of exports. Very strong export growth is exhibited also by two groups of industries in which MSMEs contribute well over a half of GVA. Medium-technology industries connected to metals and machinery exports account for a significant share of total exports, and MSMEs account for nearly two thirds of that. Finally, the group of industries in which large companies account for more than 50% of GVA—mainly chemicals, basic metals, motor vehicles, petroleum processing – employs only a tenth of the business sector formal workforce and exhibits relatively slow export growth.

[6] For sector definitions see footnotes under Table 1.

[7] MSMEs also contribute a surprisingly high 90% of the value of Serbia's agricultural good exports (not shown in the table), with the value of total exports of the agri-food sector comprising a whole 13% of exports and over 10% of GVA.

Table 3 – GVA and export structure by sector and business size, as of 2018[8]

	Total economy			SPP + SMEs	
	Share in total economy			Share in sector total	
	GVA	Export	Exports/ sector revenues	GVA	Export
			in percent		
Total economy	**100,0**	**100,0**	**...**	**...**	**...**
Business sectors	**74,2**	**94,1**	**20,0**	**59,1**	**29,1**
Industry, total	24,3	71,8	43,0	37,4	33,1
Manufacturing	17,5	71,0	52,5	45,2	32,6
Food	3,1	7,4	24,9	52,5	58,4
Mid-tech MSME>50%[1]	3,5	10,5	52,9	68,1	47,8
Rubber, plastics, electrical equipment & appliances	2,0	12,7	79,7	36,9	22,6
Other, MSME>50%[2]	2,9	8,9	45,3	70,9	47,8
Other, MSME<50%[3]	6,0	31,4	62,8	22,9	21,1
Construction	5,4	1,4	4,5	82,0	...
ICT	5,8	5,4	28,3	46,8	...
Professional services	16,0	6,8	27,8	80,2	...
Trade&transport[4]	18,5	5,8	2,9	67,7	...
Lockdown sectors[5]	4,3	7,2	52,9	82,1	...
ow HORECA[6]	1,9	6,2	77,9	94,4	...
Other sectors[7]	**25,8**	**5,9**	**...**	**...**	**...**

Source: SORS, CEVES estimates

Outside of manufacturing, we also analyze separately construction, which contributes about 5% to Serbia's GVA and employment, four fifths of it by MSMEs.

Serbia's MSMEs tend to be highly diversified in their individual product portfolios, so the statistical allocation among the industries, based on "predominant" product in the portfolio, is a very rough indicator. Even the small cluster of MSMEs serving the automotive industry tend to supply relatively small series of specific parts and to produce for completely different industries as well. For instance, this may include combining metal tools with plastic parts or construction with metal profiles or wood parts. They also often trade in everything, which is an issue that merits further study, but it at least in part seems to be the consequence of a risk-reduction strategy that in this situation might serve them well.

The sector breakdown shown in Tables 1-3 incorporates from the survey presented in the subsequent chapters. The initial segmentation (stratification) used in the survey had the manufacturing sector segmented only into food, computer equipment and electronics, and "other manufacturing". For the purposes of the analysis, the latter two were integrated. Transport included passenger transport and travel agencies, and trade was broken down into several categories as shown below.

[8] See sector classification in the footnotes to table 1

III The lockdown—immediate impact and adjustments

The lockdown imposed on March 15 to put under control the first wave of the virus outbreak significantly affected the operational capacity of nearly all companies, and only a quarter of them suffered no shortfall in revenues. It took a few weeks for most companies to adapt to the new circumstances of operation. After that, most of the revenue shortfall was due to demand factors, except in the case of the "lockdown sectors" whose operation was legally blocked. Outside the "lockdown sectors", the main supply-side limitation remained the shortened work-hours allowed under the curfew. The organization of transport of goods, employees and inputs was also an obstacle, especially in international trade. Medium size companies were generally less affected then either smaller or larger ones, probably because of the ability to combine organizational and product flexibility with greater access to resources. Micro companies were most affected, partly because they tend to be more present in the "lockdown sectors". However, it is also the case that in a micro-business, a single individual whose mobility and availability is affected represents a much larger share of the workforce than was typically affected in larger companies. Sector-wise, food retail and agri-business (food, beverages, and tobacco) seem to have been least affected, whereas the lockdown sectors—catering and accommodation, travel and logistics and personal services suffered a very sharp blow.

The lockdown

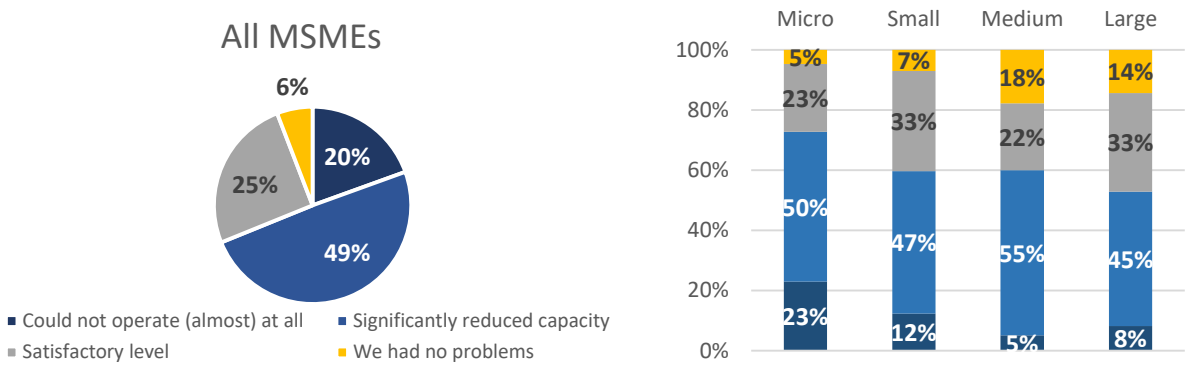
On March 6th, Serbia reported its first Covid-19 infection and by March 15 a partial lockdown was imposed with a state of emergency. Together with border closures and other measures affecting personal lives (which will not be described here), all schools, universities, and kindergartens were also closed. It was a specificity of Serbia's lockdown that a curfew was imposed, initially from 8 pm to 5 am (on March 17), soon after extended to stretch from 5 pm to 5 am and, from end-March, to last entire weekends. Companies could obtain permits for employee movement during curfew hours with extended curfew hours during the Easter holidays. All intercity bus and train lines were suspended as of noon 20 March, and soon after all public transport was prohibited. All businesses in shopping centers were prohibited except for grocer's shops and chemist's. In the case of sectors that involve social contact or proximity—accommodation and catering, personal services, (such as hairdresser salons and gyms), car washes, playrooms as well as gambling parlors—were all ordered to close. The operation of catering facilities was permitted on a take-out basis only.

Towards the end of April, public transportation between towns was reestablished. Also, all the closed-space markets, beauty and cosmetic salons, fitness centers and gyms were allowed to re-open in sequence. On May 6, the state of emergency was lifted.

The immediate operational and revenue impact

There is little doubt that both Serbia's MSMEs and large companies were strongly affected by the lockdown. Nearly a quarter of microenterprises and 5-12% of those employing more than 10 people were essentially unable to operate. Additionally, around a half of enterprises in each size category operated at a significantly reduced capacity (Figure 1).

Figure 1 -- Impact on enterprise operational capacity

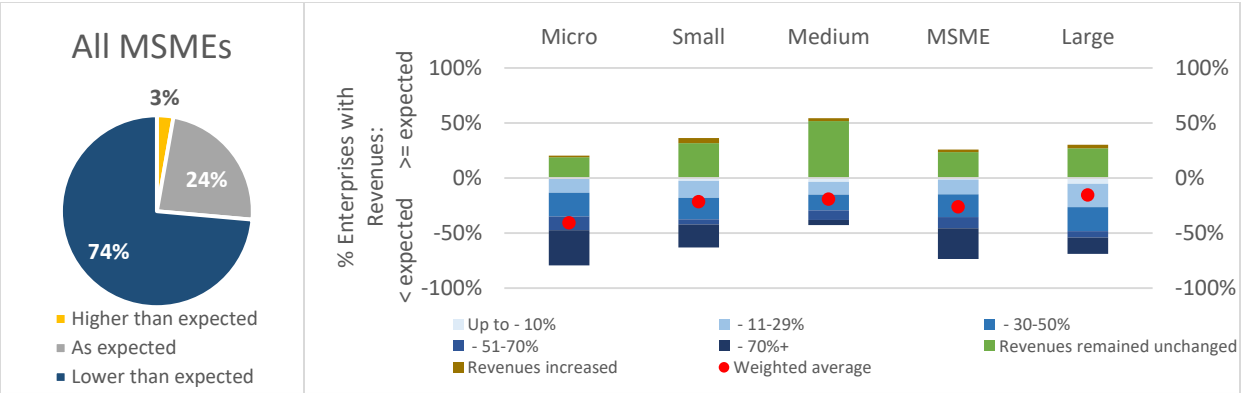


How would you characterize your company's production or service process during the crisis and state of emergency?

Source: Survey with Serbian enterprises

Looking at the loss of revenues (Figure 2), three quarters of enterprises had a revenue shortfall relative to expectations before the crisis, and about half of those report losing more than 50%. Only ¼ of all enterprises managed to earn revenues in line with, and 3% earned more than, pre-crisis expectations. The impact was generally inversely proportional to enterprise size; smaller enterprises, and especially micro enterprises, were substantially more heavily affected, with greater revenue shortfall. As many as 73% of micro-enterprises were not able to operate, or operated at significantly reduced capacity, while for small and medium-sized ones this share is 60%, and further somewhat smaller for large ones.

Figure 2 -- Revenue shortfall: aggregate and % of enterprises by shortfall range -- by enterprise size



How did the crisis affect your product sales in March-May compared to what you expected at the beginning of the year?

Source: Survey with Serbian enterprises

As the impact was inversely proportional to enterprise size, **the rough assessment of the impact on the aggregate revenues of the surveyed population is substantially smaller than an enterprise count suggests**. It is, however, still significant—a shortfall of 26% for total MSMEs and only 16% for large companies relative to expectations (red dots on Figure 2, right axis). [9] The average loss of revenues weighted by enterprise revenue size was still largest for micro enterprises (41%), declining for the larger companies to as little as 16%. In the right panel of Figure 2,each bar presents the distribution of enterprises by revenue shortfall for each size class. The shares of enterprises suffering a shortfall are shown in blue below the x axis, and those that did not suffer a decline (green) or even enjoyed a windfall (yellow) are shown above. The red dots represent the average decline in revenues (weighted by revenue size) for each industry. The overall shortfall (not shown) is 25%, only slightly smaller than that for MSMEs, as the surveyed population/sectors do not include the sectors involving the largest companies in Serbia-- utilities and the extractive industries.[10]

All sectors had enterprises that run into operational difficulties that blocked them, or prevented them from meeting potential demand, but they were by far heaviest in the sectors under full lockdown (HORECA, tourism, and passenger transportation)[11]. However, only one third of the enterprises that were fully or nearly inactive were in lockdown sectors, and some enterprises in all the other sectors (except food production and retail) were also completely, or nearly completely, blocked. Moreover, somewhat more than a half of MSMEs, regardless of size, operated at a significantly reduced level.

The concept and extent of "reduced capacity" must be interpreted with care here. Enterprises in the service sector, those under full lockdown, as well as trade, ICT, and professional services all have greater shares of companies that considered their capacity to have been significantly affected than those in manufacturing. This finding is robust to the exclusion of micro enterprises. However, ICT and Professional services suffered substantially smaller revenue shortfalls. It could be that this reflects a difference in subjective perspective, or that they had to go through greater organizational changes that ultimately let them better meet demand, but at higher cost.

[9] This figure is obtained when the midpoint of the declared range of revenue change for each surveyed company is weighed by its assessed share in the population's total revenues at the end of 2019.

[10] Our assessment is that the survey captures the surveyed population reasonably well, with two caveats. Neither of the two "behemoths" for Serbia -- Fiat-Chrysler Automobiles and HBIS steelworks—are included, which alone also reduces the size of the average revenues. Furthermore, the survey was less successful in capturing the weightier providers of ICT and professional services (both those that would be classified as large and those that are small or mid-size in population but have large revenues per employee. Hence, the aggregate revenues of these two sectors are underestimated. Finally, the combination of MSMEs and large companies should be taken with caution as the sampling method is not robust in combining them.

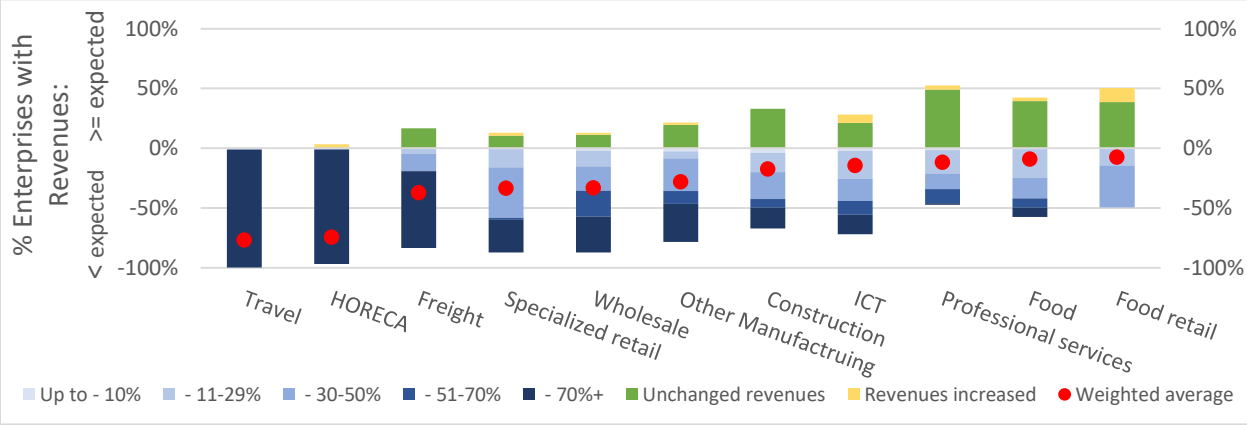
[11] As elsewhere, the businesses that were required to close their regular operations were hotels, restaurants, and catering (HORECA) except for delivery, public and intercity transport, shopping malls. All tourism related activities such as travel agencies were hence also directly affected and are considered in this group. Businesses offering personal services such as hairdressers and fitness centers as well as gambling were also under full lockdown. The overwhelming majority personal services are run as SPPs. The SPP Survey results show their performance resembles very closely that of microenterprises in lockdown sectors in the present study. Gambling is all run by large companies, not covered by this Survey. Cultural institutions, schools and pre-school childcare were also closed, but fall outside the scope of this study as they are overwhelmingly public institutions.

Supply v. demand factors

Revenue performance, outside the lockdown sectors, both in the case of manufacturing and the services appears to have been overwhelmingly determined by differences in the level of demand for the products/services they offered. Unsurprisingly, food production and retail, obviously facing the most inelastic demand, had the best performance. Better revenue performance tends to be more associated with demand factors also within the analyzed sectors, especially in professional services and ICT. In contrast, all sales linked to, for example, the automobile sector suffered strongly (discussed in more detail below). [12]

Figure 3 presents the structure of sector enterprises by revenue shortfall, together with the aggregate sector revenue shortfall when weighted by enterprise revenues. As in the case of Figure 2, each bar represents the proportion of enterprises in the surveyed revenue shortfall ranges, while the red dots represent the aggregate (weighted average) decline in revenues for each industry. It is evident that the directly affected Travel and HORECA sectors were most heavily affected by the crisis as almost all enterprises within these sectors had hardly any revenues. On the other hand, companies within the Food Retail and Food industries were clearly the least affected. None of the surveyed Food Retail businesses lost more than 70% of their revenues, and they had the highest share of companies with a revenue windfall compared to the rest of the economy.

Figure 3 -- Sector revenue shortfall: structure of enterprises by shortfall size v. weighted average



Source: Survey with Serbian enterprises

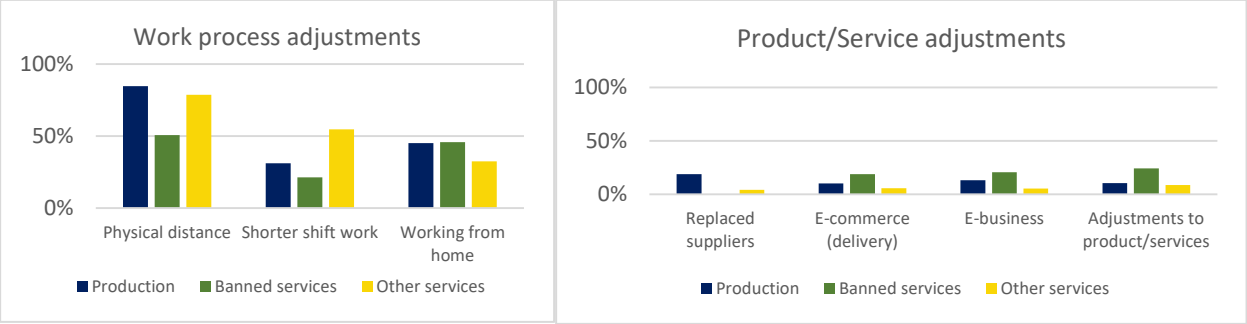
Similarly, performance of the ICT and professional services sectors were undoubtedly supported by the ease of remote service provision. The analysis below also shows a clear distinction between its sub-segments depending on the performance of the clients. Finally, the performances of the subsectors of the intermediation services, trade and transport, were very closely linked to the demand for the goods of their clients. Sector performance is further discussed in more detail below.

Although nearly all enterprises needed to undertake operational adjustments (Figure 1), once they did, operational obstacles do not seem to have been a major hindering factor for enterprises outside the

[12] Efforts to draw a distinction between supply and demand side factors through the questions in the survey were not successful.

lockdown sectors. As many as 85% in production and 79% in other services (outside of lockdown services) state they were able to establish physical distance, while almost one half of companies in these two sectors adjusted to shorter working hours and one third managed to work from home (Figure 4.a).

Figure 4a -- Adjustments to the crisis by different sectors

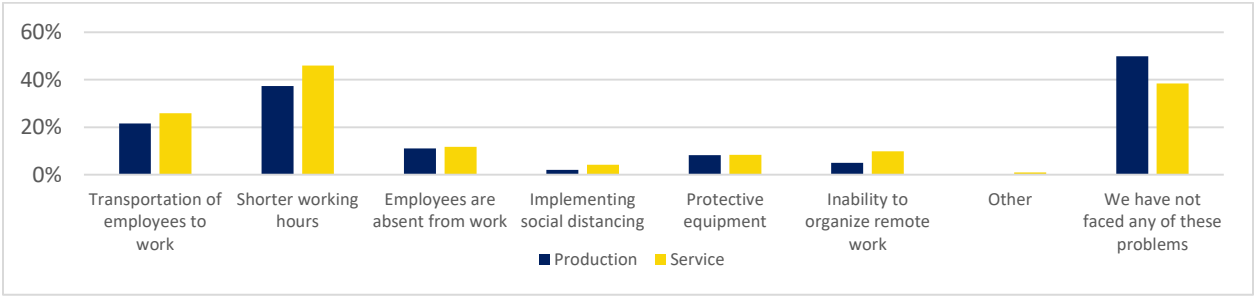


Has your company implemented any of the following measures to adapt to the state of emergency and other crisis conditions? (multiple answers possible)

Source: Survey with Serbian enterprises

Thereafter, **the biggest operational obstacles were the shorter hours of operation-- cited by some 40% of companies outside of lockdown sectors.** These were a particular problem in the early stages of the lockdown until enterprises were able to **obtain permits for employee movement** outside of curfew hours (Figure 4.b). It appears that over time a large number, possibly majority, of manufacturing and construction companies were able to obtain permits – the more so and more easily so the larger the company, so that working hours remained a limitation mainly for commerce.

Figure 4b --Significant operational obstacles faced by service and physical product producers



What factors represent a significant obstacle for the usual operation of your company during the state of emergency and other crisis conditions? (Multiple answers possible)

Source: Survey with Serbian enterprises

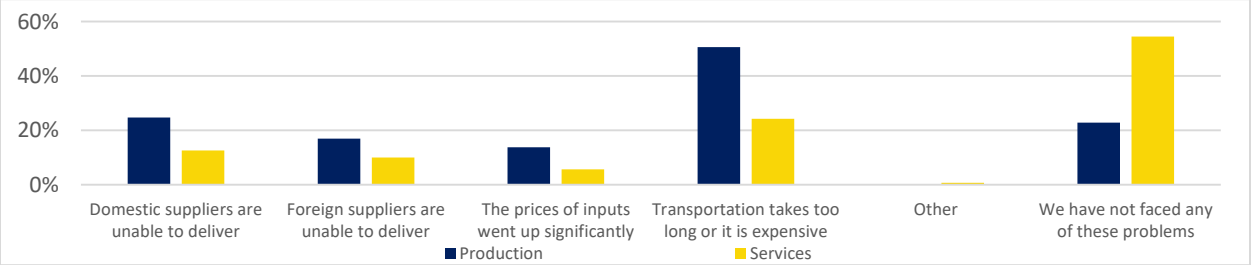
About 40% did not find major obstacles in **the procurement of inputs or services,** and nearly 30% did not find them with regard to **the organization of work.** Difficulties with procurement (Figure 4.c) were much more present in the case of physical production (manufacturing and construction) than in the provision of services. The major obstacles were the **transportation of inputs (longer and more expensive),** encountered by as many as 40% of manufacturing and construction enterprises, and to a lesser extent, the procurement of supplies. Difficulties were particularly pronounced in the case of **international transport**. In particular, it took time to sort out border procedures and it became much more difficult to combine out- and in-bound truck loads. This could more than double transportation costs, as trucks would return empty after delivering their goods abroad.

A large bakery from Belgrade reports that procurement of packaging and specific types of spices and grains, such as cumin – both imported from abroad – was rather difficult.

However, it states that purchase and transport of locally available inputs – such as flour - was not difficult.

While the effect of operational difficulties and increased costs of operation was not fully removed throughout the lockdown, they soon stopped being the limiting factor in business operation. Outside the "lockdown sectors", the only sector in which it was felt that existing demand could not be met because of operational obstacles was in the case of retail trade-- especially food. This was due to the sharply reduced hours of operation during the curfew.

Figure 4c -- Obstacles for procuring materials and/or services by those who managed to operate



When procuring materials and/or services necessary for your business, do you have a significant problem considering any of the following factors due to the crisis (excluding financial factors)? (Multiple answers possible)

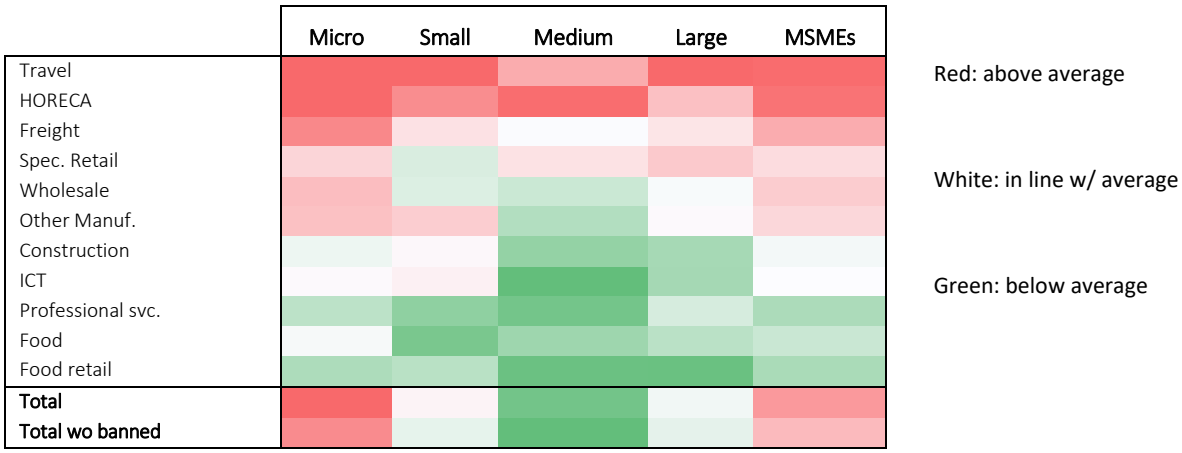
Source: Survey with Serbian enterprises

At the same time, very few enterprises seem to have been able to adjust products, or services, or increase reliance on e-commerce in order to improve their access to customers (Figure 4a). The exception was in the food sector, where 36% of enterprises stated that they increased reliance on e-commerce. The only other notable effort is by companies in the lockdown sectors, in which as many as 19% of enterprises made adjustments to products or increased reliance on the internet.

Relevance of enterprise size

A particularly notable and robust observation[13] **is the relevance of enterprise size to the reach and depth of impact**. Smaller enterprises tended to be more affected and micro enterprises especially so, but medium sized enterprises appear quite robustly to have fared better than either smaller or large ones. This was true for almost all sectors, both in terms of shares of affected enterprises and the depth of revenue loss. Figure 5 shows the heat map of enterprise sector-size segments by average revenue loss. The intensity of the red/green color for each sector-size group shows the extent to which this figure is below/above the average for all surveyed enterprises.

Figure 5 -- Depth of revenue shortfall of enterprise sector-size groups



Source: Survey with Serbian enterprises

While intuitively compelling and robust in the survey findings, this phenomenon is not easy to explain—a multitude of factors with contrasting effects combined to produce the evidenced results, and **mid-size companies appear to have benefited somewhat both from the greater flexibility of being small and greater resources at the disposal of larger companies.** Size was definitely proportional to the difficulties companies encountered in organizing social distancing and work from home. Microenterprises would also have been negatively affected by a possible higher probability that they engage in delivering services that require personal interaction. Also, they were more likely to be severely affected by the lockdown of individuals older than 65, if they relied on such individuals for services or (informal) employment. However, smaller enterprises were better able to organize employee transport and had a higher ability to adapt their products/services to the situation, and by organizing shorter work shifts. Mid-size companies were more often able to adopt electronic practices, but not e-delivery.

On the other hand, a **lack of flexibility was definitely an issue for large companies**. They were generally less able to adopt efficiency measures (such as introducing electronic business practices or delivery) probably because these have already been adopted if possible and much less able to adapt their products or the way they deliver them.

[13] Also borne out by preliminary analysis of the complementary survey of SPPs.

Exports v. domestic sales

A company from central Serbia specialized in wholesale and retail trade reports that during the first wave of virus outbreak it ceased its export-related activities, largely because significantly stricter sanitary regulations raised both the costs and length of transport beyond sustainable levels

Being an exporter had a clear negative effect (trade and transport were excluded from the analysis, as it is not completely clear what they meant by being an exporter). The impact has been larger on manufacturing than service companies, although it is significant in both (tested with a regression). On the supply side the negative causality is clear, while on the demand side it seems to be mixed. Most clearly, borders have become a significant obstacle, increasing both the costs and time to supply/obtain goods--it costs more to export and exporters are more likely to depend on imports, thus the effect runs through two channels. On the demand side, clearly a dependence on exports to Italy or other countries significantly affected by the outbreak of the virus, or on sales within the global automobile value chain was a major negative factor. However, often exporting over 50% of revenues was better than having a mixed portfolio. In the case of consumer goods and food production, exporting over 50% was better than being oriented solely to the domestic market, but this might be a factor of size.

The proportion of self-declared exporters matches what we know from statistics, lending support to the representativeness of the survey. Among the companies that do not belong to the trade sectors or the industries under full lockdown, almost 50% do not export at all and 40% of them export less than 50% of their products, while only 10% export more than 50% of their outputs. The share of exporters within the ICT and the professional services sectors is very similar to the one described above. However, many more exporters are concentrated in the manufacturing industry. This substantially larger share of exporters within the manufacturing sector is mainly driven by enterprises within the other manufacturing industry, rather than the food sector. Investigating the other manufacturing sector more closely, we observe that more than 80% of companies from the automobile subsector export more than 50% of their products, while only 20% of enterprises from the other subsectors are not exporters.

IV Assessment of cost and liquidity management and government measures

Serbia's companies proved to be surprisingly resilient to the effects of the lockdown. There were virtually no cuts in formal employment. In fact, companies generally expected to increase employment in June if normalization of business activities continued, and this is what eventually happened. The resilience appears to have been on the ability of MSME to draw on reserves, even though they reported some difficulty with collection of payments.

The (un)likely stability of employment

Serbia's lockdown and its aftermath are remarkable for the limited loss of employment generated so far. Both the survey and official formal employment data support this claim. The survey reports only 1.1% of enterprises reducing the number of their workforce (Figure 6), almost all of which laid-off even less than the measures' disqualifying criterion of 10%. Furthermore, official statistics on business sector employment report similar figures. Namely, seasonally-adjusted MoM decline in March was only 0.9% and 1.2% in April.[14] Translated to numbers, corporate employment in March and April was lower by 1,808 and 1,244 compared to February, respectively. Furthermore, YoY comparison of the employment in March and April (2019-2020) reveal an increase in corporate employment of 1.7% and 2.4%, respectively.

According to available statistics and key informant interviews, **payroll cuts happened primarily by curtailing informal employment, with formal layoffs concentrated in industries related to tourism: hotels and car rental companies.** In Serbia, 8% of non-agricultural employment is, in fact, informal employment. It is not captured by the official employment data and those cuts were likely not reported in the Survey.[15] Needless to say, informal workers are easiest to release and are not taken into consideration for assistance eligibility assessment. Informal employment is mostly prevalent in HORECA, construction, and smaller retail. None of the 25 surveyed companies in HORECA claim to have laid off their employees (Figure 6), even though they were unable to operate at all throughout most of May and April. Key informants suggest that a large share of HORECA enterprises have in fact laid-off a majority of their informal employees, and in the case of foreign tourist-oriented hotels -- formal ones as well.

Figure 6 -- Share of enterprises reporting to have laid-off employees due to crisis

Source: Survey with Serbian enterprises

[14] With respect to January-February seasonally adjusted average

[15] Informal employment is assessed through Labor Force Survey (LFS). Data on LFS are available only on quarterly and yearly basis.

The reasons behind the relatively weak effect of the crisis on corporate employment can be manifold:

- One is statistics. Corporate employment does not include SPPs and registered individual agricultural producers. However, even when these two are included, the picture does not change much. Namely, the seasonally adjusted MoM decline in March was only 1.4% and 1.7% in April.
- Due to various factors (some positive, some negative) the unemployment rate in Serbia hovers around a 30-year minimum – around 10%. The labor market in Serbia is progressively becoming more competitive, as employers often quote workforce shortages, especially for qualified workers. Thus, employment has become less elastic with respect to short to medium term crisis situations, as employers are unwilling to risk losing their employees over some supposedly short-term effect.
- Informal employment is likely to have served to amortize the blow, but in a reverse causality from what is usual, probably due to two factors. In *usual crisis circumstances*, this relation works the other way around – informal employment increases on account of formal employment, as enterprises endeavor to cut down on social contribution costs. However, as enterprises could apply for three monthly net minimum wages if they did not lay-off more than 10% of workers, they probably kept the formal workers and cut down only on the informal ones.

  Moreover, the shortage of skilled workers that intensified right before the crisis may have affected this correlation more permanently, at least in regard to qualified labor, as businesses will want to ensure not to lose valued workers, they have invested in. Indeed, the number of informally employed persons has shrunk by 40,000 between the first quarter of 2020 and IV quarter of 2019, while their share in employment declined by 1.7 percentage points.[16] Again, some of these informal workers could have been laid off, while some might have become formally employed.

The financial impact: mitigated by high reserves and risk preparedness?

There is no doubt that the lockdown significantly affected most companies' finances with ¾ of companies stating that they are experiencing difficulties in meeting their financial obligations. Operating under the lockdown generally involved an increase in costs, and the impact was that much more important as in most cases companies suffered a significant loss of revenues. It is interesting hence that, nevertheless, few seemed to scramble for liquidity and most expect to overcome the difficulties over the medium term (discussed in the next section).

A dairy company from southern Serbia, whose sales to HORECA segment make up 35% of total sales, reported that the sales to restaurants and hotels completely stopped during the first wave of the outbreak, while sales in retail chains – which makes up 25% of sales dropped by cca 20%, due to shorter work hours.

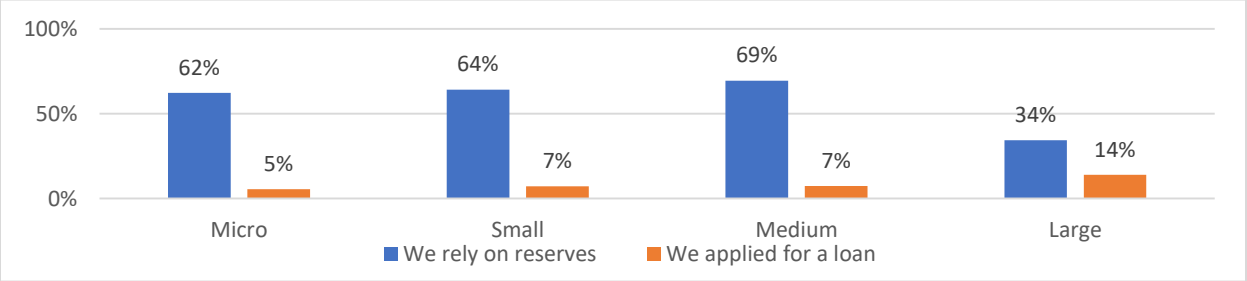
While revenues plummeted, costs increased by at least 10% due to higher sanitation related costs – i.e. purchases of masks, gloves, etc.

Reaching out for a loan was generally a rare occurrence during the crisis itself, especially for the MSMEs. Only 5% of microenterprises, and 7% of small and medium size that cited having financial difficulties, applied for a loan during the lockdown (Figure 7). The moratorium on bank loan repayments undoubtedly made a significant difference in this regard, but it is remarkable that this

[16] Excluding agriculture. Difference in share is season effect adjusted.

proportion contrasts with as many as 62-69% of these enterprises recurring to the use of personal/family reserves. The Survey corroborates numerous other sources of information that suggest access to external finance by Serbia's MSMEs is very low. As many as 66% of all companies state that they do not access bank credit, or do so only occasionally. This proportion is not significantly affected by company size (not shown). Also, in the absence of deeper financial markets, companies tend to hold liquidity if they do not invest directly in their own enterprise.

Figure 7 -- How do you cope with a lack of funds? [Enterprises reporting some financial difficulties]



Source: Survey with Serbian enterprises

There are **several possible explanations**. Buffeted by deep crises and an unpredictable business and regulatory environment, **Serbian companies may tend to accumulate significant reserves.** According to the survey, a half of all companies relied on personal, company or family reserves to meet the obligations (Figure 7). This proportion is rather even by company size, but it is substantially higher when trade companies are excluded, reaching as much as 80% in the case of manufacturers outside the food industry. This distribution is understandable, considering that manufacturers invest in more permanent assets. Interestingly, according to the answers to the survey, less than a fifth of companies delay payments to their suppliers. It is noteworthy that the first instalment of the minimum wage aid came in late May. It is possible that enterprises where counting with them while dipping into their reserves coffers.

However, another possibility is that companies may be easily ready to fall back on non-payment. Only 17% of companies appear ready to offer this as an explanation (twice as many in Food) but the survey also finds that nearly 60% of companies are having difficulties in collecting payment. This is an issue that merits further study, as Serbia only recently came out of two decades of illiquidity chains and it greatly matters that this accomplishment be protected.

V Short- to medium- term perspective and indicative scenarios

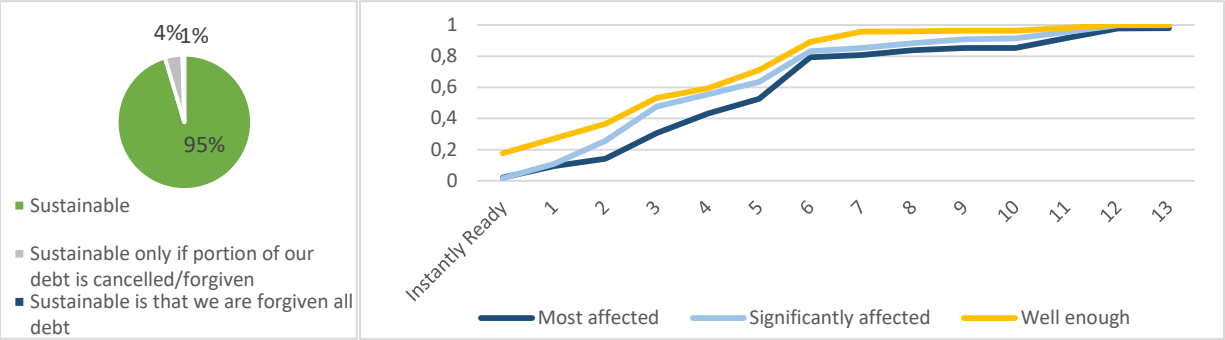
Businesses interviewed during the lockdown were optimistic for its aftermath. Although this expectation was undoubtedly exaggerated by the expectation that the pandemic would be a brief episode it was not completely off the mark. There is little doubt that Serbia's economy, including the MSME sector, has been weathering the crisis relatively well so far. The decline in activity during the draconic lockdown was sharp, but the recovery in its aftermath was fast –albeit to some extent unsustainable. A second wave of the epidemic in Serbia in late June and July showed that the lockdown sectors cannot return to normal levels of activity without jeopardizing the nations' health. However, it was put under control without recurrence to extreme measures. The growth momentum evidenced at the start of the year appears to have been maintained and played a role. It has been driven by strong fiscal spending and apparently resilient export demand. Looking into the future, it is likely that continued support from the government's investment in infrastructure and resilient export demand will continue lending support to economic activity, including MSMEs. The key uncertain policy-related variable is the management of the epidemic itself, which –as the second wave of the epidemic has shown—affects the economy primarily through the lockdown sectors. The maintenance of foreign investment levels is also uncertain, but less under the governments control over the short run. We develop two scenarios for the effect that fluctuations in the epidemic can have on the economy, both acting primarily by affecting the lockdown sectors. The two scenarios give a realistic range of potential loss of economy-wide income of between -13% and -2,6% of 2019 GVA.

After discussing the expectations expressed by surveyed companies during the lockdown, we present an overview of real sector performance in the aftermath of the lockdown and conduct a scenario analysis of the effect of the epidemic on selected sectors assuming it lasts until end 2021. We base the following analysis on available statistics, including flash estimates of the GDP to end-June and exports to end July, lessons from the May and June surveys and interviews with key informants conducted during June, July and August.

High expectations

Both the survey and the business-leader interviews conducted by CEVES painted an optimistic picture for the future (especially MSMEs) in all but the tourism sector. In the survey conducted in early May, only 5 percent of enterprises reported that to be sustainable, they needed for some proportion, or even the whole amount, of their debt, to be forgiven (Figure 8, left panel). These companies are mainly concentrated in the sectors under the full lockdown, or in Freight. Enterprises that were the least affected by the crisis expect to fully recover in the next seven months (Figure 8, right panel). On the other hand, those companies that were heavily affected still expect to fully recover within a year after the lockdown.

Figure 8 -- Enterprises' medium-term perspective

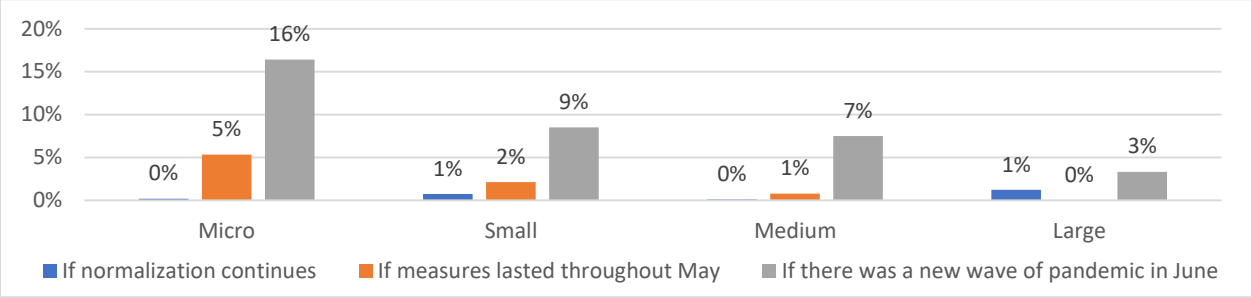


Source: Survey with Serbian enterprises

Businesses were less optimistic considering the possibility of a second wave of the epidemic, that would lead to the reintroduction of measure. Still, only 5% of the enterprises report that they would need to lay off more than 10% of employees, while an additional 5% of them would consider this measure. Somewhat more, 8.5% of firms stated that they would certainly further reduce employees' salaries, while an additional 8.2% of companies would consider it. Moreover, 5.8% of enterprises reported that they would consider temporary closure of their companies with unpaid leave to employees. However, less than 1% of firms would even consider the permanent liquidation of their companies.

Enterprises expected to increase employment rather than reduce it after the lockdown, assuming the circumstances normalized. About 18% of enterprises as well as sole-proprietors expected to hire new employees if normalization was maintained at the end of the lockdown, and the proportion was higher the larger the business. In the event that the lockdown had continued throughout May, the results seemingly would not have been much worse, especially for larger enterprises (Figure 9). However, the companies expected that yet another wave of the pandemic with a full-blown lockdown in the near-future would have been reason for much higher concern. Micro- companies seemed to particularly have depleted their reserves, with 16% of them expecting layoffs in that case. The share of small and medium-sized companies expecting layoffs was half as big (Figure 9).

Figure 9 -- Share of enterprises that would lay-off employees if…



Source: Survey with Serbian enterprises

On the other hand, if the normalization were to continue, enterprises seemed confident that they will return to pre-crisis levels of operation.

The aftermath of the lockdown

Total GVA declined by 6.3% in the second quarter of 2020 (Q2) following a strong performance in the first quarter of Q1 and was only partly dampened by the second wave of the epidemic in late June and July. There is little hard data for July, but the latter appears to have affected predominantly the lockdown sectors. The performance in the first quarter (Q1) was strong despite the economy already being significantly affected by the crisis. In February exports had become affected by the strict lockdown in Italy, while the second half of March was the hardest period-- the period of adjustment--under the lockdown. In Table 4 we present estimates of GVA growth for Q4 2019, Q1 2020 and Q2 2020 with as close a sectoral breakdown to that of the Survey as possible. It is important, first, to distinguish between the performance of the business sector (including enterprises and sole proprietorships) and other sectors of the economy. The latter -- including mainly agriculture, finance, and government services -- fared much better than the business sector. A very sharp (approximately 9%) increase in public wages effected at the end of 2019 will lift Serbia's GDP performance throughout 2020, both on an accounting basis – lifting the value of government service production--as well as through their effect on consumer demand.

Table 4 -- Economic sector real growth, first half 2020

	GVA			Revenues
	Q4 19	Q1 20	Q2 20	Lockdown v. expected
	y-o-y rates			
			in %	
Total Economy	**6.8**	**5.2**	**-6.3**	…
Total corporate	**…**	**4.9**	**-11.4**	…
Industry	3.1	4.3	-7.7	…
Manufacturing[1]	…	6.1	-8.3	…
Food[1]	…	4.1	-1.5	-9.0
Other manufacturing[1]	…	6.5	-9.8	-28.0
Construction	48.3	20.4	0.1	-18.0
ICT	8.2	11.4	5.4	-14.0
Professional services	4.1	2.6	-20.6	-11.0
HORECA[2]	…	4.6	-40.9	-71.0
Personal and other services	1.5	3.2	-32.0	-50.0
Trade & transport[2]	6	2	-14.0	-30.0
Other sectors, total	1.8	5.7	3.9	…

1: Based on industrial output index

2: Based on sales data

Source: SORS, CEVES estimates

The business segment alone had a much weaker performance (-11.4% in Q2 after also growing strongly in the first quarter) which, in turn, is comprised of three types of performance. Some of the sectors, such as manufacturing industry and construction, which were strongly affected during the lockdown, but appear to have recovered fast with performance and its sustainability depending largely on the international environment. Within the service sector the segment most strongly affected during the lockdown – the so called "lockdown sectors"— excepting the hotel industry, showed a very strong recovery from the near paralysis during the lockdown. However, as we argue below this proved unsustainable. Meanwhile, the ICT and professional services sectors' performance has varied depending on the performance of their heterogeneous parts, some under the strong influence of export demand, and others more affected by the vagaries of the epidemic. Still, the effect of epidemic control measures on the latter sectors remains more indirect, mainly because of the sharp decline in the demand of the lockdown sectors, but also to the extent that overall consumer and producer demand are affected.

Construction activity was already in full swing ahead of the outbreak of the pandemics. As numerous projects in construction of buildings and public infrastructure were started in 2019, total value of performed works rose by 35% YoY in nominal terms along 2019.

CEVES' informants claim that many of the large projects started last year were maintained even during the lockdown. This is also supported by data on the value of performed works which rose by almost 10% YoY in the first half of 2020.

Looking ahead, construction activity might still decrease somewhat in the remainder of 2020 and early 2021, due to a very strong basis effect, coupled with a trend of decrease in issuance of building permits in the first 7 months of 2020.

The business sector performance was clearly underpinned by the momentum in the growth enjoyed at the start of the year. The shortfalls in revenues cited by companies in the survey were reported as relative to expectations –but these expectations had been high.[17] The double-digit growth of construction over 2019 has been questioned, and while undoubtedly exaggerated, it is still likely that it has really materialized at least in the upper teens. The impetus in construction is owed to civil works, FDIs into manufacturing and into real estate, with ample anecdotal evidence and key informant communication suggesting households under lockdown increased their construction (repairs, remodeling) spending as well. In the construction sector, civil works tends to engage larger companies, the building of commercial real-estate engages both large and smaller companies, while the household sector tends to engage MSMEs. For the moment, they all appear to be performing strongly, but both inward flows of investment in the balance of payments and a slowdown in the issuance of building permits may not bode well for the future.

Other than motor vehicles, all the manufacturing product groups introduced in Chapter II, also started the year with a very strong performance, and recovered it after the lockdown. Most manufacturing had in fact been growing rather strongly already in 2019, led by strong export demand, but this performance is masked in the aggregate figures by the extreme vagaries of a few large export sectors (mainly motor vehicles, petroleum refining and basic metals). The latter tend to not have a strong impact on the

[17] It is in this light that the throughs of revenue shortfalls from the Survey should be compared to outcomes – they include the effect of the growth momentum, while the present figures are given relative to the same period in 2019. When viewed in this light, the Survey findings are largely consistent with what is observed in the aftermath.

domestic economy. Under the circumstances, manufacturing suffered moderately in Q2 —with a drop of 20% in April that by July had been nearly compensated for. The cumulative output in the year to July stood at 99% of that in the same period of 2019 (Table 5).[18]

Table 5 -- Industry- sector cumulative output growth and characteristics Jan -July 2020

	MSME	Jan-Mar	Jan-Jun	Jan-Jul
	% in GVA	y-o-y rates, index		
Industry, total	35.4	104.8	98.3	98.7
Manufacturing	45.0	106.1	98.5	98.7
Food	53.1	104.1	101.2	101.3
Mid-tech MSME>50%[1]	67.6	103.9	97.0	98.6
Rubber and plastics	41.7	101.9	86.3	87.0
Electrical equipment & appliances	33.2	121.8	104.4	105.5
Motor-vehicles	11.7	89.1	58.3	62.6
Other, MSME>50%[2]	70.5	102.2	95.0	96.2
Other, MSME<50%[3]	24.3	117.0	112.1	108.6

1: Metal products, computers, machinery, other traffic vehicles

2: Beverage, tobacco, textiles, apparels, coke and petrol derivatives, chemicals, pharmaceuticals, base metals

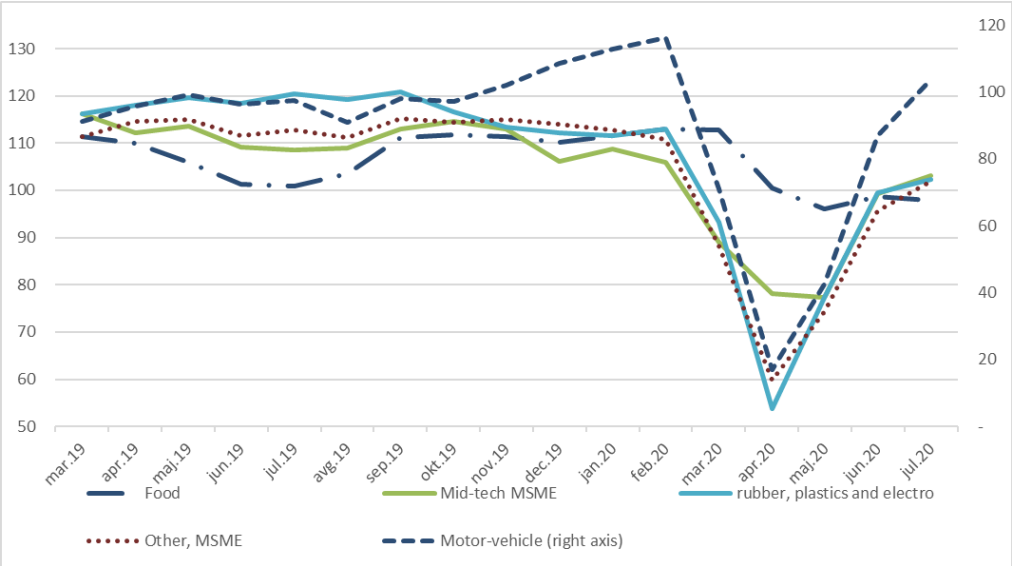
3: Leather, wood, paper, printing, other nonmetal minerals, furniture, other manufacturing

Source: SORS, CEVES estimates

The decline in manufacturing was largely driven by a decline in both exports and domestic demand other than that for food. However, the exports of sectors dominated by MSMEs suffered less during the lockdown. In particular, food exports fell just to last year's levels in April, but did not recover the earlier growth momentum thereafter. The exports of mid-tech MSME and other products dropped by 20% and 40% respectively but had surpassed 2019 levels by July. Meanwhile, the exports of the automobile industry suffered an extreme shock (with exports dropping to 17% of last year's levels in April), recovering to only 63% of an already low level a year earlier. While rubber and plastic product exports which comprise pneumatics also continue to suffer, it is interesting that the electrical equipment and appliances group exports have recovered strongly, despite consisting in large part of automobile related products. This issue needs to be further explored.

[18] At the moment, industrial activity by sector and with a monthly frequency can be deduced from the industrial production index (and sales), which we use as a rough proxy of value-added performance.

Figure 10 -- Trends in export activity of manufacturing sectors*



* Index based on 3-month moving averages until March 2020, and in period between March and July 2020 on single month/3-month average for 2019

Source: SORS, CEVES estimates

A strong positive growth momentum in the ICT sector was further affected not only by negative but also positive factors related to the crisis itself. SORS estimates ICT output grew by a remarkable 5.4% throughout Q2, as its exports proved rather resilient and parts of domestic demand increased. ICT growth had been fast throughout 2019 (around 8%) and accelerated to 11.4% in Q1 2020. Export revenues in the first two months of 2020 stood more than 20% above levels attained a year before. While exports were struck by the crisis they only declined to somewhat below 2019 levels during the subsequent three months and by June already overtook last years' levels. In the case of ICT there is also a crisis-induced positive effect. As many as 40% of interviewed ICT businesses saw an increase or stagnation in demand during the lockdown, undoubtedly related to the ICT needs of businesses adjusting to the new circumstances. (This is likely an underestimate as ICT companies are harder to sample the smaller and more successful they are.)

- The second wave

As it turned out, the strong rebound evidenced in June was not sustainable, at least for the lockdown sectors. It was driven by both a rebound from the state of emergency, and by a pre-electoral disregard for health safety measures implementation, which both contributed to strong but temporary business and consumer demand. By the third week of June the epidemic started accelerating very fast with hotspots of epidemic spreading in several cities in the country. By 7th July a new state of emergency was announced but not implemented due to strong popular resistance.

It is remarkable that the flattening of the epidemic curve was accomplished despite what by all accounts appears to be the near absence of health-related restrictions/stoppages in the operation of manufacturing and construction works. The flattening was largely borne by the lockdown sectors, and a high level of citizen discipline in the most affected communities. A combination of national and local policies was applied with quite a wide latitude on the breadth of local measures. Hence, at the national level the main measures were a reinforced implementation of sanitary requirements such as the use of masks in closed public spaces, and limitations on the hours of operation of restaurants, cafes and other gathering places. However, locally, these could also include significantly stricter measures. While there are no reliable infection rate data, the rhythm of the official figures appears to be roughly correct. The curve peaked on July 27 and declined to fully acceptable levels by the third week of August. It appears to since have remained under control.

Scenarios for Q4 2020 and 2021: the epidemic as a driver

We consider the exogenous channels of effect that will affect MSMEs in turn: those of the health-crisis on supply and consumer behavior, primarily of the most exposed, "lockdown", sectors and through them on the rest; construction activity which has played an important role in driving growth before the crisis and maintaining real sector activity since, (but also skewing statistical data); and international demand for manufactures exports.

Looking forward, export demand is the dominant factor determining the behavior of larger manufacturing companies, but MSMEs, both in the service sectors and manufacturing, will be heavily affected by the success in the management of the epidemic. The waves of infection have a threefold effect. They affect directly the lockdown sectors whose operations need to be restricted when the disease is spreading too fast. They affect indirectly the rest of the economy by affecting the demand of the lockdown sectors for inputs, and they affect overall demand by affecting consumer spending and investor "animal spirits". Of course, if a partial or full-blown lockdown is needed to put the disease under control, then other supply-side effects will affect sectors other than lockdown sectors as well. The localized emergency measures undertaken during the July second-wave of the epidemic did not, in general, go that far, although they are likely to have had at least some supply side effect, especially on smaller companies, as they are less likely to be able to amortize the effects of employee sick-leave. Key informant interviews, however, suggest that during the second wave in July larger companies worked full steam even when they had employees on sick leave with COVID, and company closure for sanitary reasons was rare. A deceleration in manufacturing year-on-year growth rates is evident in July, but analysis of seasonally adjusted rates attribute it to a high base month in 2019 (MAT, No 308).

As the milder measures applied during the second wave of the epidemic were successful, we assume this will be so in the future as well. This means that epidemic dynamics are likely to impact the economy mainly by intensifying or easing the difficulties of the lockdown sectors and impacting the rest of the economy mainly

Anecdotal evidence from our interviews suggests the second wave had some dampening effect on the economy's "animal spirits" as it enhanced the notion that the epidemic will continue to affect business over the medium-term.

through them. However, given the relatively limited role that autonomous domestic investment seems to be currently playing as a factor of growth, this effect is likely to remain subtle for the time being.

- Lockdown sector structure

We estimate the performance in Q3 and model two scenarios –one optimistic and one pessimistic--for Q4 and 2021 for the HORECA and personal service sectors. We further apply to tourist agencies the same assumptions made for hotels, and the assumptions made for personal services to sports, entertainment and gambling. This group of sectors contributes some 2% of Serbia's GVA and some 3% of the formally employed persons (Table 6) and does not, again, include private education and cultural institutions which are also affected. Also excluded from the analysis is passenger transport which can be expected to be far less affected in the second and subsequent waves than during the lockdown. With the exception of gambling, these sectors are nearly entirely comprised of MSME.

Table 6 -- Lockdown sector structure

		%MSME in total sector		%SPP in MSME	
	%GVA tot econ	GVA	Empl	GVA	Empl
Total lockdown sectors	**3,60%**	**81%**	**88%**	**62%**	**58%**
HORECA	**1,88%**	**94%**	**96%**	**56%**	**56%**
Tourist agencies	0,20%	100%	100%	12%	12%
Hotels	0,43%	100%	100%	7%	10%
Catering	1,25%	92%	96%	74%	68%
Personal services, sport, entertainment	**1,32%**	**95%**	**95%**	**86%**	**73%**
Gambling and betting	**0,39%**	**18%**	**18%**	**0%**	**0%**

Source: SORS, CEVES estimates

We ask (a) what is the range of the possible direct and indirect effects of the epidemic on the economy through this channel?; as well as (b) the effects on the profitability of the sector itself, and possible business failures. We apply economic impact coefficients to the thus obtained two sets shortfalls of revenue shortfalls, to obtain the range of the plausible impact that the fluctuations in the epidemic can have on GVA.

Out of the sectors shown in Table 6, HORECA is both directly and indirectly the most important one as it is both the largest and has the strongest indirect effects on the rest of the economy. A distinction ought to be made between the accommodation business ("hotels" in further text) that comprise approximately a third of the sector, and restaurants, cafés and other catering ("catering" in further text). Both subsectors consist of two distinct segments. Hotels differ depending on whether they cater to domestic or to foreign demand. Generally, foreign visitors come for business (including a non-negligible congressional segment) or city-break tourism, although there is also a segment of visits from the region to Serbia's spas.

Domestic tourism tends to relate to spas, rural and nature travel outside the big cities. We estimate the economic size of the two segments to be approximately equal.

As international travel is limited, domestic tourism has shown a tendency to expand while international has shrunk to about 15% of normal levels and is likely to remain almost stagnant. However, at the height of the second wave of the pandemic, hotels catering to domestic tourists suffered a sharp contraction and have since come to operate at maximum occupancy rates. According to interviews and anecdotal evidence, they are currently booked weeks if not months in advance. Clearly, hotels catering to foreign visitors and especially congressional tourism have been operating at minimal capacity, with foreign visits declining to 5% in April, and recovering somewhat to 15% in June and July compared with levels attained a year earlier. As the second wave of the pandemic was followed by restrictions in the EU and other countries towards travelers from Serbia, this rate might have declined somewhat in the rest of the third quarter. A very gradual trend of recovery should be expected in future months only if there are no marked new epidemic waves.

Catering is HORECA's largest sub-sector. It is important both because of its significant indirect effect on the Food & Beverage as well as other industries and because it employs a relatively large segment of the vulnerable (lower paid, partly informal) employed. None of its sub-segments can be expected to operate at normal levels as long as health concerns are active-- but cafés are the least affected, while event venues are the most affected. Two factors play may mitigate the otherwise strong effect that every wave can have on any given establishment. First, the ability to deliver food and beverages can replace part of the demand otherwise lost to due to closure or limited frequenting of premises. Delivery outlets and fast-food windows have, in fact, enjoyed a strong increase in demand in the pandemic environment. Second, open space—the ability to provide service in a garden or the street --has nearly become a condition of any kind of operation, especially for restaurants. In general, cafes are less affected than restaurants, and event-venues (such as for weddings) are the most heavily affected. Even at the height of the state of emergency, when all restaurant and café premises were closed, the sector's revenues fell by only some 60%. We estimate that by June they had recovered to about 95% of the pre-crisis level.

Finally, the understanding of the personal services, sports and entertainment sector is important from the point of view of understanding the effects on one of the most vulnerable employed populations. Otherwise, its indirect effects on the rest of the economy are among the lower ones. It is a heterogenous group sector whose components nevertheless tended to behave similarly. These are overwhelmingly SPPs whose behavior we learned about from the Survey of sole proprietors. In the Survey, beauty parlors and hairdressers comprised 70%, dry-cleaning and similar services 23% and sports clubs and gyms 7% of the segment. We assess that at the height of the lockdown their revenue shortfall was around 70%. [19]

[19] The Survey's finding is actually a 50% shortfall in revenues during the lockdown. This assessment is likely to be an overstatement as the Survey was conducted later in May when the effect of the lockdown was fading. The 70% figure fits better the statistics for Q2 as well as anecdotal observation during the second wave.

- Scenario assumptions and results

The scenario assumptions are based on observed phenomena during the lockdown, and anecdotal evidence from key informant interviews during the second wave. During the course of the second wave the declines in the revenues of the lockdown sectors fell very close to levels observed during the March-April lockdown, during a period of approximately 2 weeks. Thereafter they recovered gradually (in a period of 2-3 weeks) to levels that we consider "normal" for the operation of these sectors under the COVID circumstances – about 50% shortfall for hotels, 10% for catering and 8% for personal services. Furthermore, we estimate the outcome for the lockdown sectors in Q3 2020 and then vary our projections for Q4 2020 and the year 2021 according to the two scenarios. **Both scenarios assume that there is much learned from the previous two waves, as well as that the winter months will necessarily worsen the feasible steady state levels of activity of the lockdown sectors**.

The scenario **assumptions** follow:

- **Optimistic scenario.** Although in winter the disease is harder to control, the lessons from the second wave are well learned and ultimately, we assume there will be less need for restrictions than during the second wave. Sporadic localized disease flare-ups will be inevitable, and their sum total will have an equivalent effect to only one week-long revenue through as in previous waves and two-week long recoveries in each of three sectors. The optimistic throughs are set to equal the average loss of incomes during the summer recovery period. Thereafter, revenue performance in 2021 improves because of better annual average weather as well as further learning effects. Overall, in 2021 the loss in revenue is above levels attained in 2020 but do not reach 2019 (it should be taken into account that the first quarter of 2020 was very strong).
- **The pessimistic scenario assumes that it is much harder to manage the epidemic in the cold weather months, and that while present, learning was limited.** It assumes another wave with the same throughs in revenue as the second wave, also lasting two weeks, but with a slower, 4-week recovery to lower sustainable levels than the second wave. In 2021 there is a milder improvement in performance over Q4 compared to the optimistic scenario. This roughly brings annual average performance in line with Q3 2020.

We calculate and aggregate the two scenarios for 2020 and 2021 (Table 7), but the full effect of the difference in assumptions is only reflected in 2021, as three quarters in 2020 are already the same. Overall, the loss of revenues in the pessimistic scenario is approximately twice as large as the loss in the optimistic one. It ranges between -24% for personal services and -55% for hotels in the pessimistic scenario v. 10% and 45% in the optimistic one. Further plausibly worsening the pessimistic scenario does not make much difference. Simply, behavior exhibited to date suggests that even if the epidemic is even harder to put under control in the cold weather than we currently assume, both a learning effect and an increasing fatigue effect will affect the caution in individual behavior; in other words, there will be a growing habituation to the risk of infection.

Table 7 -- Epidemic effect scenarios: "Lockdown sector" revenue decline

				Scenario 1		Scenario 2	
	2020Q1	2020Q2	2020Q3	2020Q4	2021	2020Q4	2021
			In % of same period 2019				
Total, lockdown sectors	**2**	**-37**	**-28**	**-19**	**-15**	**-30**	**-29**
HORECA	5	-41	-30	-24	-19	-35	-34
Hotels	-1	-77	-53	-52	-45	-58	-55
Restaurants and cafes	7	-29	-23	-15	-10	-27	-27
Personal services	0	-32	-26	-14	-10	-26	-24

Source: CEVES estimates

This health-induced variation in the operation of the lockdown affects the overall economy directly, but also through an indirect effect. As mentioned above, the direct effect is suffered not only by the HORECA and Personal services sectors that we model, but also by tourist agencies, the entertainment industry and gambling. Hence, we apply the estimated rates of decline to these additional sectors and we multiply those direct effects by the indirect effects they are likely to have on the rest of the economy. The indirect effects will vary depending on whether the decline in sectoral revenues is accompanied by a concomitant decline in employee income due to layoffs and/or wage reductions. The optimistic assumption is that they will not, while the pessimistic is that they will. This, of course, increases the range of possible effects.

Overall, when the direct effects for the entire set of lockdown sectors are compounded by the indirect effects of these sector's demand on the rest of the economy, and as the pessimistic scenario implicitly assumes a degree of income reduction/layoffs and their indirect effects on the economy, the possible income losses to the economy in 2021 become nearly three times larger in the pessimistic v. the optimistic scenario. The loss of revenue to the economy's GVA in 2021 according to the two scenarios ranges between -1.3% and -2.6%. For 2020, they are estimated to range between -2.1% and -2.3%, in both cases assuming no induced income loss effects, as for the most part of the year the income support policy has been generous (Table 8).

Table 8 -- Economy-wide revenue loss -- COVID effect through "Lockdown sectors"

	Total effect 2/		Scenario 1		Scenario 2	
	income effect: excluded |	included	2020 3/	2021 3/	2020 3/	2021 4/
	Coefficient		In millions of Euros			
Total	…	…	**-794**	**-500**	**-879**	**-1002**
HORECA & tourist agencies	2,1	2,6	-531	-357	-572	-658
Personal svc, entertain. & gambling	2,0	2,2	-262	-143	-306	-344
			In % of total economy GVA			
Total	…	…	**-2,1**	**-1,3**	**-2,3**	**-2,6**
HORECA & tourist agencies	2,1	2,6	-1,4	-0,9	-1,5	-1,7
Personal svc, entertain. & gambling	2,0	2,2	-0,7	-0,4	-0,8	-0,9

1/ It is assumed that income losses (GVA) is exactly proportional to revenue losses in all sectors.
2/ Sum of direct, indirect and induced multipliers based on SORS' Input-Output tables for Serbia.
3/ Income effect excluded.
4/ Income effect included.
Source: SORS, CEVES estimates

- Business failure scenarios: catering

Of course, in the face of **sustained shortfalls, profitability will decline, reserves will be depleted and eventually this will lead to business failures and a consequent additional chain of effects.** We here model the number of catering businesses that become unprofitable under the two scenarios in 2020 and in 2021. We incorporate the existing wage subsidies paid or committed and alternate the Pessimistic scenario without additional commitments, and with the assumption of an additional subsidy of 60% of the minimal wage for one month during every quarter.

We model the distribution of businesses by profitability based on enterprise financial report data submitted for 2016, and we assume that SPPs have an identical profitability distribution as incorporated enterprises. In the original data, 45% of all enterprises report a zero or negative profit. While some are truly in difficulty and others are simply underreporting income, it is also evident that a large portion of these enterprises are not making a bona fide effort to operate as businesses. To use only bona fide enterprises in our modeling, we reduce the total number of enterprises in this group so that the resulting average number of those employed in the group comes up to 2. This is aligned with the average number of those formally employed in the next profitability group –enterprises earning 0-5% profits. Overall, this gives us **21080 bona fide businesses** in the catering (caffes and restaurants) sector. Among them, those with negative or zero profits and those with positive profits up to 5% comprise respectively 34% and 36% of the total (Table 9). The remaining profit brackets are 5-10%, 10-20% and more than 20% profits. They account, respectively, for 12, 12 and 6 % of the total number of bona fide businesses. Furthermore, we assume that the within each bracket the businesses are distributed linearly by profitability.

Table 9 -- Catering businesses: adjusting the profitability profile

	in % of revenue					
Reported profits	<0	0-5	5-10	10-20	>20	5.9
Adjusted profits	0-5	5-10	10-15	15-22	>22	9.4
Average # of employed	2.01	2.30	3.00	3.50	3.00	2.50
Share of total businesses	34%	36%	12%	12%	6%	100%

Source: SBRA and CEVES estimates

Before performing the simulations, **we need to adjust the reported profitability of the businesses to more realistic magnitudes.** It is well known that a large number of businesses in the lockdown sectors operate partly in the grey area. This opens the question of what is their true profitability? Key informant interviews suggest that the expected average profit for caffes is 20% and for restaurants it is 15% of revenues. The average reported profitability of the population is only 5.9%, without taking the loss-making businesses into account. Hence, we first assume that all negative or zero profit businesses earn in fact a positive profit of up to 1% (more for simplicity but also it increases realism). This assumption is maintained when we use the otherwise reported levels of profitability as an extremely conservative assumption. However, we also perform the simulation on an „Adjusted profits" profile that is still set to be rather conservative, as it lifts the average sector profitability to 9.4% (Table 10). In it, the first bracket is lifted to range between 0 and 5% and the second between 5-10%. The adjustment tappers off towards the higher profitability brackets.

To model business failures, we need to model the structure of costs—labor, variable and fixed—as well as their behavior in the crisis. We depart from the BRA financial report cost structure, but adjust it based on key informant information. This gives us the following shares of each cost component in the total: of 36% for labor (including informal labor), 46% for variable costs and 18% for fixed costs. Labor costs are assumed fixed and they incorporate informal employment (in line with information from SORS' LFS).[20] For illustrative purposes, we model two different assumptions about business behavior with regard to informal labor. In one extreme case we assume these costs are maintained (no informal employment layoffs) throughout the modeled period. In Table 10 this assumptions produce the results under the sub-heading "Informal employment retained". A more realistic assumption, still somewhat conservative, is that informal employee costs are reduced to 0 in Q2 2020, and that they are reduced by a half in all subsequent quarters.[21] This is shown under the heading "Informal employee layoffs". Finally, variable costs adjust proportionally to the loss in revenues.

Assuming business profitability is as **in the adjusted profile, the two scenarios produce rather different results, and so does the variation of the assumption on the treatment of informal labor.** If both formal and informal labor are kept in hire, even in the optimistic Scenario I 41% of all businesses (8,993) become unprofitable by end 2021—about two thirds of that (6,435) already by end 2020 (Table 10). (The scenario

[20] For a detailed discussion of labor structure see *The effect of COVID-19 crisis on employment: focus on the vulnerable* categories, Forthcoming

[21] For further variation of assumptions see *The effect of COVID-19 crisis on employment: focus on the vulnerable* categories, Forthcoming

would be radically worse if profits were as reported, with total lossmaking businesses surpassing 15,000 (not shown) by end 2021.) In the pessimistic scenario with no layoffs the number of loss-making businesses doubles. While allowing for layoffs significantly improve the situation under the optimistic scenario, the cuts would need to be much more radical to make a major difference in the pessimistic scenario, in which still 75% of business end 2021 in the red.

Table 10 -- Number of businesses w/ losses, adjusted profitability profile

	2020	2021	Total	In % of all bus.
	Informal empl. retained			
Scenario I	6.435	2.558	8.993	41
Scenario II	9.334	8.750	18.085	83
	Informal empl. layoffs 1/			
Scenario I	2.470	2.361	4.830	22
Scenario II	5.138	11.256	16.395	75
Layoffs plus 85% subsidy 2/	1.998	2.894	4.891	22

Source: SBRA, SORS and CEVES calculations

1/ informal employee costs reduced to 0 in Q2 2020, and by a half in all subsequent quarters.
2/ 85% of minimal wage two months per quarter in Q4 2020 and 2021

Note, that in the case of Scenario I, there is a high sensitivity of the shown results to changes in the assumed company profitability profile. Increasing the maximum profitability of the 34% of companies in the first bracket to 7,5% from 5% reduces the total number of loss-making enterprises in 2020 and 2021 to 5947, a reduction of 25%. It does not, however, change the results of the pessimistic scenario that much.

It is interesting and noteworthy, however, that just an 85% of the net minimum wage subsidy for two months per each quarter makes a very significant difference. It brings the pessimistic scenario with layoffs to a very similar--significantly better—trajectory as that projected in the optimistic Scenario I. We discuss this issue further at the end of the next Chapter.

VI The government's economic measures: an assessment

In assessing the effectiveness of the measures, a distinction needs to be made between the very short-term and the picture emerging in the subsequent weeks and months. The immediate and direct impact on MSME liquidity and employment behavior turns out to have been very limited, despite the measures' generosity, in part because of their delay. Nevertheless, as it is clear that the crisis will not be over in a matter of months, the government's measures are likely to be playing an increasingly critical role in the maintenance of employment as well as for the sustainability of the most affected MSMEs as well as supporting income overall as shown in the previous Chapter. However, the crisis is having a very different effect on various groups of MSMEs and the lack of targeting of the assistance is coming at an unnecessarily high cost that risks to ultimately reduce the government's capacity to provide sustained and effective support throughout the length of the crisis. Our illustrative simulations suggest that the cost of the first package of subsidies could have been reduced by about one half. Looking forward, we show that in the event that the winter developments resemble the pessimistic scenario described above, better targeted assistance could cost 35% less than the second package of assistance implemented by the government, but rescue a much larger proportion of companies from losses and failure. This measure would still cost substantially less than the likely loss of economic activity and income that would ensue if the government abstains from further assistance.

As stated, the urgent goals of the Government's package of economic measures were threefold—to „safeguard as many jobs as possible, as well as help the economy to maintain its liquidity during the state of emergency"[22]. The government also recognized that additional fiscal incentives may be needed in the future, depending on further developments, to „remove the possibility of longer-term negative effects on the economy". We discuss the measures from these three points of view, as well as comment on the opportunity that the crisis offered to enhance and encourage SME access to bank finance.

The Government's measures were announced on March 31st, but their adoption, including the greater specification of some substantive detail took as much as two more weeks. The delay in the measures' adoption and implementation means that over two thirds of the lockdown's duration, including through the date of the quarterly VAT payment closure, businesses operated without a precise understanding of the assistance they will be able to count on. They were primarily aimed at MSMEs, consisting of liquidity assistance (payroll tax deferrals during the state of emergency, deferred payment of advance income tax), direct aid--wage subsidy support (three minimal monthly net wages), support for working capital loans (with preferential conditions) either through the Development Fund of Serbia or as loan guarantees to commercial banks. Measures applied to all enterprises except for the wage subsidy. The latter was conditioned on businesses keeping more than 90% of their workforce for the duration of subsidy and three additional months. Also, the wage subsidy in the case of large enterprises could only be applied for furloughed workers.

[22] *Program ekonomskih mera za smanjivanje negativnih efekata prouzrokovanih pandemijom virusa Kovid-19 i podrsku privredi Srbije,* p.3, translated by CEVES.

Subsequently, the moratorium on bank credit was extended to end-September, and the wage subsidy was renewed but at a lower level and for a shorter duration. While the first amounted to 100% of the net minimal wage for each MSME employee during three months, the second subsidy amounts to 60% of the minimal wage for a duration of two months (August and September).

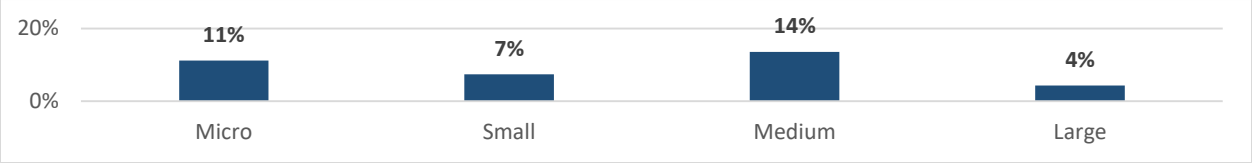
We take two approaches to assessing the impact of the measures. One, more relevant to their immediate and direct impact on MSME liquidity and employment in the very short term largely relies on information from the Survey, especially the views expressed by the businesses themselves in the relevant questions. This view is clearly given with a very short-term perspective, and one that, as we have seen, was based on a very positive outlook for the future. In the second section of this chapter we focus on an illustrative model to gauge the scope for improved targeting of the wage subsidy. This is needed to enhance the sustainability of the assistance, which is, in turn, key to enhance the sustainability of the MSMEs in the most affected sectors.

The business perspective at the end of the lockdown

There is little doubt that the measures were well appreciated by businesses. All the measures received individually high ratings (around 2,7-2,85) on a scale from 1-3 for how helpful the measure is considered to have been for the economy. Moreover, despite the lack of detail at the time of the measures' announcement, more than 90% of the enterprises stated that they completely understood them. Unsurprisingly the most appreciated has been the minimum wage subsidy (Figure 10).

However, when the question aims closer to home – **asking if the government's measures affected the company's decisions regarding employee retention, most businesses reply they did not, suggesting the actual short-term impact was much weaker than expected.** Less than one in ten of the surveyed businesses state they did, i.e. that they would have laid off (more) employees had it not been for the government measures. With the exception of food production, HORECA and wholesale – in all other sectors the share of enterprises stating this is well in the single digits. Nearly a half of those that do state it are in the food and HORECA sectors (respectively, 75% and 30% of sector enterprises), followed by 13% of enterprises in the wholesale sector (mostly motor vehicle sales). That these three sectors were more prone to layoffs than others is corroborated by the survey of sole proprietors, but those figures are not as extreme (respectively 25%, 9% and 13%). Overall, only 5% of sole-proprietors claims the measures made a difference. Interestingly, based on the two surveys, the government measures helped postpone layoffs only in some 5-7% of the lockdown enterprises other than HORECA. There is no clear correlation between enterprise size and the assessment of the government's measures. The effect of measures on decisions about keeping the number of employees was the strongest in case of medium enterprises (Figure 11). That may come as a surprise, since they were less impacted on average, and the application of the 10% condition is inherently more flexible the larger the company (e.g. the minimum share of the workforce that a 5-employee company can lay-off is 20%). However, this possibly attests to the greater flexibility of medium-sized companies overall.

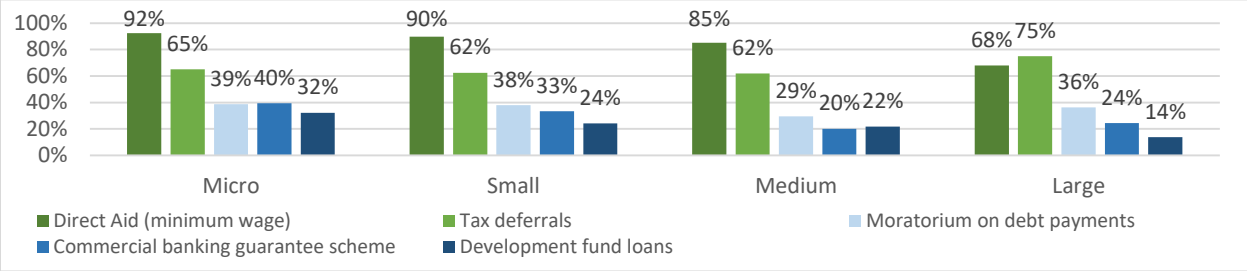
Figure 11 -- Share of enterprises that would have reduced their workforce in the absence of the Government' measures



Source: Survey with Serbian enterprises

The relevance of the different measures can also be gauged from company responses on the intention to recur to the offered instruments. Unsurprisingly, the largest proportion of businesses (85%-92%) intended to use the wage subsidy (Figure 12). Less than two thirds of MSMEs planned to recur to tax deferrals, which is not surprising. A revenue decline was suffered by three quarters of them and they were all able to access the wage subsidy, so this eliminated the need for at least some of them to defer them. This suggests even more than a third of companies had no practical need to defer taxes. As to the effect of the government's credit facilities, these schemes were fully implemented only well after the period of the survey. The number of companies intending to access them should be observed cumulatively as Banks and the Development Fund they tend to service different populations. Their number is substantial – ranging between 42-72% of respondents, in inverse proportion to company size group. Finally, the fewest enterprises reported recurring to the debt moratorium (between 30-40%). This is not surprising, in view of the fact that two thirds of companies do not rely regularly on bank credit. In fact, as many as 87% of companies that do regularly rely on bank credit expressed the intention to avail themselves of the moratorium, and this is in line with the use of the moratorium reported by key informants from the banking sector.

Figure 12 -- Have you used or plan to use any of the following measures?



Source: Survey with Serbian enterprises

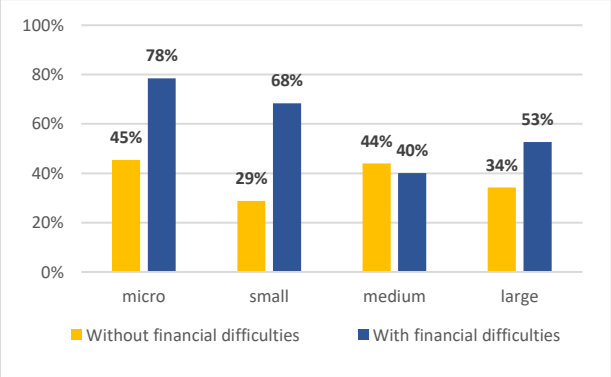
As regards **the very short-term effects on liquidity and staff retention, most government's measures came too late to make much difference** and the NBS's measures –which were timely—percolated to only a very small portion of MSMEs. Clearly the tax deferral was of critical importance to liquidity. However, the implementation of National Bank's response served, of course, to protect the stability of the financial system. However, commercial bank funding reached too small a share of the MSME population during the lockdown, as discussed in the previous section and shown in Figure 7. On the other hand the wage subsidies which had a very wide reach, arrived too late to have a critical liquidity effect-- it reached

business only on May 7th, i.e. after the lockdown had already ended. From the point of view of employment, in addition to what 90% of the businesses claimed themselves, key informant interviews emphasize that the reluctance of businesses to cut staff has been largely driven by the overall perception of an extremely tight labor market.

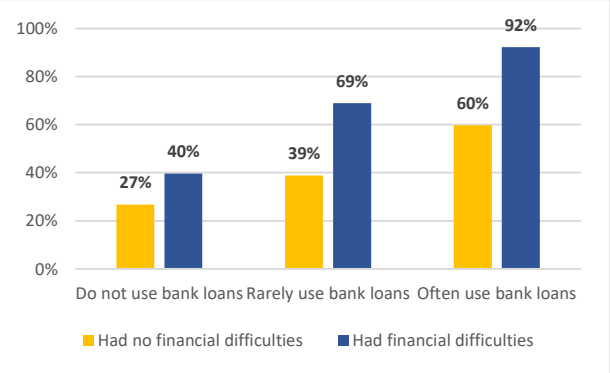
The favorable credit facilities offered with the Government's package are likely to have significantly enhanced the sustainability, as well as liquidity, of those businesses in financial need who already had regular access to bank credit. However, **as many as 60% of businesses suffering financial difficulties did not plan to apply for loans** (**Figure 13**). Credit from the government's schemes begun percolating into the system in late May, at best, and relatively gradually. The envisaged amounts have not yet been fully utilized to this date. At the time of the survey, companies in financial difficulties were 50% more likely to (plan to) access credit than those without difficulties. This is true across the range of sizes (with a possible exception of medium size ones). (Figure 13 left panel). However, a large proportion of companies did not intend to access bank credit despite expressing some kind of need—over 20% of microenterprises, 35% of small enterprises and as many as 60% of medium sized enterprises.

Figure 13 -- Proportion of enterprises planning to use credit facilities

By enterprise size



By financial status and practices



Source: Survey with Serbian enterprises

Being a company that regularly accesses bank credit more than doubled the likelihood that a company will apply for a credit compared to companies that stated they do not, or rarely use bank credit. This suggests the terms of the credit facilities offered by the government did not succeed in enticing a significant proportion of those MSMEs that do not usually access bank credit to do so now (Figure 13). In other words, the extent to which companies rely on bank credit was a much stronger factor than need in determining whether they will access it now.

Certainly, a key factor is that the banks themselves have reported to prioritize their regular customers under the current circumstances – this was seen as a matter of good bank-client relations. Moreover, the measures did not aim to remove key factors of constraining MSME access to credit. Even the loans offered through the Development Fund were required to be backed by collateral, which in the case of MSMEs usually comes down to using personal property. This clearly has to be a major deterrent in

accessing bank credit for many MSMEs. Finally, poorly understood but well documented factors for MSME a priori aversion to debt, may also have been an obstacle.

Clearly, the strongest overall effect on MSMEs was accomplished with the wage subsidy --contributing to the accomplishment of all three stated goals, but mainly for labor intensive MSMEs and mainly after the lockdown. What is more, the *only* enterprises that are excluded from this assistance are those whose sustainability is better helped by a 10% payroll reduction than by a net minimal-wage subsidy for every employee. These are companies whose situation can be assumed to be so difficult that they cannot afford to keep paying the portion of wages in excess of the minimal wage as well as paying/deferring payroll tax obligations. All else equal, these will tend to be higher-productivity companies with higher average wages. In other words, in the longer term the restriction undermines productivity growth, although in the short-term it has a welcome distributional effect. Also, this kind of assistance does not help much small companies for whom rented or leased capital equipment and real estate play an important role—such as transport companies with leased trucks, or hotels in rented premises.

Scope for better targeting – illustrative scenarios

All the government's measures are being provided based on a completely horizontal approach which ultimately reduces the fiscal space for government action that will be needed over the medium- term. And while the first two will, in the event, have an element of self-selection (with those that cannot service the debts defaulting), the wage subsidy is a powerful tool whose blanket distribution comes at an unnecessarily high cost. It reduces the government's fiscal space for continued action, undermining its capacity to secure business sustainability over the medium-term. We here present an illustrative model of how the wage subsidy could be substantially better targeted in an administratively feasible manner.

Considering that the epidemic is clearly having distinct effects on different sectors, by directing more assistance to more affected sectors, and saving resources where they are likely to be an unjustified windfall, it is possible to significantly reduce the subsidy's costs and hence extend the length of its sustainability. The cost of the first package (paid for months of April-June), according to our model was approximately Euro 710 million (three months at 237 million each, Table 11). The subsidy paid equal amounts per employee to companies regardless of the size of their revenue loss. Assuming that this compensation made a sufficient, meaningful, difference to the sustainability of the companies that most needed it (those in the lockdown sectors) then the companies that suffered smaller losses were overcompensated. In particular, we estimate that 110 million euros was spent just on companies that in fact did not even suffer any revenue loss, or might have had a gain.

Table 11 -- Direct wage subsidy scenarios – costs, mil. Euros

	Sector impact level			Total	
	1- High	2 - Medium	3- Low		
	Passenger transportation, HORECA and Tourist agencies, Education and Health, Personal services, Gambling	Other manufact., Specialized retail, Wholesale (and motor vehicles), Freight, Professional services	Food and Beverage, Construction , Food Trade, ICT	Monthly	Quarterly
# Employees	110.139	590.095	216.883	917.116	917.116
Package I (state of emergency)					
Subsidy level, % net minimal wage	100%	100%	100%	…	
Total cost, mil. Euros	28	152	56	237	711
Package II (summer/fall 2020)					
Subsidy level, % net minimal wage	60%	60%	60%	…	
Total cost, mil. Euros	17	91	34	142	284
Targeted package I					
Subsidy level, % net minimal wage	100%	50%	15%	…	
Total cost, mil. Euros	28	76	8	113	339
Targeted package II					
Subsidy level, % net minimal wage 1	85% 1/	43%	6%	…	
Total cost, mil. Euros	26	65	4	94	189

1/ Hotels receive a full gross minimum wage subsidy per employee.

Source: CEVES estimates

To illustrate how better targeting could result in the greater availability of funds for those that really need them over the medium term, we construct a model that sets the size of the wage subsidies in proportion to the revenues lost by businesses. We do not here question the proportionality of subsidies to a company's wage bill, but rather depart from the view that it should also be proportional to the loss of revenues. Thus a business that lost 50% of its revenues should receive twice the size of subsidies as a company with an equal workforce that lost 25% of its revenues. Of course, targeting the assistance to reach only the companies that suffered a revenue loss, and only in proportion to the loss suffered would be ideal, but it is administratively extremely difficult. Any recommended policy needs to be administratively feasible. Hence, we assume the assistance criterion to equal the average impact the lockdown had on the industries to which the businesses belong. The administrative observation of the true industries of operation for each business could be complex, but there is no need for that. The sectors of company registration with the Business Registry Agency tend to be reasonably close to the truth. Moreover, the Business Registry maintained by SORS is in fact quite highly accurate, and in an ideal policy coordination it could be used to resolve dilemmas and improve the accuracy of registration overall.

We construct a simple simulation model to calculate the monthly costs associated with four sets of packages: the first and second are the actual packages of support enacted by the government (the first has already been implemented and the second is under implementation), as well as two additional targeted hypothetical packages that correspond to the actual ones. The first targeted package corresponds to the first actual, more generous package and the other is „tighter", corresponding to the government's second actual package.

The sectors as defined for the current study are classified in three groups—the first consists of those that lost more than 50% of revenues, and the third, the least impacted, that lost less than 16%; the revenue losses of the second group are in-between those limits. In Table 11 the classification of sectors is shown in the heading.

Both hypothetical, targeted, packages assume that each of the groups of sectors receives support in proportion to the upper limit of the group's revenue loss, but that they differ with regard to the highest compensation paid, as well as the duration of the subsidy, just as in the case of the two actual packages. The first targeted package is paid for a duration of 3 months and it pays the most impacted group 100% of the minimum wage per employee—all the same as the actual first assistance package. However, the medium impacted group is paid 50% of the minimum wage per employee, and the least impacted group is paid 15% of the gross minimum wage per employee (Table 11). These payments more accurately reflect the relative needs of the latter two groups of sectors and it costs only Eur 339 million compared to the estimated cost of the actual package (Eur 711 mil), a saving of nearly 400 million in three months.

The second targeted package scenario has been developed with the future in mind. We expect that if the epidemic evolves as projected in the optimistic scenario in the previous chapter, the government may be able to avoid paying broadly aimed wage subsidies altogether. However, if the future evolves along the lines of the pessimistic scenario, then it will be politically impossible, and, as we argue below--economically unwise to resist continuing to assist at least some of the most affected MSMEs. However, in that case the government needs to have resources to cover 5 quarters of assistance. Sticking with the relatively frugal 60% of the minimal wage for 2 out of 3 months per quarter would cost it over Euro 1 billion and, according to our model in the previous section, it would still not quite prevent the bankruptcy of the majority of businesses in the lockdown sector.

Thus, we calibrate the targeted package II to secure 85% of the minimum wage to the group of sectors in Impact level 1, and proportionally less to the others, as in targeted package I above. With these assumptions, as shown in the simulations in the previous Chapter the rate of failure of restaurants alone is reduced from 75% to 22% (Table 10)., and we can expect that the effect on other lockdown sector companies is similar. We do, however, expect that most hotels would be in much greater difficulties and hence assume they are extended a full gross wage subsidy for the salaries of their employees. Overall, Targeted package II saves nearly 50 p.p. more companies, yet it costs a third less than the second actual package—a savings of nearly half a billion Euros over the course of the five quarters, if they prove to be as stressful to the economy as the pessimistic scenario suggests they could be.

While our simulations refer only to the wage subsidy, the authorities may want to consider a similar kind of gradation for the eventual write-off of portions of deferred taxes in cases of companies that have been missed by the wage subsidy (due to layoffs), or for companies where labor costs are known to be structurally a small share of operating costs. Also, incentives could be built in for improving the transparency and accuracy of company accounting, for example, by offering the possibility to improve the accuracy of last year's reports in order to show this year's losses more realistically.

This is an illustrative model whose targeting in practice could be easily further improved by targeting enterprises by sub-sector and size. In our case, the presented sectors are a bit too heterogeneous to be

adequate for ready application. With sufficiently homogenous sectors, every company within a sector would receive at least as large a subsidy as the most impacted business in the group. In reality, of course, every sector has some companies that performed worse/better than even the upper/lower boundaries of the group. In the case of this illustration, the first group of sectors is sufficiently homogeneous to be well targeted. Companies in this group account for only 12% of all employed, but they account for 42% of all those that were employed in companies unable to work during the lockdown. Moreover, the reasons for their shortfall in revenues are likely to remain relevant throughout the crisis.

In a practical application the middle group of industries that would need to be more refined. As it is, it still incorporates as many as 49% of people that were employed in blocked companies (v. a 65% share in the total number of employed). This is because large sectors such as construction and wholesale trade comprise specific subgroups that were strongly affected (micro companies in construction, and automobile sales in wholesale). The former were largely affected by transient, first-lockdown related effects. The latter, however, are likely to continue to suffer. Also professional services consist of a broad range of subgroups: from cleaning services—most of which are likely to have suffered substantially with office closures, as well as consultants – most of which have not.

Why subsidize?

Even the more frugal targeted subsidy package II is quite expensive –reaching nearly Eur 1 billion over a period of 5 quarters. To emphasize: this is a package that would need to be considered in case the epidemic cannot be quite contained to the performance exhibited in Q3, the warmest and in many ways least busy of all quarters. Things may not come to this, but the possibility cannot be ruled out. In this section we present why the authorities would do well to consider such assistance, even if they may wish to further narrow down the scope of businesses to reach, or to combine/replace the subsidy with highly concessional loans.

The reason is not only to save jobs, but also to reduce the knock-on effects that business failure would have on the broader economic activity. As shown in the simulation presented in Table 10, in the pessimistic scenario, and assuming that the 2019 profitability profile is not far from that shown in Table 9, as many as 16,395 restaurants or cafes run losses, and ultimately become unsustainable. The subsidy reduces this figure by a factor of 3. We ought to expect that the failure of a business in the time-frame that we are considering results in the loss of at least some portion of the economic activity generated by this business, and this has an indirect effect on the rest of the economy.

In the extreme assumption that all lossmaking enterprises fail, and that their entire business disappears the economy-wide loss would amount to 1.8% of total GVA, or Eur 671 million. This assumes a direct loss of catering sector income generation of 0.7% of GVA, that is further multiplied –through the input-output indirect and induced effects (by the coefficient 2.6 in Table 8).

This is an extreme figure. We should expect that in reality it would take a period of sustained losses for most businesses to close. Many businesses would not fail but rather run a debt for a while. Also, in reality some businesses are being much more affected than others—a is the case, for example, with wedding venues. Also, we have to expect that some portion of the business lost to the failed businesses would spill

over to the remaining establishments. However, because under the current crisis real estate space at the disposal of the operating businesses is a substantial limiting factor, less spillover can happen than usual. We can expect that the latter factor would have a lesser mitigating effect on the economy, than usual, and by crowding space may increase health hazards. The loss of economic activity could thus be a half, or a third, or even a smaller share of the above figure.

Still, it would remain likely to compare well with the annual cost of the subsidy that would be paid to the catering sector –amounting to a total for the 5 quarters of Euro 113 million.

Conclusion

In addition to a rather detailed account of the impact of the March-April lockdown this study analyses the economic turnout in its aftermath and offers an indicative analysis of the factors likely to affect the performance and needs of MSMEs in the short- to medium- term. Particular attention is paid to MSME business segmentation, by (sub)sector and size. It also estimates the plausible range of effects the management of health policies will have on the on the lockdown sectors – the most affected MSMEs-- and the economy through 2021. The study also assesses the impact of government policies thus far and provides an illustrative model of the potential that exists for increased efficiency in the use of public funds through improved targeting of the sectors in need.

The severe lockdown imposed in March dealt a strong blow to s MSME, and especially companies in the "lockdown sectors". However, most businesses have shown resilience and an ability to adjust to the new circumstances of operation, largely because of what seems to be a habit of maintaining reserves and diversified business portfolios even when they are small. This factor deserves to be further studied.

Judging from hindsight and the lessons of the second wave of the epidemic, the March-April lockdown was excessively rigorous, especially concerning the onerous, and apparently excessive or even unnecessary, limitations on the hours of operation of businesses outside the lockdown sectors. If a very strict lockdown does need to be repeated in the winter months, its economic costs would be sharply reduced if normal hours of operation can be maintained and safe public transport is made more broadly available. Companies clearly tended to be more affected by the lockdown the smaller their size. However, outside of the "lockdown sectors" much of the supply-side obstacles to the operation of MSME have become manageable and the experience of a new wave of the epidemic (suffered in late June and July) suggests that their performance will be predominantly affected by factors related to demand-side factors. On the other hand, the sustainable management of the epidemic will require permanent limitations on the operation of the lockdown sectors.

The future depends on the management of the epidemic mainly through the careful imposition of limitations on the operation of the lockdown sectors and sustainable management of public finances. Key exogenous factors remain export demand – which have so far proved resilient as regards MSME products—and inward foreign investment which has recently supported a construction boom. The latter appears to continue quite unabated for the moment, but data on new construction permits and capital inflows in July are not encouraging about the slightly longer- short-term prospects. The lockdown sectors, most traditional services and non-negligible parts of smart/creative services are unlikely to return to "normal" in the foreseeable future. These are overwhelmingly MSME sectors and their reserves are being drawn down. Wise and differentiated policies are likely to make a critical difference to their sustainability and the longer-term effects of the pandemic on the structure of Serbia's economy. This, in turn, requires the careful targeting of scarce fiscal funds, to ensure the fiscal space needed over the longer haul.

Annex 1: Brief description of the research

The research was carried out on the basis of a representative survey of micro, small, medium and large enterprises, excluding the Sole proprietors (SPPs) that submit financial reports.

The survey lasted between late April and late May, and the surveyed companies are comprised of companies operating in 12 business activities, as follows:

Sector	#	NACE 2			NACE 3	
Manufacture of food products + beverages + tobacco	1	10	11	12		
Man. of computer, electronic and optical products + medical and dental equipment	2	26			325	
Other manufacturing	3	From 13 to 33, excluding 26				
Construction	4	41	42	43		
Wholesale trade	5	45	46			
Retail trade of food, beverages, and tobacco in specialized stores	6				471	472
Other retail trade	7	47 (exc. 471 and 472)				
Passenger transport and travel agencies	8	79			4931	4939
Freight transport	9	49	50		494	52
Accommodation and food service activities	10	55	56			
Information and communication	11	Entire J (58, 59, 60, 61, 62, 63)				
Professional and other services	12	From 68 to 82 excl. 79				

The frame for the research was constituted at the basis of the Statistical business registers (with a cutoff date of 16/04/2020). As for the companies, the framework includes all business entities, which have provided their financial reports for 2018, which are privately owned, and which have provided information on their revenues. They were classified into micro (less than 10 employees), small (10-49), medium (50-249) and large (250+), according to the employment data available on the CROSO database.

Final stratification of the sample was performed by using the Hidirglou algorithm. This approach has, under the assumption that it is needed to estimate the number of employees with an error of 6%, determined the units which need to be selected in the sample (the so called ''census'' business units) – with an error of 6% - whereas the remainder of units is homogeneous in terms of employment size. The approach has yielded a total of 48 stratums.

Allocation for the SME sample was performed at the basis of the Behtel algorithm, based on the Neyman method, under the assumption that the error for the number of employed is 5% at the level of Serbia, and for the revenues is at 8%, with a 1,000 companies being allocated.

Allocation for the sample of large corporate was performed at the basis of the Neyman algorithm, based on the number of employed persons, with a total allocated sample amounting to 70.

Annex 2: List of contacted stakeholders

Institution	Name of interviewee	Function of interviewee
Atelier Consulting	Siniša Otašević	CEO
Brzan Plast	Dejan Simić	CEO
Cini Invest	Srđan Spasović	CEO
Cini Invest	Srđan Spasović	CEO
Crystal Hotel	Dušan Puletić	CEO
Cuoco doo	Marko Gašić	Owner
Cuoco doo	Marko Gašić	Owner
Dorian Gray	nemam upisano ime	Manager
FACTS	Nemanja Radujević	Board member
FAO	Miloš Milovanović	Consultant
Frizerski salon Duška	Duška Bogataj	Owner
Frizerski salon Trend	Slavica Bogosavljevic	Owner
Furnex	Slavko Stamenić	Owner
Gacatrans	Dragan Zagrađanin	CEO
Gama consulting	Aleksandar Jelić	CEO
Greiner Packaging	Goran Jovanović	Commercial director
Himtex	Zdravko Vuksan	CEO
Hotel Beograd	Miladin Paunovic	Manager
Hotel Konstantin	Aleksandra Bogdanović	CEO
Hotel Livade	Marisela Belic	Marketing manager
Hotel Mona	Tomislav Momirovic	Owner
Hotel Morava	Marisela Belic	Marketing manager
Imidžstudio	Nadežda Mateović	Owner
Interfast	Darko Filipović	Owner
Interfast	Darko Filipović	Owner
Izolator	Milomir Šarac	Owner
Kozmetički salon M/J	Jelena Mandić	Owner
Kozmetički salon Mezotic	Tijana Đurđević	Owner
Ministry of transport	Saša Stojanović	Assistant minister
Mlekara Lazar	Milan Vidojević	Owner
Mona doo	Uroš Momirović	Owner
Mona plaza	Tomislav Momirović	Owner
Multicatering	Dragana Dragišić	Supply manager
Odmaraliste Zdravljak	Marisela Belic	Marketing manager
PACOM doo	Dragan Ćosić	Owner
Pan Pak	Milojko Pantelić	Owner
Peštan	Danijela Popović	CFO

Institution	Name of interviewee	Function of interviewee
PKS - Niš	Dragan Paunović	Coordinator for agriculture
Prizma	Spasoje Puzić	Commercial director
Restoran Na ćošku	Dimitrije Dimitrijević	Owner
Restoran Sorizo		Manager
Rivex spedicija	Zoran Radojičić	CEO
RPK Niketić i Todorović	Jovan Niketić	Owner
Stamatović zubarska ordinacija	Darko Stamatović	Owner
Strauss Adriatic	Siniša Daničić	CEO
Sunnyvill	Vladimir Radovanac	Responsible person
Termomont	Darko Despotović	CTO
Trivit Group	Vera Šćepanović	CEO
Trnava promet	Zoran Vukićević	CEO
Unior Components	Ljubinka Mihajlović	CEO
Urban construction	Nemanja Bajović	Owner
Urban construction	Nemanja Bajović	Owner
Vinograd doo	Darko Matejić	Owner
Vulović transport	Mališa Galjak	CEO
YUTA	Aleksandar Seničić	CEO

Annex 3: Questionnaire used for the survey

1. General information about the company

1.1. How many workers did you employ at the end of February? (fill in the number)
1.2. What is the share of women in your workforce? (fill in the share in %)
%
1.3. What is the type of ownership of your company? (select one)
Foreign ☐ Domestic ☐
1.4. What product or service do you consider to be the most important for generating revenues of your company? (describe briefly)

2. Place of the company within the value chain

2.1. Has your company exported goods or services over the previous business year? (either directly or indirectly, including net revenue from re-export)
Yes ☐ No ☐
If the answer is "Yes", go to question 2.2., If the answer is "No", go to question 2.3.
2.2. What percentage of your company`s revenues came from exports over the previous business year? (including net revenue from re-export)
%
2.3. Who is (are) the dominant buyer(s) of your company's products or services (refers to the period before the crisis)? (multiple answers allowed)
a) General population (directly or through retailers or wholesale) ☐ b) State and state-owned companies ☐
c) Domestic MSMEs ☐ d) Domestic large companies ☐

e) Foreign companies	☐		
2.4. To which industry sector do you typically sell your products or services (refers to the period before the crisis)? (multiple answers allowed)			
a) Agriculture	☐	b) Producers of food, beverage, and tobacco	☐
c) Manufacturing industry engaged in the production of consumer goods (except producers of food, beverages, and tobacco)	☐	d) Manufacturing industry engaged in the production of raw materials, inputs, parts, and capital goods	☐
e) Construction	☐	f) Services	☐
g) Other (please specify)			
2.5. Does your company rely on any of the following elements of e-business possibilities? (multiple answers allowed)			
a) E-commerce / sale over the internet	☐	b) Payment of bills and other obligations (e-banking)	☐
c) My company has a website	☐	d) Communication with clients	☐
e) Other (please specify)		f) We do not rely on any of e-business elements	☐
2.6. How much did your business rely on bank lending before the crisis? (select one)			
a) Insignificantly / Very rarely	☐	b) Sometimes	☐
c) Significantly / Often	☐		

3. The direct impact of the covid-19 crisis on demand and production process:

3.1. How did the crisis affect your product sales in March-May compared to what you expected at the beginning of the year? (select one)			
a) Sales are above expectations	☐	b) Sales are as expected	☐
c) Sales are below expectations	☐		
If the answer is "b)" go to question 3.3			
3.2. How much are the sales above/ below of what expected? (select one)			

a) Up to 10%	☐	b) 11-30%	☐
c) 31-50%	☐	d) 51-70%	☐
e) Over 70%	☐		
3.3. If orders for your products were at the level you expected before the crisis, would you be able to meet them? (select one)			
a) Yes ☐		a) Yes, but with higher costs (losses) that are not sustainable	☐
c) No ☐			
3.4. How would you characterize your company's production or service process during the crisis and state of emergency? (select one)			
a) We could not operate at all or almost at all	☐	b) We managed to organize the business (production), but at reduced capacity	☐
c) We managed to organize the business (production) at a relatively satisfactory level, but with interruptions, difficulties, and additional costs	☐	d) Other (please specify)	
3.5. During the crisis period (March-May), did you have any difficulties in settling financial obligations to your suppliers? (select one)			
Yes ☐		No ☐	
3.6. When procuring materials and/or services necessary for your business, do you have a significant problem considering any of the following factors due to the crisis (excluding financial factors)? (multiple answers allowed)			
a) Domestic suppliers are unable to produce and / or deliver	☐	b) Foreign suppliers are unable to produce and / or deliver	☐
c) The prices of the materials / services we use went up significantly	☐	d) Transportation takes too much time or it is expensive	☐
e) Other (please specify)		f) We have not faced any of these problems	☐
3.7. What factors represent a significant obstacle for usual operation of your company during the state of emergency and other crisis conditions? (multiple answers allowed)			

a) Transportation of employees to work	☐	b) Shorter working hours	☐
c) Employees are absent from work / Employee health issues	☐	d) Inability to implement social distancing between employees at work	☐
e) Inability to obtain sufficient protective equipment (masks, gloves, disinfectants, etc.)	☐	f) f) Inability to organize work from home (remote work)	☐
g) Other (please specify)		h) We have not faced any of these problems	☐

4. Company's response to the crisis conditions

4.1. Has your company taken any steps to reduce its labour costs due to crisis? (select one)

Da ☐ Ne ☐

If the answer is "No", go to question 4.5.

4.2. What measures has your company taken to reduce its labour costs? (multiple answers allowed)

a) We have reduced the number of employees	☐	b) We have reduced all wages/salaries	☐
c) We have reduced the wages of only those employees who are unable to work in during the crisis (those whose workload has significantly decreased due to crisis)	☐	d) Reduction of working hours	☐
e) We have introduced collective paid leave (as defined by Articles 116 and 117 of the Labour Law)	☐	f) Other (please specify)	

Respond to question 4.3. and 4.4 if the answer under "a)" is marked.

4.3. How many employees did you lay off during the crisis?
(please state number or percentage, depending on data availability)

4.4. What is the wage level of the laid off employees? (select one)

a) Mostly low-wage employees	☐	b) Mostly high-wage employees	☐
c) On the company average	☐		
4.5. Has your company implemented any of the following measures to adapt to state of emergency and other crisis conditions? (multiple answers allowed)			
a) We have implemented working from home	☐	b) Establishing physical distance between employees	☐
c) We have implemented shorter shift work	☐	d) We have found a replacement for suppliers who cannot produce or deliver necessary inputs	☐
e) We rely on e-commerce /delivery more	☐		
f) We have made some adjustments to our product/service so that we can continue with our business at least to some extent	☐		
4.6. Has the collection of your accounts receivable been significantly reduced compared to the period before the crisis? (select one)			
Yes ☐		No ☐	
4.7. How do you cover for the lack of funds (due to reduced collection of accounts receivable and reduction of sales and/or increased costs)? (multiple answers allowed)			
a) We do not pay all obligations to employees / or I pay reduced amounts	☐	b) We are being late with my payments to suppliers	☐
c) In addition to tax and loan deferrals, we do not pay obligations towards public enterprises (water, electricity...)	☐	d) We rely on reserves (personal, family and friends)	☐
e) We have applied for a loan	☐	f) We do not lack funds	☐

5. Economic policy response by the Government of Serbia

5.1. Are the procedures for obtaining assistance from the Government's economic measures clear to you? (select one)			
Yes ☐		No ☐	
5.2. Have you used or intend to use any of the following Government assistance measures: (multiple answers allowed)			
a) Tax deferrals	☐	b) Moratorium on debt payments	☐
c) Direct aid – minimum net salary for each employee	☐	d) Financial support through commercial banking guarantee	☐

scheme	
e) Financial support through loans for perseverance of liquidity by Serbian Development Fund ☐	f) We have neither used any of the measures, nor we intend to ☐
5.3. For each of the Government measures you have used or expect to use, rate it on a scale from 1 to 3 with respect to the expected contribution to sustainability of your company. (1-no contribution; 2-small contribution; 3-significant contribution)	
a) Tax deferrals ☐	b) Moratorium on debt payments ☐
c) Direct aid – minimum net salary for each employee ☐	d) Financial support through commercial banking guarantee scheme (under facilitated conditions) ☐
e) Financial support through loans for perseverance of liquidity by Serbian Development Fund ☐	
Answer the following question if you have not marked the answer "c)" in question 5.2.	
5.4. Why won't you use direct aid in form of minimum net salary for each employee? (multiple answers allowed)	
a) I have no need for help ☐	b) b) Laying off more than 10% of employees has a greater contribution to sustainability of the firm ☐
c) The measure has become available to late ☐	d) Other (please specify) ☐
Answer the following question if you have not marked the answer "d)" in question 5.2.	
5.5. Why won't you use financial support through commercial banking guarantee scheme under facilitated conditions? (multiple answers allowed)	
a) I do not need additional liquidity ☐	b) We do not expect that bank would approve us a loan ☐
c) It would be too hard to pay off debt and interest ☐	d) Banks are requesting mortgage (personal property) and we cannot risk that much ☐
e) Other (please specify) ☐	
Answer the following question if you have not marked the answer "e)" in question 5.2.	
5.6. Why won't you use financial support through loans for perseverance of liquidity by Serbian Development Fund? (multiple answers allowed)	
a) I do not need additional liquidity ☐	b) We are not ready to risk personal property on the ☐

mortgage	
c) We cannot commit that we will not reduce the number of employees by less than 10% in the next three months ☐	d) We are not in the Fund's registry ☐
e) Other (please specify) ☐	
5.7. How useful for your company would be the possibility to pay VAT only after the realisation of the payment on a scale from 1 to 3. (1-no contribution; 2-small contribution; 3-significant contribution)	
Grade: ☐	
5.8. How satisfied are you with the engagement of the Serbian Chamber of Commerce in resolving the difficulties caused by the crisis? (1-dissatisfied; 2-I have no opinion; 3-satisfied)	
Grade: ☐	
5.9. How do you generally assess the Government's measures (given the constraints) have responded to the needs of the economy? (1-dissatisfied; 2-I have no opinion; 3-satisfied)	
Grade: ☐	

6. Look to the future

6.1. Would you have laid-off (more) employees during the crisis if it were not for the Government's measures? (select one)	
Yes ☐	No ☐
If the answer is "No", go to question 6.2.	
6.1.1. How many would you lay-off? (number of employees or percentage)	
☐	
6.2. Under the assumption that the normalization of the situation will continue throughout May (that there will not be new wave of the epidemic), what are your employment plans from June? (multiple answers allowed)	
a) I will lay-off some workers ☐	b) Number of workers will remain unchanged ☐

c) I will employ additional employees ☐

Answer the following question if you marked the answer "a)" in question 6.2.

6.3. What would your employment plans be if state of emergency had continued throughout May? (multiple answers allowed)

a) I would lay-off some workers ☐

b) Number of workers would remain unchanged ☐

c) I would employ additional employees ☐

6.4. Under the assumption that the normalization of the situation will continue throughout May (that there will not be new wave of the epidemic), how do you evaluate sustainability of your company? (multiple answers allowed)

a) Our business will be sustainable ☐

b) Our business will be sustainable only if portion of our debt is cancelled/forgiven ☐

c) The only way that our business can be sustainable is that we are forgiven all debt, including the debts towards employees ☐

6.5. Would access to additional loans under preferential conditions significantly facilitate sustainability of your business (loans without guarantees of personal property, longer repayment period and interest rate up to 1%)?

Da ☐ Ne ☐

Answer the following question if you answered "Yes" in question 6.5.

6.5.1. How much money would you require under these conditions? (in EUR)

6.7. How long will it take for your business to recover to pre-pandemic levels?

6.8. In the event of a second wave of epidemics that would lead to the reintroduction of measures that were in force during April, how likely would the following situations be for your company? (1-unlikely; 2-option under consideration; 3-certain)

a) Permanent closure of the company

b) Temporary closure of the company with unpaid leave to employees

c) Further reduction of employees' salaries

d) Reduction of the number of employees by more than 10%

e) Other (please specify)

7. Additional:

7.1. **Do you think that there is any other relevant topic that is not covered by this questionnaire, which concerns the business of your company in time of the crisis?**
Yes ☐ No ☐
If the answer is "No", please fill in the data on the respondent.
7.2. What would the topic be? (please describe)