

Turkish Firms and the Covid-19 Outbreak: Preliminary Evidence for General Business Outlook and Responses

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Abstract

The global Covid-19 crisis hit public life and the economy hard in the first half of 2020. This study examines the impact of Covid-19 on business by considering survey data from 182 Turkish firms operating in the manufacturing sector. The data analysis revealed several key findings. First, Covid-19 has negatively influenced business turnover and has increased uncertainty, with competitiveness expected to remain moderately high. Second, firms have responded to the Covid-19 crisis flexibly at the organizational and operational levels. Even though many firms have applied for state support schemes, there has been considerable criticism of the scope and amount of support on offer. Firms anticipate that the shutdown will last up to 24 months, although many may face severe restrictions as the crisis continues. In addition, the results indicated that the impacts of Covid-19 crisis differ among sectors and firm sizes. Discussion centres on the implications of these findings for businesses, both within Turkey and beyond.

Keywords: business uncertainty, business expectations, mitigation strategies, Covid-19 crisis, government promotion

1. Introduction

China reported the first Covid-19 case in December 2019 in the state of Wuhan, Hubei province and rapidly implemented a strict lockdown of business and public life. Nevertheless, Covid-19 spread rapidly across the globe and was confirmed as a pandemic by the World Health Organisation on 12 March, 2020, with Turkey announcing its first case a day earlier. Since then, the Turkish government has taken several actions in an attempt to reduce the effect of the pandemic. It has applied a mixed containment strategy including full lockdowns on official holidays, partial lockdown only for weekends, enforcement of social distancing and complete shutdown of several service sectors such as hospitality, travel, education and sport.

The implementation of strict rules to contain the virus has led to business closures and an adverse effect on supply and demand, increasing economic uncertainty. Nicola et al. (2020) propose a threefold categorization of the economic impacts of the Covid-19 outbreak. According to the study, the primary sectors of agriculture and petroleum will struggle hardest, the secondary manufacturing sector will slow down due to remote working and other restrictions creating disruption in supply chains, and finally tertiary sectors such as education, healthcare and the pharmaceutical industry, finance, tourism, hospitality, aviation and sports will be impacted by reduced consumer demand as a result of the fear of infection and self-isolation (Nicola et al, 2020).

Since the end of the Covid-19 outbreak cannot be predicted with any certainty, the negative spillover of the virus is predicted to continue until the end of 2020 under the best-case scenarios which estimate the virus will continue to be active in China at this point. Under the best-case scenarios, world GDP is expected to decline by .75% and global trade will decrease by 0.9% during 2020 (Boone, et al., 2020). Fernandes (2020) states that all countries will suffer economically, Based on actual data from China, Fernandes assumes that the global recession will not equally distributed across countries and sectors. Those which heavily depend on tourism earnings such as Greece may suffer more, whereas advanced economies which have more resistance in terms of their industrial power, financial status and government packages may be less affected. While some industries have experienced severe adverse effects, others such as those producing medical supplies or pharmaceuticals may benefit during the crisis (Fernandes, 2020).

Mann (2020) underlines that the Covid-19 outbreak will have substantial negative spillovers in three major areas: manufacturing and supply chains; tourism, transportation, and services relationships; and energy and commodity demand and prices. The global recession that will result differs from those of the post-2008 global financial crisis or Asian debt crisis, meaning that existing economic models are not equipped to estimate its consequences at the global and industrial levels. Research by Ozili and Arun (2020) has examined the global spillover effects on Covid-19 outbreak from the perspective of extended social distancing policies and lockdowns based on secondary data.

Government responses to the Covid-19 outbreak have included monetary, fiscal, public health and human control measures (Ozili and Arun, 2020). The study demonstrates that social distancing and lockdown policies have triggered recession at the global level although fiscal policies have ameliorated the effects to some extent. Recently, USA and Germany has announced biggest GDP fall due to Covid-19 crisis (DW,2020; New York times,2020) .

As in many countries, the pandemic has created serious negative economic consequences for Turkey. Uncertainty remains as to how long these negative influences will continue for Turkish firms as business confidence has dropped strongly since February 2020 (Trading Economics, 2020). Government responses have been similar to those of other countries. Turkey introduced an economic package of about 240 billion TL to mitigate the impact of Covid-19 on the business environment, with measures including delays in credit payments and tax obligations, easy access to liquidity for firms that are in trouble, short-term payments for employees and social security premiums (Çakmaklı et al.,2020). Turkey's strong health care sector has also mitigated the effects, due to its high numbers of qualified health workers, government-supported suspension of fees for infected patients and strong infrastructure in hospitals in terms of tools and medical supplies. However, as Çakmaklı et al.,(2020) state, the Covid-19 outbreak has caught the Turkish economy at a bad time. Turkey has experienced economic turmoil for the last three years, reflected in high inflation and unemployment rates, increasing foreign debts in the private sector, and so forth. The authors modelled various economic scenarios based on full lockdown, no lockdown and partial lockdown in the Turkish context, and advise that the lowest level of economic fallout will occur under the first scenario.

Both within and beyond Turkey, the responses of businesses to Covid-19 have followed a broadly similar pattern. For instance, Mercer's (2020) global surveys in March indicate that 30% of firms responded to the virus by closing plants, with 92% of businesses shifting to a remote working model. Another example based on German panel data showed that firms have restricted their investment activities and/or applied for credit to sustain their market positions (Buchheim et al., 2020). The impact of the virus on medium to long term business confidence has also been considered by researchers. Buchheim et al., (2020) provide evidence that firms' background and pre-crisis operating conditions are important determinants of responses towards the crisis, with uncertainty around sales and employment also reported. Another paper written by Bartık et al.,2020 based on large survey data on small businesses in the U.S. indicates that Covid-19 has created huge unemployment due to permanent and temporary shutdowns. It has also put many enterprises at risk due to the fragility of their financial positions.

While the above research is valuable, there is as yet little evidence on the responses of firms and the general business outlook specific to the national context of Turkey. The current study aimed to address this gap by investigating how firms have acted in response to the Covid-19 outbreak and their interpretations of the effects on business. In particular, the study focuses on firms' perceptions of uncertainty, how long they anticipate the crisis to last, their expectations of future sales, employment, revenues, and their evaluations of government actions for business. Section 2 of the paper explains how the survey data for this study was generated, while Section 3 describes and explains the results of the study.

2. Data

Our research utilized many resources to design survey questions with the aim of providing a comprehensive view of Turkish business during Covid-19. As mentioned, the paper tries to capture a snapshot of the general business outlook during this period of turmoil including views on employment, uncertainty, expected responses to Covid-19 and predictions about the path of the crisis. In this regard, Baker et.al. (2020) advise that Covid-19 business expectation surveys generate a valuable source of real-time data. A modified version of the Ifo Business Survey (IBS), which includes items related to Covid-19, was supplemented with additional details on expectations with indicators on energy prices, wages, raw materials, interest rates, output prices, the degree of competition and demand (see Koetse et al., 2006). In addition, items covering implications for employees in the context of Covid-19 were included (McKinsey *in* Craven et al.,2020), alongside those from Bartık et al., (2020) and other surveys on business uncertainty (Bloom et al.,2018)

The survey was conducted between 15 May and 10 June, 2020, during a period of partial lockdown across the major cities of Turkey. The samples were collected from among the 400,000 firms listed by the Istanbul Chamber of Commerce. We sampled manufacturing firms on the basis of involvement in exports, innovation, a minimum 15-year date of establishment and from various sectors including chemical, machinery, textile, food, energy and others. In the end, these steps produced a sample of 550 firms.

Anonymised data were collected through telephone interviews with firm owners or senior managers whose informed consent was sought and secured before conducting the surveys. We received 182 valid responses, a response rate of 35%.

2.1. Sample Profile

The sample of this study consists of 182 firms. According to OECD criteria (2017), 18,7% of firms were operating at the micro-scale, 12,1% at the small scale, 24,2% were medium sized and 45,1% were large enterprises. The majority of firms operated in the food sector (38), followed by chemicals (32), energy (29), machinery (24), textile (27) and other sectors (32) including metal, automotives and furniture.

Tables and Figures

Table 1: Summary of statistics

Descriptive Statistics					
	N	Min	Max	Mean	SD
COVID-19 Impact on Business	182	-3,0	3,0	-,626	1,4348
Business Uncertainty	182	,0	100,0	52,79	24,339
Decline in turnover	182	1,0	3,0	1,934	,7768
Competitiveness Expectations	182	-1,0	1,0	,275	,5959
Expected Shutdown duration	182	0	24	8,60	7,451
Reasons For Loss Of Revenue	182	1,0	3,0	2,017	,8642
Reaction: Working from home	182	1,0	2,0	1,357	,4805
Reaction: Short-time Work	182	1,0	2,0	1,434	,4970
Reaction:Reduction of time accounts and leave days	182	1,0	2,0	1,692	,4628
Reaction: Employment (e.g., layoffs, non-renewal of contracts)	182	1,0	2,0	1,923	,2672
Reaction: Plant Closure	182	1,0	2,0	1,846	,3618
Reaction: Ending production	182	1,0	2,0	1,819	,3863
Reaction: Increased stock-keeping	182	1,0	2,0	1,665	,4734
Reaction: Change of suppliers / diversification of supply chains	182	1,0	2,0	1,846	,3618
Reaction: Use of government support mechanisms	182	1,0	2,0	1,522	,5009
Reaction: Adherence to global and local health authority guidelines	182	1,0	2,0	1,099	,2994
Reaction: Communication with and support for affected employees	182	1,0	2,0	1,093	,2918

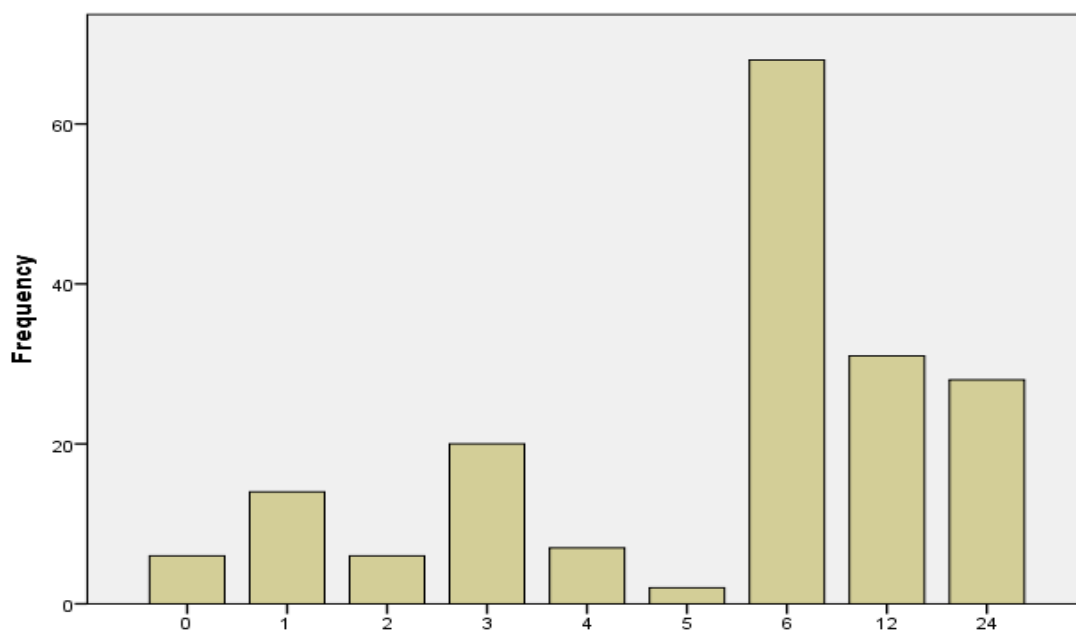
Reaction: Benchmarking efforts related to Covid-19	182	1,0	2,0	1,066	,2489
Reaction: Postponement of investment	182	1,0	2,0	1,676	,4694
Satisfaction with Govt support	182	1,0	2,0	1,533	,5003
Business expectations: Energy Prices	182	2,0	7,0	5,170	1,2116
Business expectations:Raw Materials	182	2,0	7,0	5,280	1,1627
Business expectations: Salaries	182	1,0	7,0	4,445	1,2099
Business expectations: Interest Rates	182	1,0	7,0	4,280	1,1532
Business expectations: Domestic demand	182	1,0	7,0	3,907	1,3032
Business expectations: International demand	182	1,0	7,0	4,154	1,2116
Business expectations: Final product prices	182	2,0	7,0	4,714	,8831

2.2 Descriptive Statistics

The results of our descriptive statistical analysis of the data summarised in Table 1 were as follows. Subjective business uncertainty was measured on a scale of 0 to 100 points, with the average value for uncertainty calculated at 52.79. The negative spillover of Covid-19 on firm revenues was calculated to be -.626, based on a scale from -3 to +3. Current decline in turnover was measured on a trichotomous scale where 1="No", 2= "Yes,partly", and 3= "Yes,completely". The mean value was calculated as 1,934 indicating that the of majority of firms perceived they would have the opportunity to recover some portion of revenues lost due to Covid-19.

A trichotomous scale was used to measure respondents' comments on the expected competitiveness of firms (-1" low-level,"0" fairly competitive", "1" highly competitive) and returned an average value of 0,275. We divided business expectations for the next two years into seven categories including energy, raw materials, salaries, interest rates, domestic & international demand and final product prices. These variables were measured on a scale from 1 "will critically decrease" to 7 "will critically increase". The results indicate that firms anticipate significant increases in energy consumption ($\mu=5,170$), use of raw materials ($\mu=5,280$), and final product prices ($\mu=4,71$), whereas salaries ($\mu=4,44$), interest rates ($\mu=4,280$), domestic demand ($\mu=3,907$) and international demand ($\mu =4,154$) were anticipated to remain approximately the same.

Expectations of the duration of lockdowns and restrictions on public life returned heterogeneous results, ranging from 0 months to 24 months with a standard deviation of 7,45. On average, firms are pessimistic about the duration of restrictions due to the Covid-19 outbreak, with the majority of firms reporting that it will take more than six months to resume normal life.

Figure 1: Distribution of Expected Shutdown Duration

Expected Shutdown Duration (Months)

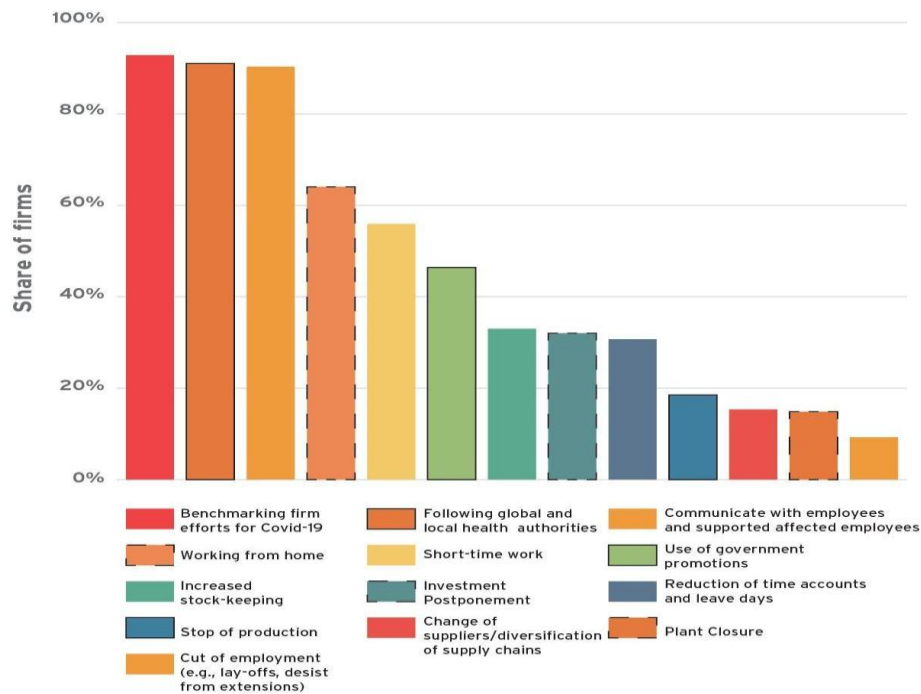
We asked whether the sources of turnover decline were those of decreased international sales, domestic sales, or both of them. The majority of firms reported that a downturn in international demand would cause a revenue loss of 36,8 %, whereas reduced domestic demand would lead to a loss of 25,3%. Additionally, some firms reported lost revenue of 37.6% due to a lowering of both international and domestic demand at the same time. In response to the item on the predicted survival time of firms under the restrictive trading conditions arising from Corona-19 measures, 88,5% of respondents expected their firms to survive more than six months, with almost 5% of firms reporting an anticipated survival time of 6 months maximum, and 5% of firms, less than 5 months.

2.2. Mitigation Strategies

Our sample indicates that the majority of firms implemented strategies to protect their workforce by following health authority guidelines, increasing awareness by communicating frequently with employees and benchmarking firm efforts for Covid-19.

Firms also responded to the Covid-19 crisis at the operational level, the most frequent responses by companies listed as working from home (64,3%) and short-time work (56,6%). Indeed, Turkey's Ministry of Labor and Social Services reports that approximately 270,000 firms applied for short-time employment grants, confirming this was a preferred response by the majority of the firms we surveyed. These findings are in line with the study of Buchheim et al.2020 that investigated mitigation responses in the context of German firms. In addition, 30.6% of firms have furloughed staff, whereas the rate of permanent layoffs was reported at only 8%. This appears to suggest that government support in the form of temporary work grants have prevented substantial numbers of layoffs which might hit the economy harder.

The data indicated that almost half (47%) of the firms benefited from government support schemes, leaving a significant proportion (53%) which had not applied for this support. 33% of firms reported an increase in production of stocks since the crisis, whereas firms reporting that they had changed or diversified their suppliers was relatively low at 16% in comparison to countries such as USA whose supply chains rely more heavily on imports (Fernandes, 2020). A low proportion of firms reported they had stopped production (18%) or closed plants (15%) in response to the crisis. Finally, 32% of firms reported postponing investment decisions as a result of the crisis, a significant rate.

Figure 2: Frequency of firms' mitigation responses to the Covid-19 outbreak

2.3. Firms evaluations for government Economic support

In this section, respondents' evaluations of government support during the Covid-19 crisis are presented. In response to the survey question asking respondents to evaluate the sufficiency of government support, 52,3% of the firms described it as adequate, meaning 47,7% did not find this to be the case. Respondents from firms who negatively appraised the Government schemes criticised them for several reasons. First, the level of support failed to meet their expectations, both in terms of its scope and the amount on offer, particularly in comparison to other countries. Respondents stated that support should be attuned to the variable impact of Covid-19 on different sectors, as well as acknowledging differences in turnover among firms. Ozatay and Sak (2020) suggest that it is important to prioritise some sectors and small-sized firms in order to secure business value chains. Additionally, some respondents criticised the lack of government intervention in energy prices, which remained high, and mentioned the failure to oversee the introduction of discounts, delays or grants in electricity, water and other kind of bills during the Covid-19 crisis.

The expectations of government support for Turkish firms were not met in several other ways. Respondents perceived that the government's Short Term Employment Allowance scheme was inadequate, and required a significant increase in order to avoid staff layoffs. Many firms have requested an extension to the scope of government support, including tax exemptions or tax delays until the end of 2020. In terms of funding, firms were expecting the availability of long-term, interest-free credit to increase, in order to invest in their production facilities.

Finally, firms criticised the raft of state measures as difficult to understand and access, increasing the likelihood of operational errors. Resolving these issues would facilitate the avoidance of operational errors and speed the application process for the government schemes. Finally, respondents reported the need for improved workplace audits and wider availability of testing to secure the health of their employees.

2.4. Covid-19 business impacts at sectoral and firm levels

Within the scope of this research, we analyzed the business indicators of different sectors in the Covid-19 crisis with a one-way ANOVA, and the findings are reported here. First, there was found to be a statistically significant difference between the business impact of the Covid-19 crisis on different sectors ($F=4,080$; $P=,002$). The Scheffe test result indicated that this difference is particularly pronounced in the machinery and textile sectors ($p=,006$) and between the textile and other sectors ($p=,049$). Subsequently, subjective perceptions of business uncertainty were measured for different sectors. The findings suggest that there is a statistically significant difference between the uncertainty level of firms from different sectors ($F=2,572$, $P=,028$). The Scheffe test evidences a statistically significant difference between the food and textile sectors ($p=,015$), with greater uncertainty observed in the latter.

Finally, a one-way ANOVA analysis conducted to test whether expectations of competitiveness varied by sectors found no statistically significant difference.

Table 2:ANOVA results of covid-19 economic impacts according to sector

			Sum of Squares	df	Mean Square	F	Sig.
COVID-19 Impact on Business	Between Groups		38,703	5	7,741	4,080	
	Within Groups		333,891	176	1,897		,002
	Total		372,593	181			
Business Uncertainty	Between Groups		7160,197	5	1432,039	2,572	,028
	Within Groups		97988,072	176	556,750		
	Total		105148,269	181			
Competitiveness Expectations	Between Groups		2,085	5	,417	1,180	
	Within Groups		62,179	176	,353		,321
	Total		64,264	181			

We also applied the same procedure of analysis to discover that some business impacts of Covid-19 differ according to firm size. While the impact on business does not differ according to firm size, there is statistically significant range in business uncertainty according to this variable ($F=4,199$, $p=.007$). The Scheffe test provided evidence that micro sized firms experience higher uncertainty than large firms ($p=.012$). Similarly expectations of competitiveness vary on this basis ($F=5,55$; $p=.001$). Expectations of competitiveness among Turkish firms varied between large ($p=.036$) and micro firms, large and small firms ($p=.030$); and large and medium firms ($p=.049$). Overall, larger firms assume their continued competitiveness over the next two years.

Table 3:ANOVA results of covid-19 economic impacts according to firm size

		Sum	of	Mean		Sig.
		Squares	df	Square	F	
COVID-19 Impact on Business	Between Groups	5,720	3	1,907	,925	.430
	Within Groups	366,873	178	2,061		
	Total	372,593	181			
Business uncertainty	Between Groups	6948,820	3	2316,273	4,199	.007
	Within Groups	98199,449	178	551,682		
	Total	105148,269	181			
Competitiveness Expectations	Between Groups	5,503	3	1,834	5,557	,001
	Within Groups	58,761	178	,330		
	Total	64,264	181			

3. General Business Outlook

In the previous section, we reported results on the effect of the corona pandemic in terms of its impacts on economic situation, perceived uncertainty, expectations and mitigation responses adopted by firms. Additionally, we reported how the impacts of Covid-19 impacts might differ according to sectors and firm size. The major findings are as follows.

First and most obviously, the study shows that Covid-19 has impacted business negatively, and perceived business uncertainty for the future is relatively high. Although firms are expecting a fairly competitive environment in domestic and international markets, this competition is not expected to be too demanding.

Secondly, the findings indicate that firms followed several mitigation strategies to protect employees and secure jobs such as extensive using of home-office working, furloughing procedures and other options. Many firms have taken actions at the operational level by changing suppliers and increasing stocks of supplies in order not to encounter issues with demand. While approximately half of the firms have benefitted from government measures aimed at ensuring their survival, they consider there should be more progress made by the government in this regard. Participants reported that it will not be possible to make up for loss in turnover this year, and anticipate major increase in energy, raw materials and prices, leading to a major increase in final product prices. Nevertheless, the majority of firms claim they will be able to sustain their business for more than six months even if pandemic restrictions continue. This indicates they developed sufficient strength during the pre-Covid period to be able cope with unexpected incidents or threats, even if they anticipate that the crisis may last for another two years.

The study findings revealed that government policy has a significant role in ensuring the survival of firms during the crisis. More importantly, there should be different forms of support for firms according to their sector and size. Additionally, firms have requested more support from the government in the form of increases to the budget for mitigating Covid-19, alongside more frequent workplace safety audits and testing.

This paper also assessed differences among firm sectors and size in terms of response and attitude to the Covid-19 pandemic. The results demonstrate that some sectors have been more negatively affected during Covid-19, with economic impacts differing among the machinery, textile and other sectors. Variation in levels of business uncertainty is also reported among the food and textile sectors, with the textile sector affected more than the chemical, food and other sectors. Finally, the results showed that there is no overall difference in terms of covid-19 impacts between all firm sizes, whereas micro-sized firms expect higher uncertainty than large size firms. The expectations of competitiveness among large firms are higher than for micro, small and medium sized firms.

4. Conclusion

This study has provided evidence of the economic impacts of Covid-19 on business, and explored firms' responses to Covid-19 at the organizational and operational levels. The results demonstrate that Covid-19 has severely affected the general economic activities of firms, but these impacts have not been felt equally, and vary according to firm, size and sector. The study highlights the critical role of government in prioritising support to some sectors and SMEs to ensure their survival. More importantly, in order to maintain value chains in the economy, the government should follow the examples of other countries and provide easy and affordable liquidities for firms. For instance, Hong Kong has reduced its profit-based taxation rates and made available low interest loans for SMEs; Singapore has also prioritised financial support for some sectors such as aviation, tourism. Also, countries such as USA and Hong Kong have allocated financial support to households to prevent a decrease in domestic demand (Baldwin et al.,2020,p.27; Ozili and Arun 2020). It is thus recommended that Turkish policymakers observe global monetary, healthcare and fiscal measures and implement them according to sectoral needs. Therefore, it is important to maintain productive communication between stakeholders and government in order to reduce negative spillover from the Covid-19 crisis.

The findings have also revealed that Turkish firms have responded to Covid-19 with several actions that demonstrate their preparedness for such a severe crisis. Acting imaginatively and flexibly, they have implemented several actions at the organizational and operational levels to maintain current business activities in order to not be affected by Covid-19: these measures include those of working from home, accessing government support and changing suppliers; nevertheless, it is crucial for firms to continue to maintain and build on their capabilities as the crisis continues to unfold.

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