PANEL STUDY III:
IMPACT OF COVID-19 ON SMALL- AND MEDIUM-SIZED ENTERPRISES IN IRAQ

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International Trade Centre
Food and Agriculture Organization of the United Nations
IOM UN MIGRATION

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The Food and Agriculture Organization (FAO) is a specialized agency of the United Nations that leads international efforts to defeat hunger. FAO aims to achieve food security for all and make sure that people have regular access to enough high quality food to lead active, healthy lives. With 194 member states, FAO works in over 130 countries worldwide in pursuit of five objectives: to help eliminate hunger, food insecurity and malnutrition; make agriculture forestry and fisheries more sustainable; reduce rural poverty; enable inclusive and efficient agricultural and food systems; and increase the resilience of livelihoods to threats and crises.
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The International Trade Centre (ITC) is the joint agency of the World Trade Organization and the United Nations. ITC assists small and medium-sized enterprises in developing and transition economies to become more competitive in global markets, thereby contributing to sustainable economic development within the frameworks of the Aid-for-Trade agenda and the United Nations' Sustainable Development Goals.
For more information, visit www.intracen.org.

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EXECUTIVE SUMMARY

As of 11 January 2021, 603,739 confirmed cases of COVID-19 and 12,906 deaths had been reported in Iraq, a fatality rate of 2.1 per cent.[1]

The initial measures that the government of Iraq took to curb the spread of pandemic—including lockdowns or curfews, school closures, and restrictions on travel into and within the country—have been relaxed in certain locations, producing some level of economic recovery.

The United Nations' International Organization for Migration (IOM) in Iraq, Food and Agriculture Organization (FAO), and International Trade Center (ITC) jointly conducted three surveys at different time periods analyzing the pandemic's impact on small- and medium-sized enterprises (SMEs) in Iraq. Round 1 of data collection was contacted between late June and early July 2020. The same businesses were surveyed in Round 2, which took place in September, and Round 3 in late November and early December. The number of new COVID-19 cases increased about 15 per cent between Round 2 and Round 3.

The ongoing COVID-19 crisis and movement restrictions resulted in a drastic reduction in production. Around half of the businesses across the sectors included in the study—agriculture, automotive, carpentry, chemical, construction, education, food production, general trade, hospitality, manufacturing, medical services, general services, materials (metal and plastic), technology and textiles—have witnessed a decline in production or sales in the since the last interview in September.

Between August and November, there was an average increase of four per cent in the number of employees. However, this recovery in the labor market is seven per cent below reported employment levels before the pandemic in early March.

The effect on revenue due to reductions in the buying power of customers and constraints on normal business activity is heterogenous across SMEs. Only the medical service sector saw an average increase in monthly revenue between February and August. Between August to October, all sectors witnessed on average a partial recovery in revenue.

METHODOLOGY

IOM Iraq, FAO, and ITC conducted an assessment of 893 SME businesses in Iraq. The team selected respondents using a blocking design sample by Iraqi governorates from 2,236 firms registered in IOM databases, covering rural and urban areas.

The optimal sample size was determined to be between 650 and 950 to estimate an average reduction of four employees with a power of 80 per cent and a statistical confidence level of 95 per cent. This blocking design created a sample that is representative of the 2,236 firms in IOM's database using respondents identified in previous data collection across all governorates.

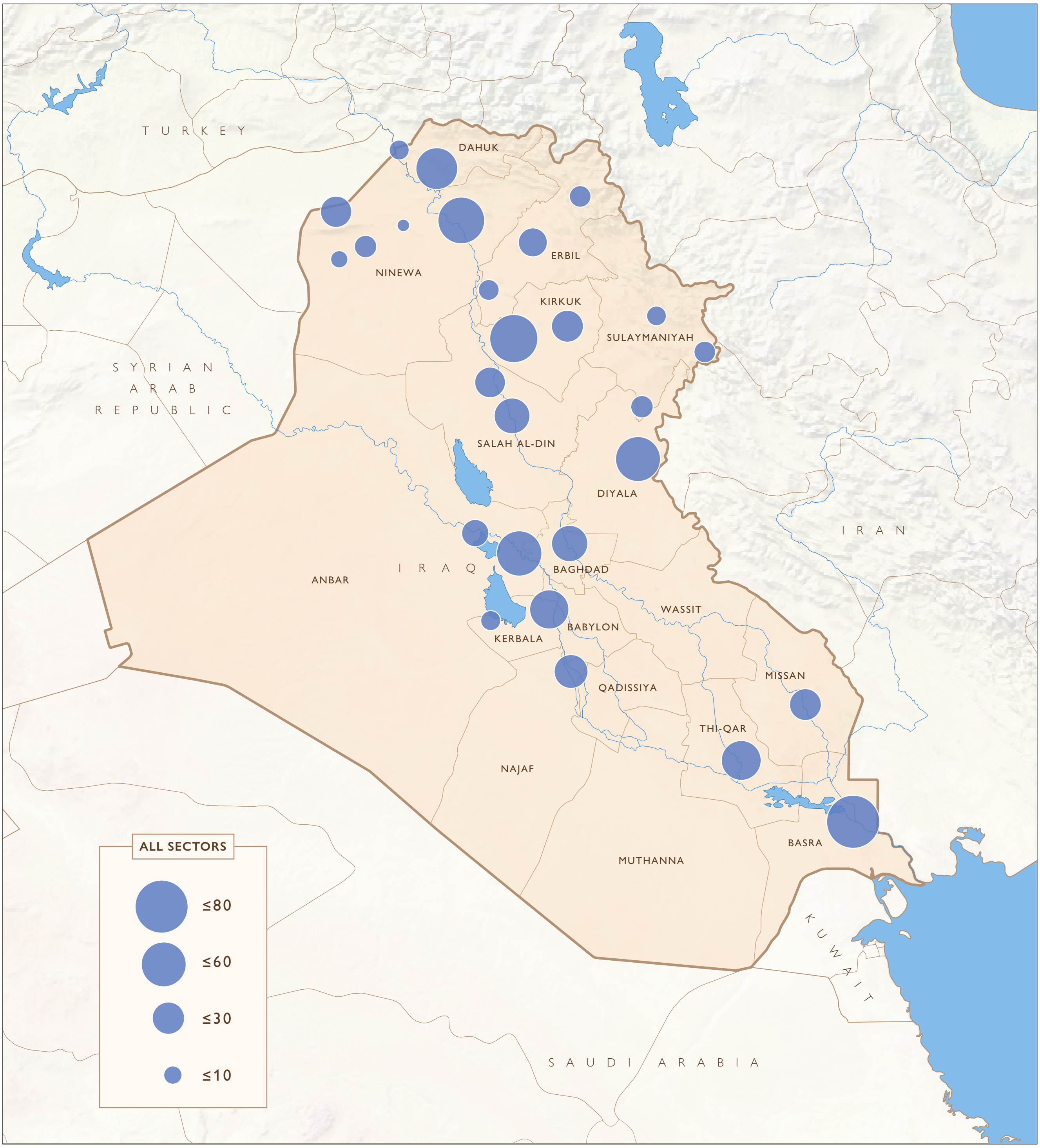
Round 1 included surveys of 893 SME business owners collected between 22 June and 7 July 2020. In Round 2, 851 of the same businesses were surveyed between 9 and 18 September. In Round 3, 822 of the same SMEs participated in the data collection between 29 November and 15 December. The attrition rate is 4% for Round 2 and 8% for Round 3.[2] The three rounds followed a training of the field researchers on the survey's concepts and terminology and were conducted via phone calls due to COVID-19-related movement restrictions and safety measures. Surveys followed an informed consent protocol that offered respondents a description of the purpose of the survey and a chance to opt-out of the survey.

1 Corona tracker, 11 January 2021, https://www.coronatracker.com/country/iraq/.

2 From the original 893 SME businesses, 14 per cent of firms in medical services did not participate in Round 2, 9 per cent are in hospitality, 9 per cent in textile, 8 per cent in general trade, 6 per cent in manufacturing, 5 per cent in construction and services each, 3 per cent in carpentry, and 1 per cent in automotive. Furthermore, from the original sample of SMEs, 14 per cent each of firms in food and general trade did not answer Round 3, 6 per cent in metal and textile each, 5 per cent in services, 4 per cent in agriculture, construction, hospitality and manufacturing each, 4 per cent in automotive, 2 per cent in carpentry, 1 per cent in chemical, education, medical and technology each.

This panel study focused on 15 governorates and 16 sectors. The food and agriculture sector was oversampled, totaling 201 SMEs in the subsectors of food and agriculture (50), retail and wholesale (45), agri-food processing (41), accommodation and food services (39), and other SMEs (26). General trade (122) is the second most represented sector in the sample, followed by chemical and materials businesses (119), carpentry and construction (111), services (81), manufacturing and textile (77), automotive (56), the hospitality industry (29), education and technology (7), medical services (6), and other businesses (13) for a total of 822 SMEs surveyed.

Figure 1: Locations of Sampled SMEs Participating in Rounds 1, 2, and 3 of the Longitudinal Study



IMPACT OF COVID-19 BY SECTOR: MAIN FINDINGS

The pandemic has negatively impacted SME production levels and sales between September and December. Half of SMEs across all sectors reported production and sales were negatively affected, on average by 50 per cent.

The sectors of education and technology (72%), hospitality (53%), and manufacturing and textile (52%) faced higher than average levels of reduction in production and sales. While these five sectors witnessed reductions below the average, medical services suffered the smallest contraction, of only 25 per cent (see Table 1). About 22 per cent of SMEs surveyed reported production or sales were affected neither positively nor negatively. A further twenty per cent of firms indicated production or sales increased, on average by 35 per cent, between September and November.[3]

Businesses' ability to retain employees recovered slightly between August and November with an average increase of four per cent in the number of employees. However, employment levels in November were still on average seven per cent less than pre-pandemic numbers. Automotive and businesses categorized as "other" are the only firms that saw an increase in employment numbers by November compared to the pre-COVID-19 period (1% and 25% respectively).

Since the first round of data collection in late June and early July 2020, the pandemic has affected the gender gap in the labor force among the SMEs involved in the study. In November, SME owners employed 13 men for every woman. The strategies to cope with financial difficulties caused by the pandemic and movement restrictions affected females at higher rates than males. In November, 13 per cent of female employees and less than one per cent of male employees were asked to stay at home without payment on average.[4]

Table 1: Effect on Production and Labor

Sectors	Number of Firms	% Decline in Production September to December	% Change in Employment Between February (Pre-COVID-19) and November
Food and Agriculture	201	-49	-9
Automotive	56	-51	1
Carpentry and Construction	111	-47	-4
Chemical and Materials	119	-48	-9
Education and Technology	7	-72	-30
General Trade	122	-52	-3
Hospitality	29	-53	-20
Manufacturing and Textile	77	-52	-11
Medical Services	6	-25	-6
Services	81	-50	-8
Other	13	-39	25
Total	**822**	**-50**	**-7**

Note: Percentage change is calculated by averaging the percentage changes of each SME, which may differ from the percentage change between the two averages shown.

3 SMEs that witnessed an increase in production or sales in the two months prior to data collection included SMEs in the following sectors: food and agriculture (44), carpentry and construction (31), chemical and other materials (23), automotive (17), general trade (16), manufacturing and textile (14), services (13), hospitality (4), education and technology, medial services, and other (1 each).

4 In Round 1, questions about employee numbers, revenue, and production were asked in terms of "the past four weeks." Data collection took place between 22 June and 7 July. Thus, that period of time will be referred to as June throughout the report. In Round 2, questions about employees, revenue, and production were asked in terms of the period of August. Other questions were asked in terms of the period up until the interviews took place, which was from 9 to 18 September. In Round 3, questions about employees were asked in terms of the month of November, and questions about revenue were asked in terms of the months of September and October. Therefore, the month identified will differ based on the question that was asked, but will always be tied to the round in which it was asked.

DECLINE IN REVENUE

SMEs' reported revenue has been slow recovering since the beginning of the study. The hospitality and medical service sectors witnessed an increase in revenue between February and August, on average by 3 and 104 per cent respectively. However, the other nine sectors saw a decline in revenue during the same period, where services had the highest decrease (41%), followed by other businesses (38%), and manufacturing and textiles (32%).

When comparing August and October, SME owners across all sectors reported an average increase of 32 per cent in revenue. Hospitality saw the highest increase (70%). This is expected since hotels and restaurants had been completely closed at the beginning of the pandemic and started to re-open as the lockdowns began to relax in the summer months. Education and technology SMEs saw the smallest increase in revenue between August and October, only eight per cent. This sector is also still behind the reported revenues from the period before the pandemic and movement restrictions started. Overall, SMEs are witnessing slow economic recovery, with different rates of growth across sectors (see Table 2).

Table 2: Revenue Change

SECTORS	AVERAGE MONTHLY REVENUE			CHANGE (%)	
	February (Pre-COVID-19)	August	October	February to August	August to October
Food and Agriculture	$6,633	$3,540	$4,096	-1	39
Automotive	$2,054	$1,346	$1,125	-19	26
Carpentry and Construction	$6,552	$3,772	$3,630	-24	28
Chemical and Materials	$3,945	$1,986	$2,394	-10	22
Education and Technology	$10,450	$3,557	$8,071	-28	8
General Trade	$9,134	$3,636	$4,185	-16	33
Hospitality	$3,019	$2,117	$2,414	3	70
Manufacturing and Textile	$10,024	$4,749	$5,650	-32	28
Medical Services	$1,008	$1,025	$1,150	104	38
Services	$2,954	$1,099	$1,279	-41	31
Other	$3,533	$2,258	$2,804	-38	42
Total	**$6,084**	**$3,004**	**$3,398**	**-16**	**32**

Note: Percentage change is calculated by averaging the percentage changes of each SME, which may differ from the percentage change between the two averages shown.

RISK OF CLOSURE OF SMEs

The risk of permanent closure among the businesses in this study declined by nine percentage points between September and December. Three out of ten SME owners reported a risk of permanently shutting down in December.

Education and technology businesses faced the highest risk of permanent closure (43%), followed by services (38%), and manufacturing and textile (38%). In contrast, medical services and other sectors reported the lowest chance of permanent shutdown, 17 per cent each (see Table 3). In September, almost half of the small and medium firms in the hospitality sector reported being at risk of closing their doors. By December, only a third of hospitality SMEs reported being at risk. The overall reactivation of the economy—witnessed by SMEs owners in the database interviewed between June and July—helped hospitality SMEs.

Among the 242 businesses that reported being at risk of permanent shutdown, 17 per cent claim it could be within the next six or more months, 13 per cent within three or fewer months, and 12 per cent within one month or less (which is a decline of 10 and 5 percentage point respectively, compared to September).

Table 3. Five Sectors with Highest Risk of Business Permanently Shutting Down

SECTORS	% OF FIRMS (DECEMBER)
Education and Technology	43
Services	38
Manufacturing and Textile	38
Automotive	36
Chemical and Materials	29

SME STRATEGIES TO COPE WITH THE IMPACT OF THE COVID-19 PANDEMIC

In December, the most common strategies to cope with the COVID-19 crisis were increasing marketing efforts followed by requesting leniencies in paying off debts. Laying off employees no longer ranks among the top five strategies adopted to cope with the pandemic (as was the case in June and September).

The most common strategy adopted by different firms has shifted throughout different points during the pandemic. The top coping strategy in June was temporarily reducing the number of employees by not paying salaries (34%). In September, the most reported approach was to request leniency in paying financial responsibilities (29%). After the initial wave of lockdowns in the spring and early summer of 2020, the slow recovery of the economy has allowed SME owners to increase their number of employees and pivot to other coping strategies to help mitigate the effects of financial difficulties during the COVID-19 crisis.

Since the beginning of the pandemic, SMEs are unlikely to have borrowed formally for their businesses. In December, almost 33 per cent of SMEs reported having informal financial commitments with friends or family. Eighty-two per cent of these firms reported they asked for money due to COVID-19, 16 percentage points more than in June.

Table 4: Top Five Strategies Adopted to Cope with the COVID-19 Crisis

STRATEGY	AVERAGE %
	November
Increased marketing efforts	24
Request for leniency in paying financial responsibilities	20
Online sales	17
Sourced from new suppliers	13
Created new product in hopes of boosting sales during pandemic	8

Notes: Multi-select question.

IMPACT OF COVID-19 BY GOVERNORATE: LOCKDOWNS AND BORDER CROSSING POINTS

Overall, levels of employment and production are below the reported levels before the pandemic started in February. Baghdad and Salah al-Din are the only two governorates with more employees in November than before COVID-19, eight and one per cent respectively. Comparing levels of production in September with November, Ninewa (2%) and Baghdad (5%) saw the lowest decline (see Table 5).

Whereas most SMEs experienced a decrease in revenues between February and November, SMEs owners in Basrah, Kirkuk, Ninewa, and Salah al-Din on average saw an increase in revenues. Kerbala and Erbil had the biggest difference in revenues between pre- and post-COVID-19 period, -50 and -43 per cent respectively (see Table 5).

The increase in revenues and decline in production can be explained by firms producing fewer outputs but selling at higher prices. The economic deacceleration resulting from the policies aiming to reduce the COVID-19 spread create a constraint on supply. Lockdowns, for example, reduce the amount of time businesses can operate. However, the demand for goods, such as food, stays the same, or could even increase due to the circumstances of the pandemic. Hence, the shortened supply along with the constant, or possible expansion of, demand boosted revenues in spite of the observed decline in production.

Table 5: Impact of COVID-19 and Related Restrictions by Governorate

DEPENDENT VARIABLE	AVERAGE % CHANGE		
	Employment[a]	Monthly Revenue[b]	Production[c]
	February Pre-COVID-19 to November	February Pre-COVID-19 to October	September to December
Anbar	-2	-41	-9
Babylon	-24	-19	-33
Baghdad	8	-9	-5
Basrah	-13	91	-37
Diyala	-3	-23	16
Dohuk	-38	-50	-57
Erbil	-11	-43	-75
Kerbala	-32	-50	-55
Kirkuk	-2	197	-6
Missan	-8	-35	-52
Najaf	-27	-29	-50
Ninewa	0	13	-2
Salah al-Din	1	70	-26
Sulaymaniyah	13	-1	-33
Thi-Qar	-3	-17	-37

a. 806 firms had no missing values in employment change: Anbar (70), Babylon (22), Baghdad (54), Basra (77), Dohuk (53), Diyala (58), Erbil (47), Kerbala (22), Kirkuk (90), Missan (26), Najaf (33), Ninewa (116), Salah al-Din (64), Sulaymaniyah (30) and Thi-Qar (44).

b. 812 firms had no missing values in monthly revenue change: Anbar (70), Babylon (22), Baghdad (54), Basra (77), Dohuk (51), Diyala (59), Erbil (47), Kerbala (23), Kirkuk (90), Missan (26), Najaf (33), Ninewa (116), Salah al-Din (63), Sulaymaniyah (37) and Thi-Qar (44).

c. 641 firms had no missing values in production: Anbar (69), Babylon (20), Baghdad (43), Basra (72), Dohuk (39), Diyala (56), Erbil (47), Kerbala (23), Kirkuk (84), Missan (23), Najaf (30), Ninewa (41), Salah al-Din (42), Sulaymaniyah (19) and Thi-Qar (33).

Note: Average changes in employment and revenue were calculated by IOM. Changes in production were self-reported by the SMEs and averaged by IOM.

LOCKDOWNS AND CLOSURE OF BORDER CROSSING POINTS

All Iraqis have faced some degree of quarantine measures and border point closures, but the severity of these measures varies across governorates. Between February and mid-December, only Dohuk, Erbil, and Sulaymaniyah faced more full than partial lockdowns.

One third of governorates across Iraq faced an equal number of full and partial lockdowns and almost half (47%) of them experienced more partial than full lockdowns in 2020 after the beginning of the pandemic. Furthermore, the border crossing point between Iraq and Syria in Ninewa was partially open only twice between mid-March and November, making this governorate the most affected by closure of border crossing points. The other SME owners in the study were in 14 governorates with more partial than full closures of border crossing points.[5]

The study found that governorates with stricter and governorates with more relaxed movement restrictions did not differ in their reporting of employment, revenue, and production. Hence, on average, the governorates with more border crossing point closures and lockdowns were not more affected than those with fewer movement restrictions during the time period of the study (starting from February through mid-December).[6]

Table 6. Impact of Lockdowns and Closure of Border Crossing Points Between February and November[7]

DEPENDENT VARIABLE	AVERAGE % CHANGE		
	Monthly Revenue	Employment	Production[a]
	February (Pre-COVID-19) to October	February (Pre-COVID-19) to November	September to December
	(1)	(2)	(3)
Interaction[b]	0.01 (0.14)	-0.32 (0.75)	-18.37 (12.53)
Constant	-0.48* (0.22)	-5.04 (3.06)	35.42* (18.10)
Observations	800	806	628
R-squared	0.06	0.10	0.08

Note: *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors in parentheses. Cluster errors at governorate model. To isolate the effect of border crossing point closures and lockdowns, we controlled for: Female manager; manager age (less than 35 years old); business unregistered with national authority; local, regional, and national trade; employment and revenue before the pandemic; governorate fixed effects.

[a] The dependent variable is the percentage by which production was negatively affected. Therefore the coefficient is positive, but the results are interpreted as negative (the extent to which production declined).

[b] Variable 1 is equal to one when governorates have more partial than full lockdowns. Variable 2 is equal to one when governorates have fewer than one-third of the border crossing points closed.

5 Field research teams also collected data on lockdown measures in all governorates. Data on border crossing points was part of IOM Iraq's Cross Border Monitoring from its Displacement Tracking Matrix (DTM).

6 Results are based in a difference in differences model. The analyzed coefficient is the interaction between a dummy variable equal to one for governorates with more than half of the cross points closed and a dummy variable equal to one for governorates with more frequent full than partial lockdowns. See IOM Iraq, Food and Agriculture Organization (FAO), and International Trade Centre (ITC), Panel I Study: Impact of COVID-19 on Small- and Medium-Sized Enterprises in Iraq, September 2020.

7 Clustered standard errors are measurements that estimate the standard error of a regression parameter in settings where observations may be subdivided into smaller-sized groups ("clusters") and where the sampling and/or treatment assignment is correlated within each group. A. Colin Cameron and Douglas L. Miller, "A Practitioner's Guide to Cluster-Robust Inference," Journal of Human Resources, March 2015, 50: 317–372.

CONCLUSION AND RECOMMENDATIONS

The economic recovery witnessed by the SMEs interviewed for this study continued in December. Revenues increased after the initial decline in the beginning months of the pandemic and employment increased between August and November. However, rates of employment remain below pre-pandemic levels.

Despite the lessening of lockdowns across the country, production among all SMEs continued to be affected negatively. On average, half of SME owners saw a decline in production when comparing February to both September and December. When asked about potential government initiatives to help businesses cope with the financial difficulties of the pandemic, about half of SMEs reported financial programs, support for self-employed workers, and rent subsidies are the best potential support programs. Only one per cent of SME owners in this study reported that a reduction of lockdown measures is a potential strategy that would help them overcome the decline in economic activity.

Another possible contributor to the recovery in the labor market is the change in strategies SMEs have resorted to in order to cope with the COVID-19 crisis since September. Fewer SMEs resort to laying off employees to cope with financial stresses of the pandemic. Instead, SMEs reported at higher rates attempting to increase marketing efforts and request for leniency in paying off financial commitments. Hence, reducing employees are not the main mechanism to overcome the challenges created by lockdowns and other measures to stop the COVID-19 spread.

The following recommendations consider the findings of the study and the main concerns of business owners:

1. **Training on marketing and online sales.** By December 2020, the main strategy used by SMEs in this study to cope with the economic hardships caused by the pandemic was increasing marketing efforts. Additionally, the number of SMEs that use online sales was very low at 17 per cent (although this was double the number that used online sales before the pandemic began). Therefore, private, public, and humanitarian sectors can create workshops, trainings, and other information campaigns to encourage and enhance SMEs' abilities in marketing and online sales to strengthen them in the midst of the pandemic's economic uncertainty. These efforts will both enhance the strategies they are already undertaking as well as take full advantage of the opportunities presented by digitalization and e-commerce.

2. **Strengthening support organizations.** Business support organizations (BSOs) can play an important role in supporting firms in accessing information on markets, suppliers, and regulation by fostering cooperation on marketing and related activities, contributing to firm capacity building, and representing firms in public-private policy dialogue. These organizations include chambers of commerce, sector associations, trade promotion organizations, investment promotion agencies, cooperatives, and others that provide services and promote the interests of firms. BSOs in Iraq would be particularly helpful in assisting SMEs in adapting to the challenges identified in the survey, such as through implementing effective marketing initiatives and building new business connections. Trade promotion organizations in particular will contribute to recovery through the diversification of export products and markets.

3. **Improved supply chain measures.** The decrease in production in the agriculture sector will continue to affect employment opportunities within the sector. Efforts to ensure agricultural products can be accessed from where they are needed requires a strong and flexible supply chain that can respond to shifts in consumer demand and adjust in response to supply constraints arising from measures implemented in response to COVID-19. The increased marketing coping measures adopted by the SMEs against the risk of permanent closure could also be a platform for insurance providers to develop risk management packages for the agricultural sector that will insure them against pandemic events affecting productivity.

4. **Supporting skill upgrading.** Ongoing formal and informal education and skill development will be critical to economic recovery and the success of SMEs affected by the crisis. Firms are adapting to new challenges and making use of new business strategies, including making greater use of information and communications technology (ICT) in production and in interacting with suppliers and customers. Successfully implementing these new strategies may require upgrading of workers' skills. Technical and vocational education and training (TVET), on the job training, and other programs are needed to prepare workers with the skills that are associated with greater competitiveness and are complementary to innovation. The retraining of laid-off workers will also be important in accelerating diversification and structural transformation, increasing labor market efficiency, and reducing unemployment and underemployment.

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