

# Impact of Covid-19 on Small- and Medium-Sized Enterprises in Iraq

Diego Martin, Erin Neale, Raffaele Bertini, Julia Smith  
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Diego Martin, Erin Neale, Raffaele Bertini, Julia Smith Omomo, and Olga Aymerich

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**Send correspondence to:**

Raffaele Bertini

Regional Office of IOM for Middle East and North Africa

Email: [RABERTINI@iom.int](mailto:RABERTINI@iom.int)

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## Abstract

Among the main socio-economic effects of the COVID-19 pandemic in Middle Eastern countries, its impact on small- and medium-sized enterprises (SMEs) is one of the most relevant, especially in post-conflict and fragile countries and contexts. To analyze this, the United Nations' International Organization for Migration (IOM) in Iraq, the Food and Agriculture Organization (FAO), and the International Trade Centre (ITC) jointly conducted a panel study tracking the pandemic's impact on SMEs in Iraq. The survey was disseminated among more than 700 SMEs across the country covering 16 economic sectors. Four rounds of data were collected at four points in time between June 2020 and June 2021 (June/July 2020, September 2020, November/December 2020, and June 2021) from businesses registered in the IOM's database, located in both urban and rural areas. Findings from four rounds of data collection show that COVID-19 negatively affected production, revenue, and employment and, notably, the gender gap in the labor force at the beginning of the pandemic (February to June 2020) and COVID-19-related movement restrictions. This study concludes with related policy recommendations for Iraq and the Middle Eastern countries.

**JEL Classifications:** I1, L3

**Keywords:** Covid-19, small- and medium-sized enterprises, Iraq

## ملخص

من بين الآثار الاجتماعية والاقتصادية الرئيسية لوباء COVID-19 في دول الشرق الأوسط، فإن تأثيره على الشركات الصغيرة والمتوسطة (SMEs) هو أحد أكثر التأثيرات أهمية، لا سيما في البلدان والسياقات الهشة التي تمر بمرحلة ما بعد الصراع. لتحليل ذلك، أجرت منظمة الأمم المتحدة الدولية للهجرة (IOM) في العراق ومنظمة الأغذية والزراعة (الفاو) ومركز التجارة الدولية (ITC) بشكل مشترك دراسة جماعية لتتبع تأثير الوباء على الشركات الصغيرة والمتوسطة في العراق. تم نشر المسح على أكثر من 700 شركة صغيرة ومتوسطة في جميع أنحاء الدولة تغطي 16 قطاعا اقتصاديا. تم جمع أربع جولات من البيانات في أربع نقاط زمنية بين يونيو 2020 ويونيو 2021 (يونيو / يوليو 2020 ، سبتمبر 2020 ، نوفمبر / ديسمبر 2020 ، ويونيو 2021) من الشركات المسجلة في قاعدة بيانات المنظمة الدولية للهجرة، الموجودة في كل من المناطق الحضرية والريفية. تظهر النتائج المستخلصة من أربع جولات من جمع البيانات أن COVID-19 أثر سلبًا على الإنتاج والإيرادات والتوظيف، ولا سيما الفجوة بين الجنسين في القوى العاملة في بداية الوباء (من فبراير إلى يونيو 2020) والحركة المرتبطة بـ COVID-19 قيود. تختتم هذه الدراسة بتوصيات السياسة ذات الصلة للعراق ودول الشرق الأوسط.

## **Part 1: Introduction**

As of January 2022, the World Health Organization (WHO) has confirmed 2.1 million cases of COVID-19 in Iraq, with 24,225 fatalities (World Meters, 2022). Upon the arrival of the first case in Iraq, the Government of Iraq (GoI) adopted movement, business operation, and travel restrictions to stymie the spread of the virus. The effects of the spread of the virus put pressure on Iraq's economic and political climates, which were already in a fragile state.

The COVID-19 pandemic is an unprecedented shock to the national and international economy (UNDP, 2020). The combined nature of the impact on several economic, social, political, and civil dimensions, and the fact that it happened across all countries at around the same time are all also unprecedented feats. Additionally, it differs from previous crises (such as the 2008 financial crisis) due to its global dimension and the fact that it penetrated several aspects of daily life (health, economy...etc.). Finally, the fact that it impacted all sectors of the economy effectively and simultaneously is unusual and thus characteristically puts this crisis in a different category compared with previous economic and financial crises. The International Organization for Migration (IOM) Iraq, the Food and Agriculture Organization (FAO), and the International Trade Centre (ITC) conducted a panel assessment of 716 Iraqi SME business owners to observe the effect of COVID-19 on labor, revenue, and production across governorates and economic sectors over the first year and a half of the pandemic.

A complex economic crisis (such as the one caused by the restriction measures implemented at the local, national, and international levels to reduce the spread of COVID-19) still has a tremendous impact at various levels among less developed economic systems and stakeholders. In this respect, in this paper we want to emphasize the significant differences between the short-term, shock-related, and long-term effects of (1) the movement restrictions at the domestic and international levels, (2) the slowdowns of economic systems all over the world, (3) the total or partial interruptions of financial and overall commercial flows within and outside of countries, and (4) the increasing deficits in national accounts in countries already facing the consequences of other complex crises.

Considering the economic crisis that occurred because of the COVID-19 restrictions and slowdown of international and domestic trade and several economic sectors, it is particularly interesting to observe two main aspects: firstly, the ripple effects of the shortage of inputs and the effects among different economic sectors and on value chains service provision, and secondly, the various effects of COVID-19 among economic sectors.

For the first point, most economic literature analyzing the impact of the 2008 financial and economic crisis in developing countries focused on the trade and financial channels of transmission at the international and domestic levels (Berkemen et al., 2009; Cetoreli and Goldberg, 2009) with a macroeconomic point of view. These studies particularly emphasize the role of exports for these economic systems that are largely dependent on the exporting of raw materials and other manufactured goods. Other authors (Kamil and Sengupta, 2010, Tong

and Wei, 2008) analyzed the effects of the crisis at the firm level. They showed the importance of downward inputs and upward markets in the economic performance of firms that are in different sectors as well as a different level of the value chain. Nevertheless, it is important to state here that the COVID-19 crisis in 2020 is a much more complex one that put stress on global and local economies from several points. Therefore, the transmission channels will need further analysis at the global, regional, and national levels.

With respect to the analysis of the impact of the crisis on the different economic sectors, the literature, coupled with the reports and studies done by international organizations, took the value chain approach and investigated the integration of different firms and economic sectors and subsectors in the value chain. UNIDO (2011) analyzes the impact of the 2007-2008 financial and economic crisis, focusing mostly on the Global Value Chain (GVC). It showed how firms' lack of integration into the GVC is one of the major weaknesses in their capacities to recover from economic crises. Despite the lack of analyses for SMEs in developing countries, it is possible to translate the considerations relative to the GVC to the domestic and local value chains' capacity to recover from economic shocks. This paper will further develop the sectorial analysis of the impact of the COVID-19-related economic crisis on SMEs' coping capacities in the Iraqi context using a unique panel study.

Economic literature for developing countries focuses on the short- and long-term impacts, and mostly on the productivity of economic sectors. By implementing a macro-level analysis of the economic performances of emerging economies, Anderson and Karpestam (2014) stated that the short-term effects of crises (the literature focuses on the 2007 financial crisis) show the reduction of economic growth through increased uncertainty and volatility in the economy, which reduces investments and consumption (Norman and Romain, 2006; Ramey and Ramey, 1995; Hausman and Gavien, 1996; Easterly, Islam & Stiglitz, 2001). Looking at the long-term effects of a crisis, the two authors mentioned above observe how economic literature on the distinct types of economic crises are not conclusive and are very dependent on the characteristics of the socio-economic systems considered as well as on the type of economic crisis analyzed (ex. financial, debt, inflation driven and others and more complex ones). Nevertheless, most of the evidence, especially for what concerns an export- and oil-producing-oriented economy, is observed to be more likely to have negative and downward effects in the long term, both in terms of productivity and economic growth.

A recently published ERF working paper (Marouani et al., 2021) focusing on the impact of the crisis on employment in SMEs in four MENA countries (Egypt, Jordan, Morocco, and Tunisia) shows how these countries were differently affected by the crisis, one of which did not go into a technical recession in 2020.<sup>2</sup> Despite the macro-level and systemic approach of these studies,

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<sup>2</sup> Another interesting aspect to be considered here is the intermediate period between the short term and long term periods of the effects of the crisis on productivity and other relevant dimensions. Medium- to short-term recovery after the initial shock due to the immediate impact of the crisis manifests as a sort of U-trend in the

the elements presented here will be useful for the analysis of the impact of the COVID-19 crisis on a more micro level, which will be implemented in the following sections of the paper.

The structure of the report is as follows. First, in Part 2, a brief overview of the socio-economic situation in Iraq leading up to the period of the first COVID-19 cases will be presented followed by the policy response. In Part 3, the methodology reveals the process used to identify firms and collect the data, including the limitations of the methodology and the background of the SMEs included in the study. Part 4 provides a general overview of the impact of SMEs, including job loss among male and female employees because of the spread of COVID-19 and restrictions affecting businesses during the study period. This section also presents an analysis of the effects on businesses disaggregated by the ten subgroups of economic sectors included in the study, among the SMEs in each governorate. Then, the paper details the effects of the COVID-19 crisis on supply chains and diverse types of firms. Part 5 delves into the resilience of businesses and explains if and how they can prepare for future external crises like that of the COVID-19 pandemic through an analysis of the main coping strategies implemented by the SMEs in the sample. Part 6 summarizes the main findings of the paper and presents recommendations for policymakers and international agencies to support SMEs in Iraq with recovery from COVID-19 given the current economic state and in the face of future COVID-19 outbreaks. An annex is added at the end with more background analyses, and it also includes an econometrical analysis to complement the analysis in previous sections.

## **Part 2: Iraqi context**

During the last decade, Iraq faced several political and stability issues, starting from the uprising of the Islamic State in Iraq and the Levant (ISIL) in several governorates and the campaign to defeat ISIL and, at the central and decentralized level, several protests and social uprisings related to the economy and provision of services in late 2019 (Chase-Dunn and Almeida, 2020). These underlying issues limited the government's ability to respond to the COVID-19 crisis and stimulate the economy.

In the 2010s, the gross domestic product (GDP) witnessed an increasing trend until 2014 and then slowed down until 2016, followed by a recovery in the following three years until the outbreak of the COVID-19 pandemic. Iraq's economy is dependent on oil exports. From 2012 to 2019, global crude oil prices decreased by 42 percent, heavily impacting this sector and Iraq's overall economy, including budgetary revenues (World Bank, 2020). The volatility of oil prices, due to the changing international demand in the pandemic period, has impacted Iraq's economic general trends, reversing two years of steady recovery. This 'twin shock' has also deepened existing economic and social fragilities (UNDP, 2020), adding to public grievances that existed before COVID-19 (World Bank, 2021a).

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overtime analysis as observed in many socio-economic analyses of the financial crisis, such as what concerns the employment rate, for example.

The private sector in Iraq is a marginal part of the national economy where the largest share is held by oil production, a capital-intensive sector that accounts for only a tiny part of the employment at the national level. The private sector in Iraq, with few exceptions, is characterized by a prominent level of informality and low-capital production systems.<sup>3</sup> Overall, private enterprises are facing new and old structural challenges during the post-COVID-19 outbreak economic crisis and need more support.

International and national estimates for the last decade show stable trends in labor force participation with a sharp decrease observed in 2020 due to the economic crisis. In 2019, the year before the pandemic, the labor force participation rate was already low at 43 percent in 2019 (World Bank, 2021b). Women are almost completely absent from the Iraqi labor market; only 20 percent of working-age women are in the labor force (IOM et al., 2021). The lack of involvement of female Iraqis in their working age in economic activities is one of the major factors that can also explain the economic constraints in Iraq, especially in SMEs (REACH, 2019).

In 2020, Iraq experienced the largest contraction in its economy since 2003. The GDP experienced a negative growth of 11.9 percent, a change from the two previous years that experienced growth (6.8 percent in 2018 and 2.4 percent in 2019). Unemployment was ten percentage points higher than before the pandemic. Debt as a percentage of GDP increased to 69.3 percent, up from 48.2 percent in 2019 and 52.4 percent in 2018 (World Bank, 2021a). Between 2020 and 2021, the inflation rate is forecasted to reach 9.37 percent, up from 0.57 percent in 2020 and -0.2 percent in 2019 (Statista, 2021). The increase in unemployment and inflation rates could deteriorate the living conditions of Iraqis (Alebadi and AlSaadi, 2021). Compared with the pre-COVID-19 levels, the fiscal budget will increase to an average of USD 13.7 billion per year (7.5 percent of GDP) in the next three years (World Bank, 2021c).

The contraction of GDP is expected to persist in the long term as well “due to depletion of savings, lack of investor confidence and reductions in production, or firm-level contraction” (IOM, 2021). In 2020, the non-oil economy contracted by nine percent and the overall GDP witnessed a contraction of 10.4 percent (World Bank, 2020). During the first half of 2021, GDP grew by 0.9 percent (World Bank, 2021a). By the end of 2021, the GDP is predicted to rebound by 1.9 percent, but there is a long road to return to the previous economic work patterns that started in 2017 as observed above (World Bank, 2021c).

### **Policy response of the Iraqi government**

In terms of measures implemented by the GoI and other national authorities to cope with the economic crisis that affected the country, several schemes were implemented to sustain the banking and financial sectors. A moratorium on interest and principal payments by SMEs was implemented together with the support to banks to extend the maturities of all loans where

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<sup>3</sup> One measure to estimate informality is access to social security. Ninety-one percent of Iraqi workers lack social security (ILO, 2021).



possible (IMF, 2021). Moreover, the GoI introduced a cash transfer scheme targeting workers in the private sector who do not receive salaries or benefits from the government.

The Iraqi government also implemented several measures to contain the spread of COVID-19.<sup>4</sup> These included closing schools and universities, closing international border crossings, and restricting international and national travel and public transportation. Additionally, in late May 2020, restrictions on ground travel within and between provinces were implemented, along with a curfew. By September 2020, movement restrictions had been lessened or removed. Intermittent flare ups of COVID-19 caused additional temporary lockdown measures in February and March 2021, but never for prolonged periods as in 2020 (IMF, 2021).

Recovery is expected to happen as an effect of the reopening of international markets and trades. However, this will involve more economic sectors that are able to cope with the new situation and this is more difficult for smaller and private enterprises that have less capital and fewer resources available.

The pre-conditions going into the pandemic as well as the dire effects of the pandemic on the economy have limited the private sector's ability to create new jobs. The initial contraction of production, revenue, and employment observed in this study is a fraction of that which took place all over Iraq among most businesses.

### **Part 3: Methodology and data**

The 716 Iraqi SMEs in the final sample come from 2,236 firms that are not representative of the Iraqi private sector. The businesses come from places where IOM's development programming focused the analysis. The areas with IOM presence have high displacement, low rates of return of internally displaced populations, and severe living conditions. The 2,236 firms are listed in IOM's data collection for the market assessments of the Enterprise Development Fund (EDF) project. Any firm in the sample has received financial support from IOM.

The sample design found that the optimal sample size to estimate an average reduction of four employees with a power of 80 percent and a statistical confidence level of 95 percent is between 650 and 950 observations. The sample design consists of a blocking design by governorate from the 2,236 firms.

Three rounds of data collection took place in 2020 and one in 2021 through phone calls, due to COVID-19 restrictions and precautions. The field teams who conducted the interviews were trained on the survey questions, concepts, and terminology. The surveys were conducted in Arabic and Kurdish. At the beginning of each interview, field researchers delivered and obtained an answer to a verbal informed consent that offered respondents a description of the

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<sup>4</sup> Figure A1 in the Annex shows the number of days under lockdowns per governorate in Iraq.

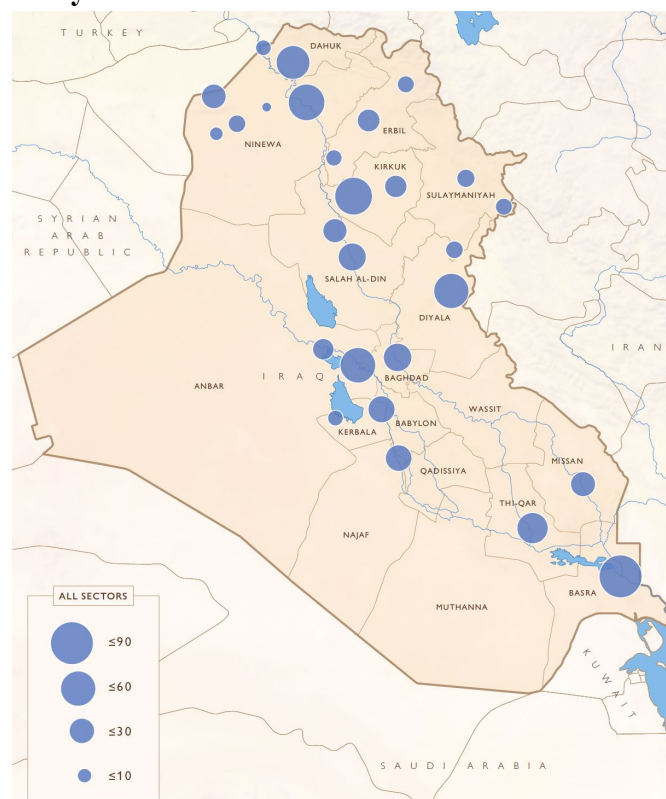
purpose of the survey and a chance to opt out if desired. Table 1 presents the date and attrition rate of the four rounds of data collection.

**Table 1. Sample sizes, time of data collection, and attrition rate**

Round	Date	SMEs	Attrition Rate
1	22 June to 7 July 2020	896	NA
2	9 to 18 September 2020	851	4%
3	29 November to 15 December 2020	822	8%
4	8 to 25 June 2021	716	20%

Over the course of the study, the attrition rate increased. By the fourth round, a high non-response rate was observed. This may be because twice the amount of time had passed between the third and fourth rounds and then had passed between the first three rounds. Additionally, some businesses closed permanently during the study. Finally, the rate of female respondents was low (2.7 percent of the sample), which is an expected challenge in market and labor assessments. Figure 1 shows the location of the SMEs in the four rounds of the study.<sup>5</sup>

**Figure 1. Locations of sampled SMEs participating in rounds 1, 2, 3, and 4 of the panel study**



<sup>5</sup> The governorates where this study on SMEs took place are particularly affected by displacement. About 15 percent of the study’s SMEs are in Ninewa. Ninewa saw the highest number of returnees during the May to July period with 8,946 individuals returning to that governorate. Other governorates where SMEs in the study are located saw high numbers of returns: Salah al-Din (4,194 individuals), Anbar (1,662), Diyala (1,614), and Kirkuk (936). Additionally, 56 percent of current IDPs in Iraq originate from Ninewa, followed by Salah al-Din (12 percent), Anbar (11 percent), Kirkuk (six percent), and Diyala (six percent).

## **Limitations**

This study shows correlation instead of causation. The lockdowns and curfews to reduce the spread of COVID-19 impacted Iraqi SMEs at the same time. Then, we cannot define a control group that never suffered from the slowdown of the economy produced by the health crisis. The available data of Iraqi firms do not suit other non-experimental tools in impact evaluation such as matching techniques and synthetic control. Nevertheless, the study panel shows the evolution of the conditions of the SME businesses during one year of the COVID-19 crisis.

## **Descriptive statistics**

In the sample of 716 SME owners, 70 percent of business managers are 35 years old or older, while 30 percent are 34 years old or younger. A stark majority of managers are male (97 percent) and only 19 SMEs in the study had a female top manager (2.7 percent). Forty-seven percent of businesses were registered with a formal authority, including 19 percent with the Chamber of Commerce or Chamber of Industry, 15 percent with a ministry, and 13 percent with another entity. However, 53 percent of the firms are not registered with any entity.

Most SMEs surveyed belong to the food and agriculture sector (180 or 25 percent), which was purposefully oversampled for the study to compare with non-food and agriculture firms. General trade was the second-largest sector in the sample with 111 SMEs (16 percent), followed by chemical and materials businesses (100, 14 percent), carpentry and construction (99, 14 percent), service (72, ten percent), manufacturing and textile (58, eight percent), automotive (54, eight percent), the hospitality industry (24, three percent), education and technology (six, one percent), medical services (six, one percent), and other businesses (six, one percent).<sup>6</sup>

## **Part 4: Effects of the COVID-19 crisis on SMEs**

During the initial phases of the pandemic, movement and business operation restrictions were a widespread practice of most countries as an effort to try to reduce the spread of COVID-19. As such, Iraq adopted intra- and inter-city and governorate restrictions on movement and business hours.

Between 2020 and 2021, the first round of data collection took place; in June 2020, two-thirds of firms reported that their business operations had been strongly affected and a quarter reported they were moderately affected. Very few enterprises reported being not or only slightly affected during the strictest lockdown period of the pandemic. Around September 2020, lockdown measures began to partially relax in some governorates. During the second

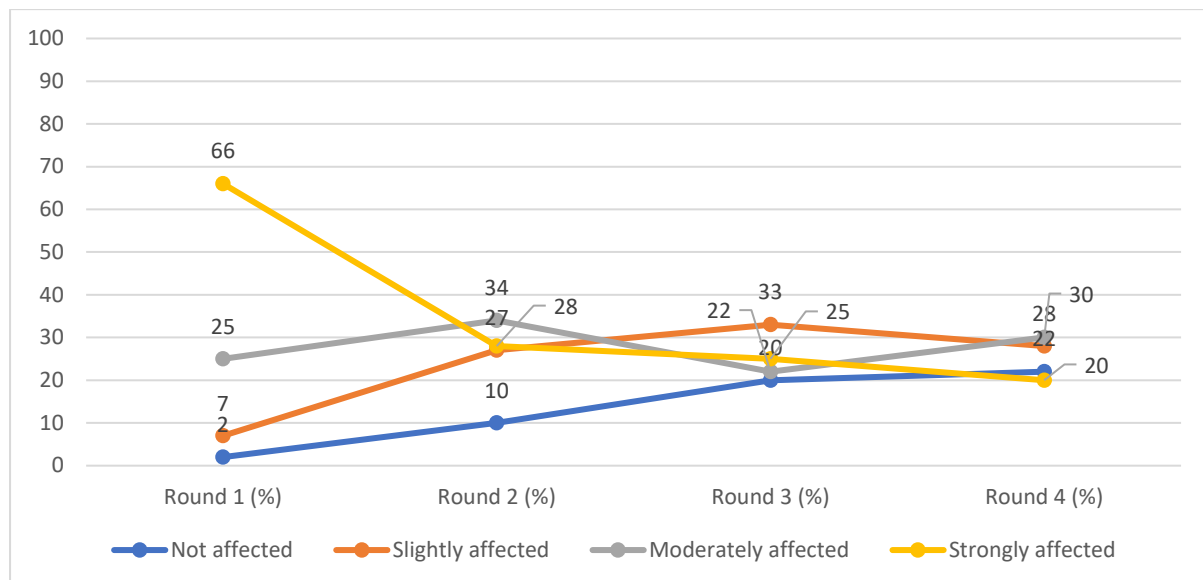
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<sup>6</sup> By governorates, 105 SMEs are in Ninewa (15 percent of the sample), 86 in Kirkuk (12 percent), 67 in Basrah (nine percent), 59 each in Anbar and Salah al-Din (eight percent each), 55 in Diyala (eight percent), 47 in Baghdad (seven percent), 41 in Dahuk (six percent), 40 in Erbil (six percent), 39 in Thi-Qar (five percent), 31 in Sulaymaniyah (four percent), 28 in Najaf (four percent), 22 in Missan (three percent), 20 in Kerbala (three percent), and 17 in Babylon (two percent). Figure A2 in the Annex show the breakdown by sector (Panel A) and governorate (Panel B).

round, the number of businesses reporting that they were strongly affected reduced to 29 percent and the proportion that reported being moderately affected increased slightly to 34 percent. SMEs reporting being slightly affected increased from seven percent to 29 percent. Businesses that were not affected or slightly affected numbered low, at two percent and seven percent, respectively, in the first round, but increased over time. This nevertheless remains low, and this is clearly reporting into estimates relative to economic growth for 2021 as reported above (see Figure 2).

As Figure 2 shows, during the third and fourth rounds, the values of all categories converged. By the final round, half of the businesses were either strongly (20 percent) or moderately (30 percent) affected and the other half were not affected or slightly affected (22 percent and 28 percent, respectively).

**Figure 2. Effect of COVID-19 on business (percentage)\***



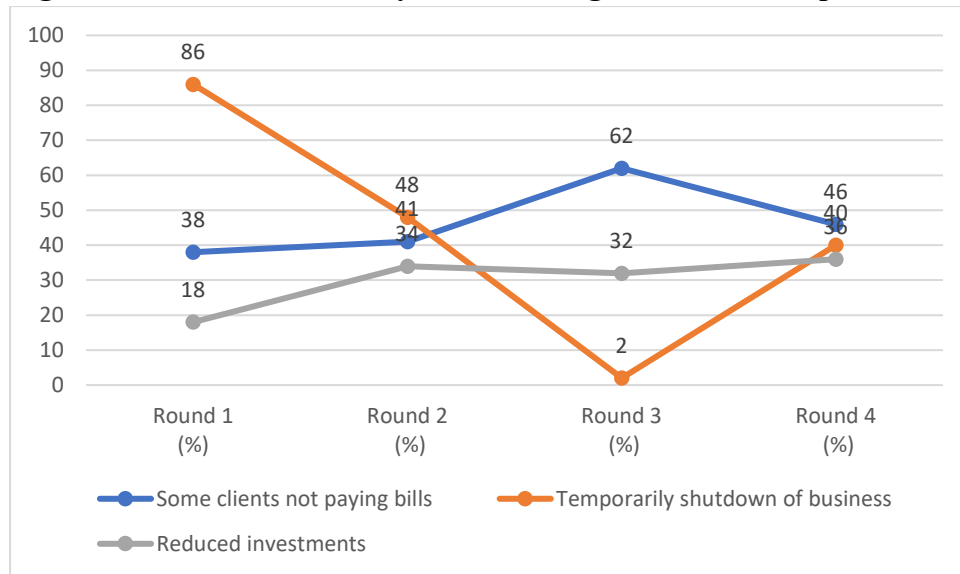
\*Business owners were asked how their business had been affected by COVID-19 since the last interview. The percentages in each round represent the time between each round and not since the beginning of the pandemic.

This breakdown follows the trend of an initial shock to businesses in the beginning (two-thirds reporting being strongly affected), which subsides but does not fully return to normal by the last round of data collection. The observed trend is the same that was observed in previous economic crises, especially in developing countries where after an initial shock is recorded, it is followed by a low recovery and a persistent (if not larger) economic crisis that is linked to the structural weaknesses present in these firms (OECD, 2020).

Figure 3 presents the main findings of some of the most relevant consequences of the crisis for SMEs in Iraq in the four rounds considered. In the short term, in the period during or immediately after the first wave of COVID-19 in the country, temporarily shutting down the business was a prominent coping strategy adopted by businesses (86 percent of businesses reported having to shut down temporarily in the first round). The prominence of temporary

shutdowns decreased significantly until the third round, when only two percent of SMEs reported closing their doors temporarily during the time. By the fourth round, to a surprisingly large extent, SMEs re-adopted this strategy. The other two options present a different trend with an increasing prominence of reduction of investments and failure of clients to pay bills in the considered period. Reduction of investments is, in economic terms, a wound to the potential development opportunities of the firms/business and represents a last resource for these economic actors to remain in the market.

**Figure 3. Difficulties faced by SMEs during the COVID-19 pandemic (percentage)**



### Effects on employment and gender gap in the labor market

During the initial shock of the COVID-19 pandemic, employment is significantly affected. In the second round, recovery begins slowly. By the fourth round, one and a half years into the pandemic, employment has almost recovered but rests on average at about one employee less per SME.

Initially, during the beginning stages of the spread of COVID-19 worldwide and in Iraq, employment fell by 33 percent from February to June 2020. On average, SMEs had 5.4 employees in February, and this fell to 3.6 in June 2020. After lockdowns began to partially relax in September 2020, employment began to slowly recover. By August 2020, the difference reduced to 19 percent below pre-pandemic levels (4.4 employees on average), by December it was 17 percent less (4.5 employees), and by June 2021 the difference reduced to 11 percent (4.8 employees) compared to pre-pandemic levels (see Table 2).

**Table 2. Average number of employees among SMEs by gender (part-time and full-time employees)**

	<b>Pre- COVID-19 (February 2020)</b>	<b>Round 1 (June 2020)</b>	<b>Round 2 (August 2020)</b>	<b>Round 3 (November 2020)</b>	<b>Round 4 (May 2021)</b>
<b>Average # of employees, total</b>	<b>5.4</b>	<b>3.6</b>	<b>4.4</b>	<b>4.6</b>	<b>4.8</b>
Average # of employees, male	5.1	3.4	4.2	4.3	4.5
Average # of employees, female	0.4	0.2	0.2	0.3	0.3

The above change in the average number of workers shows an initial shock to the wealth and health of businesses between February and June 2020 when lockdowns, curfews, and business restrictions were much more common. Later, as these regulations were partially relaxed, we begin to see businesses recover slowly and regain employees, pushing up the average closer to the pre-pandemic levels. One and a half years into the pandemic, these 716 firms have partially recovered from the shock of the pandemic but have not returned to the number of employees reported before COVID-19 arrived in Iraq.

Table 2 also shows that job loss among female employees was higher at -44 percent between February and June 2020, compared to males at 34 percent. The overall average of job loss by June 2020 was 33 percent. By the second round, the number of female workers remained 42 percent below pre-pandemic levels, while male employment recovered to -17 percent below prior levels. By the fourth round, one and a half years into the pandemic, female employment remained at -19 percent and male employment at -11 percent compared to pre-COVID-19 levels. Interestingly, a U-trend is observable with respect to female participation. This rate seems to be more pronounced, or at least at the same level for the females compared to males, showing an elevated level of adaptation of female workers in the study period.

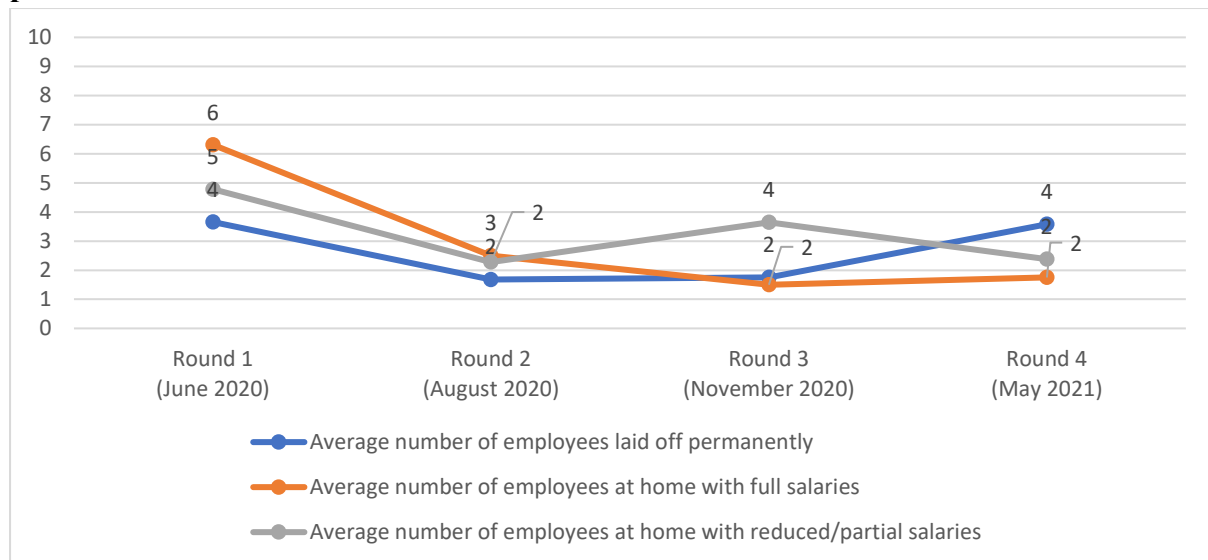
By the first round of data collection, Table 3 shows that the loss of female employees was twice as high in formal firms compared to the loss of male employees in formal firms, while in informal firms the opposite was true (loss of male employees was higher by 12 percentage points). In the longer term, by June 2021, the loss of female employees was about twice as high in both formal firms (-19 percent) and informal firms (-21 percent) compared to the loss of male employees in each category (-12 percent and -9 percent respectively). Additionally, informal, and formal firms saw similar rates of a decrease in female employment overall (-21 percent and -19 percent respectively).

**Table 3. Average number of employees by gender in formal vs. informal firms**

		Pre- COVID-19 (February 2020)	Round 1 (June 2020)	Round 2 (August 2020)	Round 3 (November 2020)	Round 4 (May 2021)
<b>Male</b>	<b>Formal</b>	6.9	4.5	5.5	5.5	6.0
<b>Female</b>		0.5	0.2	0.3	0.5	0.4
<b>Male</b>	<b>Informal</b>	3.4	2.3	3.1	3.1	3.1
<b>Female</b>		0.2	0.2	0.1	0.1	0.2

The number of employees laid off or at home with full or partial salaries fluctuated yet decreased over the study period. Among all SMEs, during the initial shock of the COVID-19 pandemic, six employees were at home with full salaries and five employees with partial salaries. Additionally, SMEs on average laid off four employees permanently. By the second round, the average number of workers affected by these three coping mechanisms related to employment decreased (see Figure 4).

**Figure 4. Average number of employees among SMEs laid off or at home with full or partial salaries**



It is unsurprising that the average number of employees at home with full salaries decreased and stayed low after the first round because this follows the relaxation of lockdowns and overall restrictions on business operations. Businesses were able to at least partially open after the summer of 2020 so there was no longer a need to have employees at home while receiving their full salary. However, the fact that one and a half years into the pandemic businesses are still laying off employees or keeping them at home with full or reduced salaries shows that there is a long-term negative effect on employment.

The coping mechanisms that businesses adopted to respond to and stay afloat during the pandemic widened the difference in gender ratio among the employees of the SMEs in the study. In February 2020, there was one woman per 14 men working in the SMEs surveyed.

The ratio reached one woman per 17 men by June 2020, one per 20 at the end of August, one per 13 by November, and one per 16 by June 2021.

### **Analysis of the labor market by sector**

The effect of the COVID-19 pandemic on employment is heterogeneous across sectors. Table 4 shows the breakdown of the number of workers in the interviewed SMEs. Before COVID-19, the education and technology sector had the highest number of employees. This sector also saw the largest drop by the first round (88 percent) from 28.7 to 3.3 employees. Later, the education and technology sector saw increases in employment, hovering around one-third of their pre-pandemic employment levels from the second round until the fourth round.

The chemical, metal, and plastic sector also saw a large drop in employment (37 percent) from 4.2 to 2.7 employees on average in the sector. As with all other sectors, chemical, metal, and plastic began to regain employees by September 2020. By June 2021, it was 16 percent below its pre-pandemic employment levels (see Table 4).

**Table 4. Average number of employees over time by sector (part-time and full-time employees)**

<b>Sector</b>	<b>Pre- COVID-19 (February 2020)</b>	<b>Round 1 (June 2020)</b>	<b>Round 2 (August 2020)</b>	<b>Round 3 (November 2020)</b>	<b>Round 4 (May 2021)</b>
Food and Agriculture	7.0	4.8	5.5	5.4	6.9
General Trade	4.0	2.8	3.7	4.6	4.8
Chemical, Metal, Plastic	4.2	2.7	3.6	3.7	3.5
Carpentry and Construction	6.4	4.4	5.8	5.9	5.3
Service	2.7	2.2	2.3	2.3	2.3
Manufacturing and Textile	5.9	3.9	4.6	4.6	3.9
Automotive	3.4	2.2	3.1	3.2	3.0
Hospitality	7.4	4.8	5.1	5.3	4.8
Education and Technology	28.7	3.3	10.3	10.8	11.0
Medical Services	2.2	2.2	2.2	2.0	2.0
Other	4.5	2.8	4.3	4.2	4.2
<b>All Sectors</b>	<b>5.4</b>	<b>3.6</b>	<b>4.4</b>	<b>4.5</b>	<b>4.8</b>

After initial shocks to their business and economic health, the food and agriculture, medical services, automotive, and services sectors all returned close to pre-pandemic levels. The education and technology, hospitality, manufacturing, textile, chemical, metal, and plastic, and carpentry and construction sectors remain far behind their pre-pandemic employment. These sectors were deeply affected at the beginning of the pandemic and then they were not able to recover to the previous level because of external factors such as rising prices for inputs (such



as in construction and manufacturing) and rising competition from international markets (especially in manufacturing and textile). The expansion of employment in the service sector has been an important feature of many economies in MENA (World Bank, 2014) and in Iraq, especially after the 2014 crisis.

General trade is the only sector that saw more employees by November 2020 compared to pre-pandemic levels. This could indicate that general trade stores recovered much faster than others. Explanations for this include that there is an increased dimension of ICT technology and e-commerce in the trade sector. Trade without physically entering shops is increasing; this – combined with the informality of the economic environment – allows for growth more easily and for it to recover quickly which is reflected in the levels of employment. These enterprises are characterized by being in low capital-intensive economic sectors; these enterprises tend to be more labor intensive and financially weaker. This contributes to keeping many SMEs smaller than they might otherwise be and gives them an incentive to remain informal (World Bank, 2018).

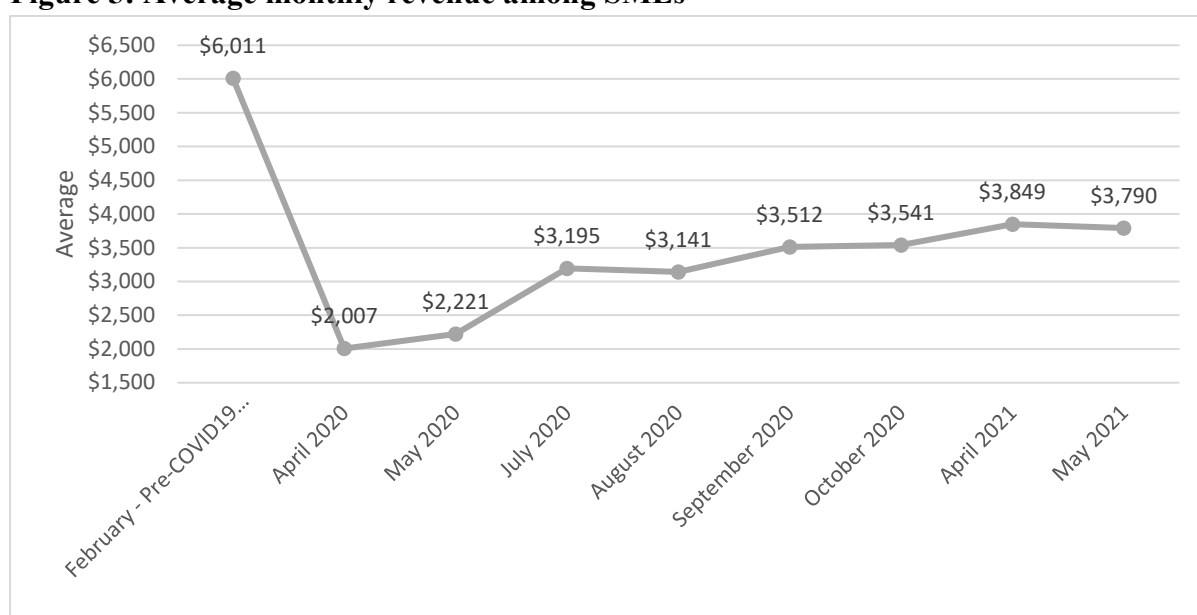
The rate of laying off employees permanently fluctuated throughout the pandemic but overall, it reflects a classic U-shaped trend where there was a short-term shock to the business, causing the business to let go of some employees, and a longer-term effect on the business as well. The education and technology, hospitality, and manufacturing and textile sectors overall reported the highest rates of laying off employees throughout the study period (see Table 5). It is unsurprising that hospitality was strongly affected, since business closures fully affect restaurants' ability to make profits in any in-person capacity, and movement restrictions limited delivery options. SMEs in the general trade, service, automotive, and medical services demonstrated, on average, the lowest rates of laying off employees to cope with the pandemic throughout the study period. The manufacturing sector interestingly demonstrates a rising curve, with its rates of laying off employees increasing one and a half years into the pandemic above those reported during the shock at the beginning (see Table 5).

**Table 5. Enterprises that permanently laid off employees by sector (percentage)**

<b>Sector</b>	<b>Round 1 (June 2020) (%)</b>	<b>Round 2 (August 2020) (%)</b>	<b>Round 3 (November 2020) (%)</b>	<b>Round 4 (May 2021) (%)</b>
Food and Agriculture	13	3	4	10
General trade	0	7	4	11
Chemical, Metal, Plastic	4	3	7	20
Carpentry and Construction	6	1	5	17
Service	6	6	7	7
Manufacturing and Textile	7	3	7	22
Automotive	15	2	0	9
Hospitality	21	4	9	13
Education and Technology	17	17	17	0
Medical Services	17	0	0	0
Other	0	0	0	0
<b>All Sectors</b>	<b>9</b>	<b>4</b>	<b>5</b>	<b>13</b>

**Effect on revenue and sales**

Revenues decreased due to reductions in the buying power of customers and constraints on normal business activity. The average monthly revenue typically experienced before COVID-19 across all SMEs was USD 6,011 (see Figure 5). A few months into the pandemic, in April 2020, respondents estimated that monthly revenue decreased to USD 2,007 (a 67 percent reduction compared to pre-COVID-19 levels) and USD 3,541 by October 2020 (a 41 percent reduction). In June 2021, one year after the first round of data collection, revenue recovered partially, reaching USD 3,790 (a 37 percent reduction compared to pre-COVID-19 levels).

**Figure 5: Average monthly revenue among SMEs**

Almost all surveyed SMEs experienced a decrease in monthly revenue between February, before the pandemic, and May 2020 (see Table 6). During the initial shock of the pandemic, the education and technology sector experienced the highest loss in monthly revenue, a decrease of 96 percent. Carpentry and construction experienced the second-largest loss, declining by 87 percent. All sectors reported a 50 percent decline in monthly revenue, except for the medical services sector, which reported a negative decline of 22 percent. By July 2020, a few sectors started to experience a strong recovery in monthly revenue, including hospitality, education, technology, and chemical, metal, and plastic.<sup>7</sup>

**Table 6. Percent change in revenue by sector compared to pre-COVID-19**

<b>Sector</b>	<b>April 2020</b>	<b>May 2021</b>
Hospitality	-77%	79%
Other	-88%	47%
Medical services	-22%	-28%
Education and Technology	-96%	-58%
Automotive	-64%	-52%
Agriculture and Food	-59%	-21%
General trade	-52%	-58%
Carpentry and Construction	-87%	-47%
Manufacturing and Textile	-75%	-32%
Chemical, Metal, Plastic	-77%	-16%
Service	-75%	-68%
<b>All Sectors</b>	<b>-67%</b>	<b>-37%</b>

### **Effect on production and supply chain by governorate**

Production was significantly impacted across governorates. Exceptionally, every single business in all governorates except one (that is, 98 percent of the businesses in this study) experienced a reduction in production during the first few months of the COVID-19 pandemic (see Table 7). In Sulaymaniyah, the proportion was still high: a majority (66 percent) of firms experienced a reduction in production. In the following months, the negative effect on production declined slightly, but remained at above 70 percent until the end of the study period, one and a half years into the pandemic. The observed decreasing trend can be explained by the general trend toward recovery following the core crisis event (in this case, it is the initial arrival and spread of the COVID-19 virus and the following movement and business operation restrictions). There are some relevant exceptions when we look at some governorates that, on the contrary, show a U-trend in the impact of the crisis on the production/service provision of SMEs. Some of the main governorates, such as Baghdad and Basra, present the classic rebound of the negative effects of the crisis in the fourth round observed after the reduction of these same effects in the medium period (second and third rounds). This can be explained by the presence of structural issues that are exacerbated by the crisis that cause an additional reduction in production and service provision.

<sup>7</sup> 95 percent of firms by April 2020 and 95 percent of firms by May 2020.

Throughout the study period, an average of 90 percent or more of the SMEs in Erbil, Kerbala, Missan, Najaf, Thi-Qar, Basrah, and Salah al-Din experienced a decline in production at each round of data collection compared to pre-COVID-19 levels.<sup>8</sup>

**Table 7. Firms that experienced a reduction in production (percentage)**

<b>Governorate</b>	<b>February (Pre- COVID-19) to June 2020</b>	<b>June to September 2020</b>	<b>September to December 2020</b>	<b>December 2020 to June 2021</b>
	<b>Round 1</b>	<b>Round 2</b>	<b>Round 3</b>	<b>Round 4</b>
Anbar	100%	42%	55%	64%
Babylon	100%	70%	88%	75%
Baghdad	100%	0%	61%	85%
Basrah	100%	100%	81%	86%
Dohuk	100%	100%	7%	42%
Diyala	100%	98%	100%	52%
Erbil	100%	100%	100%	98%
Kerbala	100%	100%	100%	95%
Kirkuk	100%	40%	55%	43%
Missan	100%	91%	100%	100%
Najaf	100%	100%	100%	92%
Ninewa	100%	65%	57%	71%
Salah al-Din	100%	93%	77%	94%
Sulaymaniyah	66%	72%	100%	76%
Thi-Qar	100%	100%	97%	84%
<b>Total</b>	<b>98%</b>	<b>77%</b>	<b>74%</b>	<b>73%</b>

Among the SME businesses with a decline in production, the average reduction was about 50 percent from June 2020 to June 2021. Between February (pre-COVID-19) to June 2020, Anbar had the greatest decline in production (82 percent), followed by Sulaymaniyah (72 percent) and Diyala (71 percent). Firms in Erbil saw the highest reduction in production in the second and third rounds (68 percent and 76 percent, respectively). Sulaymaniyah became the governorate with the highest decline in the fourth round (60 percent). However, SME firms in Sulaymaniyah also reported the lowest decline in production in the second and third rounds (see Table 8).

<sup>8</sup> That is, SMEs were asked whether they experienced a reduction in production since the previous interview (not since the beginning of COVID-19), meaning continuously between February 2020 and June 2021, SMEs in the study reported at high rates that production was negatively affected.

**Table 8. Average percentage decrease in production among SMEs by governorate (percentage)**

	<b>Between February (Pre-COVID-19) to June 2020</b>	<b>Between June to September 2020</b>	<b>Between September to December 2020</b>	<b>Between December 2020 to June 2021</b>
<b>Governorate</b>	<b>Round 1</b>	<b>Round 2</b>	<b>Round 3</b>	<b>Round 4</b>
Anbar	82%	58%	54%	54%
Babylon	48%	55%	40%	54%
Baghdad	51%	51%	32%	56%
Basrah	66%	58%	54%	51%
Dohuk	60%	39%	28%	38%
Diyala	71%	59%	55%	48%
Erbil	70%	68%	76%	43%
Kerbala	70%	68%	53%	56%
Kirkuk	67%	49%	38%	50%
Missan	70%	60%	54%	56%
Najaf	61%	58%	44%	56%
Ninewa	54%	35%	39%	42%
Salah al-Din	65%	44%	43%	41%
Sulaymaniyah	72%	29%	31%	60%
Thi-Qar	65%	42%	38%	45%
<b>Total</b>	<b>66%</b>	<b>52%</b>	<b>49%</b>	<b>49%</b>

### **Disruptions to the supply chain**

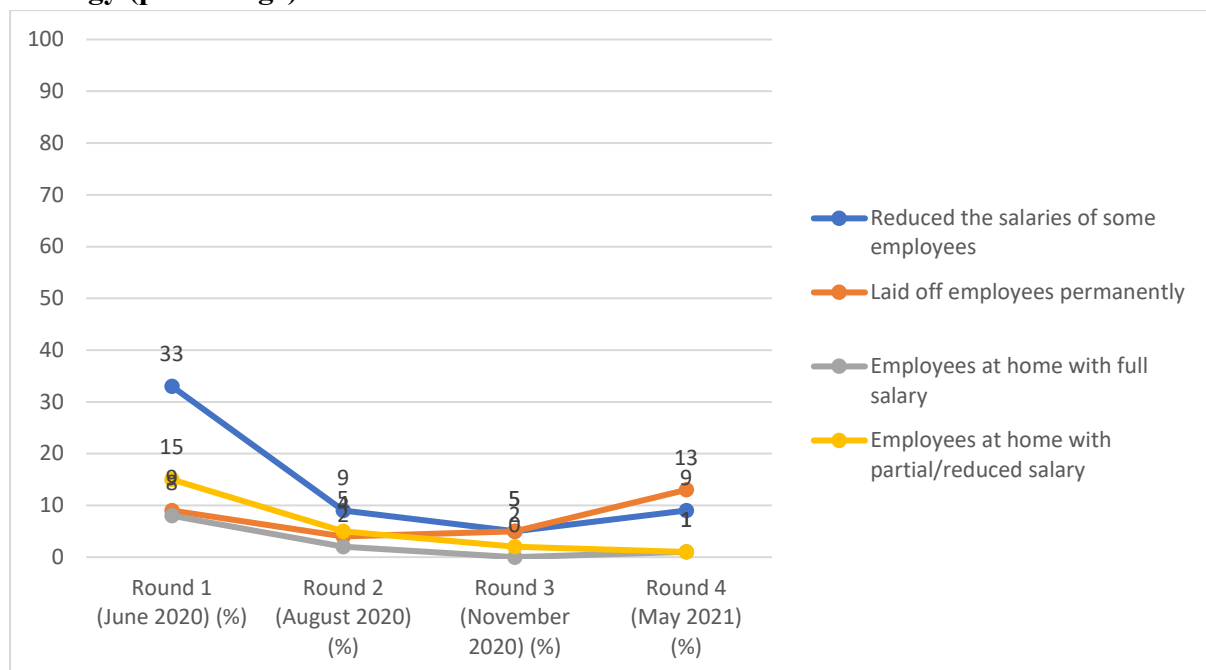
Firms that source their main inputs of production locally were more likely to report that they were moderately or slightly affected. Those that source their main inputs of production nationally and regionally were more likely to report that they were moderately affected, followed by those strongly affected. A quarter of the firms that source their main input of production globally (from outside Iraq) reported that they were moderately affected, and another quarter reported that they were not affected. A higher proportion of firms (31 percent) that source their input globally reported that they were slightly affected by COVID-19.

The most affected SMEs are those that source their supplies from national or regional suppliers. SMEs with supply sources that come from the international market are less likely to be affected on average. Strongly affected is low for those who produce locally. In general, those who source locally are less affected. There are two explanations for this, both of which can be true simultaneously. Those with sources that come from the local or community level were either more integrated into international markets that were able to recover after the reopening, and/or were affected to a lesser extent at the beginning compared to others that received their supplies from the regional or national level. The GVC theory and evidence from other crises (UNIDO, 2011) as explained above is a channel of crisis transmission as well as on the recovery side, given the reopening of borders and trade (Faße, Grote, Winter, 2009).

## Part 5: Coping strategies of SME owners

The percentage of SMEs utilizing these strategies is found in Figure 6. The proportion of firms that reduced employees' salaries reached one-third at the beginning of the pandemic and declined later. Similarly, at the beginning of the pandemic, 15 percent of firms reported paying partial salaries to employees who had been asked to stay at home. This was reduced significantly to five percent of businesses by September 2020 and only one percent by June 2021. Eight percent of SMEs were paying full salaries to employees at home, which was also reduced by September 2020 to two percent and one percent by the end of the study period.

**Figure 6. Coping strategies related to employment: Percentage of SMEs that utilized each strategy (percentage)**



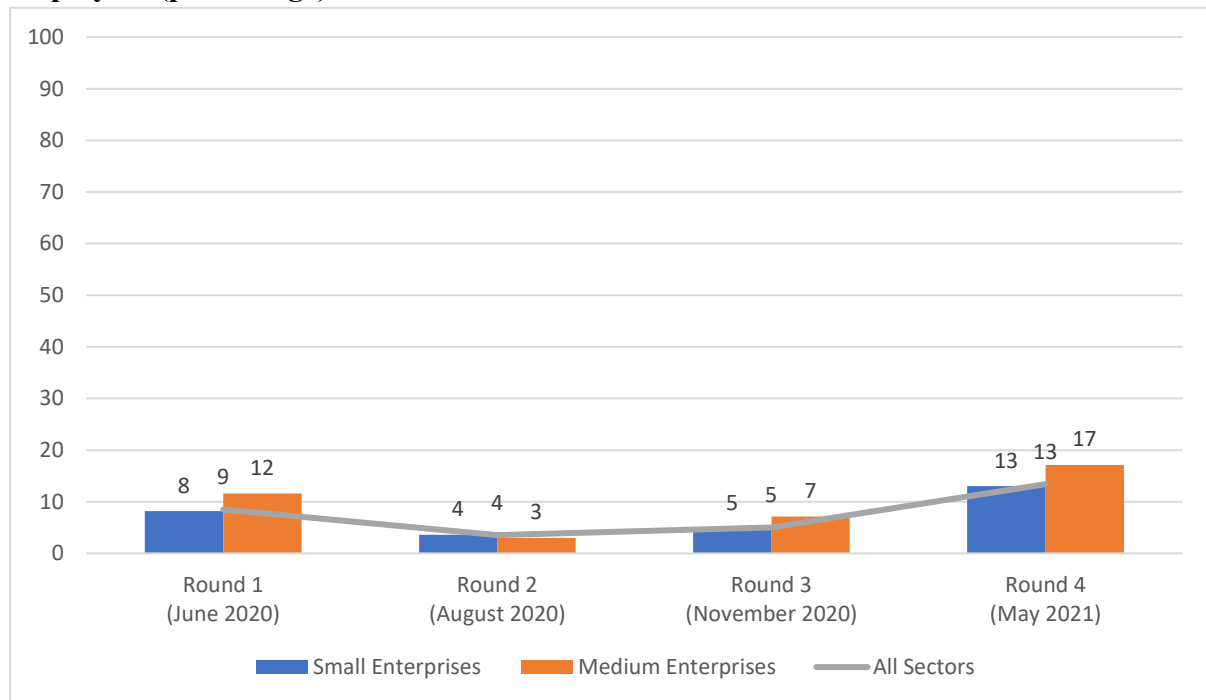
At the beginning of the pandemic, SMEs opted to reduce employment expenses by reducing or not paying salaries. These strategies were used less and less over the course of the pandemic. However, permanently laying off employees was a strategy used by nine percent of firms in the beginning of the pandemic and is the only category that saw an increase by the end of the study period, reaching 13 percent of firms. The use of less harsh measures on employment at the beginning and the fact that more firms were laying off employees one and a half years into the pandemic as compared to the beginning stages shows that the long-term effects on employment may be worse than the effects in the short-term.<sup>9</sup>

As found in other dimensions related to employment in the previous section, a classic U-trend curve can be observed in the share of enterprises implementing the strategy of laying off

<sup>9</sup> The rate of permanently laying off employees fluctuated throughout the pandemic. The education and technology, hospitality, and manufacturing and textile sectors reported to laying off employees at higher rates. SMEs in the medical services sector demonstrated the lowest rate of laying off employees to cope with the pandemic. Small enterprises were slightly less likely to implement this strategy.

employees (see Figure 7). This is a classic effect of an economic shock as the spread of the virus accelerates alongside mobility restrictions implemented to reduce the spread of the virus is clearly observable in the data from the first round. A high number of SMEs implemented this coping strategy to stay in the market. However, the following two periods were characterized by a slow but substantive economic recovery that allows some of the SMEs to reduce the use of this coping strategy. Nevertheless, in the medium to long period – as completely observable from the peak of the analyzed values in the data from the fourth round – it remains a necessary coping mechanism.

**Figure 7. Small vs. medium enterprises: Percentage of firms permanently laying off employees (percentage)**



This analysis reflects the fact that SMEs in Iraq were able to cope with the crisis in the beginning by firing employees. Furthermore, employees in a context of reduced economic growth in the longer term, the conditions in which these enterprises were operating evolved in such a way that did not allow them to rehire the same number of employees as were found before the pandemic. In other words, SMEs are still in a state of coping by not returning to pre-pandemic employment levels rather than reverting to other coping mechanisms.

### Strategies different from labor market variables

The restructuring of the market base of SMEs in Iraq can be seen from both the supply side and the outcome perspective. Over the course of the pandemic, the proportion of SMEs sourcing from new suppliers to fulfill the needs of their production and activities increased two-fold (see Table 9). This can be related to difficulties accessing markets due to movement restrictions and rising prices (national and international prices) of inputs.

**Table 9. Strategies adopted to cope with the COVID-19 crisis (percentage)**

	<b>Round 1</b>	<b>Round 2</b>	<b>Round 3</b>	<b>Round 4</b>
	<b>(%)</b>	<b>(%)</b>	<b>(%)</b>	<b>(%)</b>
Increased marketing efforts	8	22	25	31
Request for leniency in paying financial responsibilities	24	29	21	31
Sourced from new suppliers	11	15	14	24
<b>Online sales</b>	8	17	18	14
Created new product in hopes of boosting sales during pandemic	4	13	8	14
Teleworking	6	7	7	3
Applied for government subsidies	6	3	2	3
Loaned employees to other enterprises	1	2	0	2
Applied for new bank loan	2	2	1	2
Filed for bankruptcy	3	3	2	1
Rescheduling of bank loans	2	2	2	1

*Note: Multi-select question.*

SMEs increasingly adopted augmented marketing efforts as well as creating a new product to boost sales as coping strategies to deal with the negative effects of the COVID-19 economic crisis. It is interesting to see these two strategies rising together. Together with this, more on the production side, it is interesting to observe the rise in two dimensions. Despite the structural challenges and the short-term impact of the crisis, these results seem to be in line with the opportunity that these SMEs took to increase their opportunities in local, domestic, and international markets.

An important result found in Table 9 is the lack of classic coping strategies such as the use of formal financial and banking systems to support the tumultuous economic time caused by the pandemic. Among the formal means (ex. applying for government subsidies, applying for a new bank loan, filing for bankruptcy, or rescheduling bank loans) the rates of use are either very low and/or decreasing in frequency. There is a low and decreasing trend of SMEs applying for governmental subsidies reflecting potentially a lack of intervention of national and local authorities in support of SMEs in the selected sample.<sup>10</sup>

### **Online sales as a coping strategy**

Immediately after the pandemic began, there was an increasing trend in the use of online sales to cope with the effects of the pandemic. This can also be related to the different types of enterprises (some enterprises and sectors do not easily lend themselves to online sales). Medium-sized enterprises in every round more often adopted the use of online sales to cope with the pandemic.<sup>11</sup> The difference between small and medium enterprises is particularly

<sup>10</sup> The ranking of the strategies adopted to cope with the pandemic do not change when the sample is divided by formal and informal SMEs, size of the firms, and gender of the top manager.

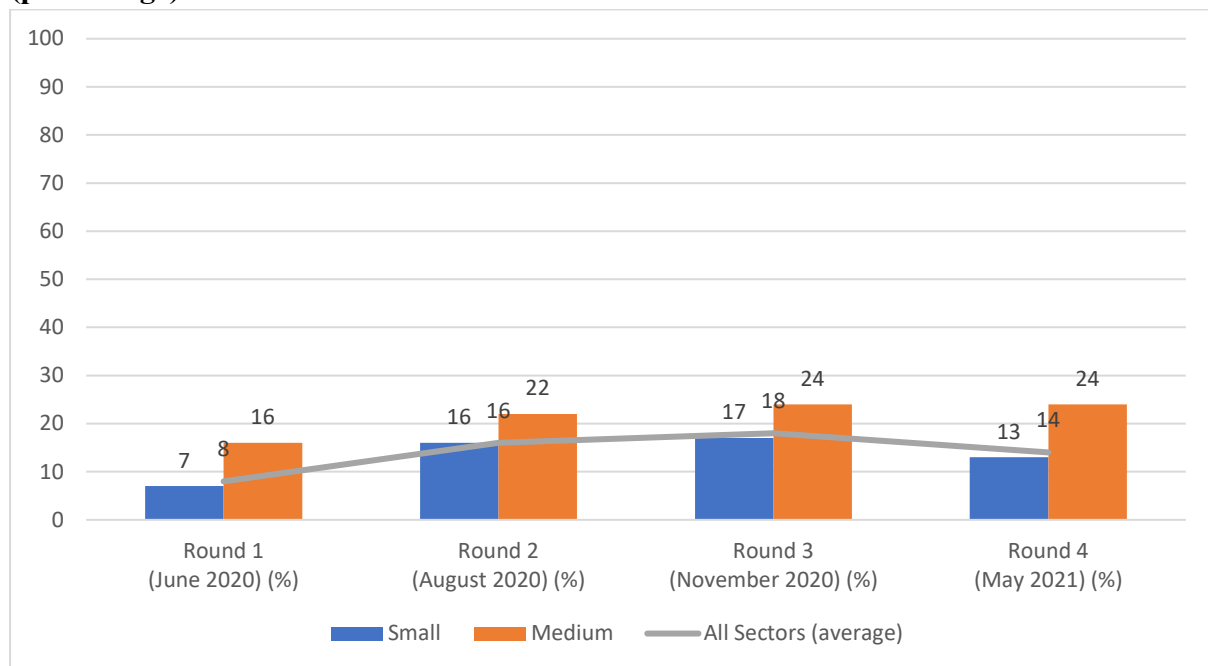
<sup>11</sup> Following IOM's Enterprise Development Fund approach, the study defines a small enterprise as having ten employees or fewer and medium enterprises as having between 11 and 50 employees. Four enterprises were included in this study that had over 50 employees.



interesting; in fact, we observe an immediately higher level of online sales for medium enterprises that have more access to ICT technologies and more access to the strong and soft infrastructures. Meanwhile, small enterprises (ten employees or fewer) were not able to cope with the effect of COVID-19 restrictions with the use of online sales (see Figure 8).

Despite this, we observe an increasing trend in both firm size categories over the study, and it is particularly interesting to observe an increase in the first nine months of the pandemic and the following stable/slowing trend (and a small decrease in the case of small businesses) during the first month of 2021 (see Figure 8). This can be explained by the lack of infrastructure in small businesses on how to implement this coping strategy.

**Figure 8. Firms adopting the use of online sales to cope with COVID-19 by firm size (percentage)**



Iraq lacks the financial infrastructure for the widespread use of debit or credit cards and electronic payment systems needed to host a robust e-commerce market (Ali 2020).

The use of online sales has been challenging for SME businesses. Only eight percent of the SMEs surveyed adopted online sales in the first few months of the pandemic by June 2020 (first round) and 14 percent between December 2020 and May 2021 (fourth round). The education and technology sector had the highest number of firms adopting online sales between the third and fourth rounds (33 percent), followed by hospitality (26 percent), and general trade between the second and third rounds (27 percent). The food and agriculture sector reports the lowest rates of adopting online sales overall throughout the study period.

Some sectors are expected to be more oriented toward online sales. It is unsurprising that the food and agriculture sector adopted online sales at low rates to cope with the economic difficulties of the pandemic. Food and agriculture sales usually need to be done in person.

Additionally, goods in this sector expire quickly, and using online sales would require an advanced information management system that constantly updates the goods in stock.

According to the evidence collected from the other developing regions (IADB, 2021), online selling increased sharply in many sectors, including food and agriculture, and this allowed the recovery of these sectors despite the negative effects of the closures and the following crisis. The services sector would also face difficulties switching to online sales because even if the advertisement of products can be done online, the completion of services (ex. such as installation or repair) requires prolonged in-person interactions. Similarly, in the automotive sector, the repair and painting of cars must be done with the worker present. However, shops selling spare parts would be able to adopt online sales to avoid in-person browsing of the products in a store. Other stores strictly selling goods, products, or materials would have an easy time adopting online sales, such as the general trade sector and the chemical, metal, and plastic sector.

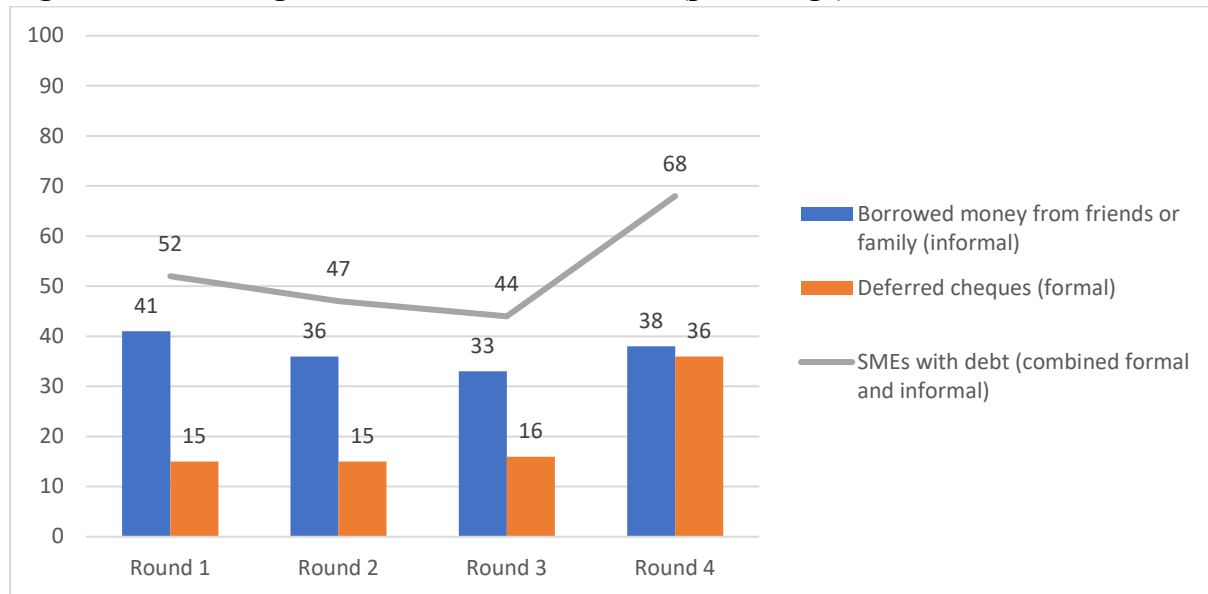
All sectors saw an increase in the use of online sales. The largest portion of SMEs increased the use of online sales between the second and third rounds. However, usage remains low. SMEs in Iraq do not see online sales as a structural and potential way to cope with the reduction of income revenues and different effects of economic crises, even though the initial period of the pandemic, especially the first year, has shown an increasing use of this coping strategy. This is due to the low level of innovation and capacities of these enterprises that are not able to adapt to the new economic situation due to their structural constraints from the financial to the technical point of view.

### **Borrowing: Capacity, availability of capital, and trends**

In the short term, SMEs preferred to go through the informal channels for borrowing money, meaning that they had more access to these informal channels (such as friends, family, and community networks) to receive money to survive through the crisis. This trend remains low in the medium term but increases at the end of the considered period (see Figure 9).

The trend of access to formal means of borrowing money is less in the short term (15 percent compared to three times informal borrowing), indicating a lower level of formality of small and medium enterprises in Iraq that is reflected in their access to credit and the financial system. Finally, inevitably, access to banks and formal financial institutions was also hindered by closures and restrictions compared to informal networks (see Figure 9).

**Figure 9. Borrowing: Informal vs. formal means (percentage)**



Nevertheless, it is important to observe that in the following months after the initial shock of COVID-19, the formal ways of borrowing money increased in relevance, whereas the informal method remained more stable as a trend in accessing credit. This can be explained by intra-enterprises and intra-sectorial changes that allow SMEs to access more formal ways of money. This can also be partially explained by the increasing involvement of government support from the GoI to the financial and banking system to ease the access to credit for SMEs (UNDP, 2020). Some of the governmental activities have been oriented towards different forms of support for these enterprises that faced negative effects of the crisis, such as guarantees in receiving credits and permission to delay payments.

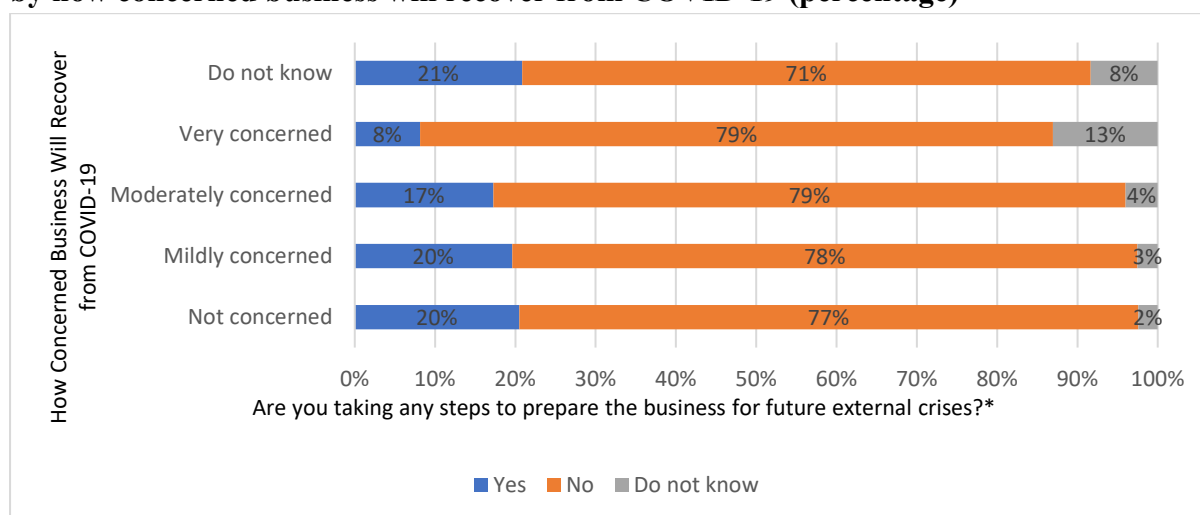
These borrowing habits mirror the structure in the Iraqi economy, which is very much an informal economy, especially in some sectors. Additionally, the lack of access to credit that is very much a feature of the Iraqi financial system and economy is reflected in the above trends. The difficulty in accessing credit is a structural issue in Iraq (IMF, 2019b). Before 2003, Iraq's centralized and state-controlled system rendered the process of opening these financial and banking markets less and less accessible, especially for SMEs and for poorer families or families with not enough assets to access the financial system and credit. This is in line with literature on this topic for other developing or transition countries. The implementation of liberalization policies, such as the one presented in IMF 2019b, is a potential tool for the economic development of these enterprises. Even if, in some cases, there is a mix of

liberalization and more developmental policies, this is potentially more efficient in the development of these enterprises or sectors.<sup>12</sup>

### Preparing businesses for future external crises

SMEs that are moderately or very concerned that their business will not recover from COVID-19 are less likely to be taking steps to prepare the business for future external crises compared to those who are not or mildly concerned (see Figure 10). This, unfortunately, reflects the low level of preparation of these enterprises toward new crises that are characterized by an extremely low level of capital, low innovation, and a scarce capacity to adapt to changes and improve their capacity to deal with economic shocks, such as the one derived from the COVID-19 outbreak.

**Figure 10. Likelihood of businesses reporting to be preparing for future external crises by how concerned business will recover from COVID-19 (percentage)**



\* Asked in Round 4 in June 2021

SMEs that are slightly or strongly affected by COVID-19 were not more likely to take steps to prepare the business for future external crises than those that are unaffected or moderately affected. Despite the reduction of the strongly affected enterprises, it is important to observe that the others affected exhibit the same trends in the medium and long period (see Figure 11).

<sup>12</sup> According to a 2019 IMF report, it is fundamental to facilitate access to finance by ensuring the availability of adequate funding sources adapted to SME needs, providing a supporting framework for enhanced credit information and bank competition, and developing capital markets to broaden access to new sources of finance for SMEs. Increasing SMEs' access to finance would raise annual growth and would promote economic development and job creation (IMF, 2019).

**Figure 11. Likelihood that business is preparing for future crises by degree of reported impact of COVID-19 (percentage)**

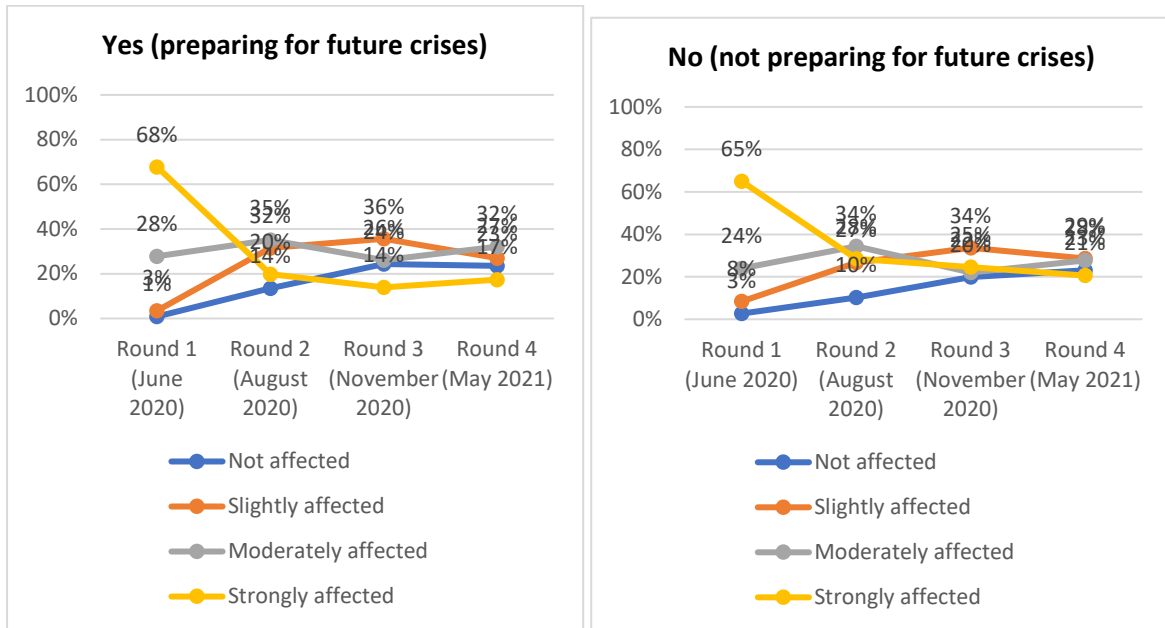
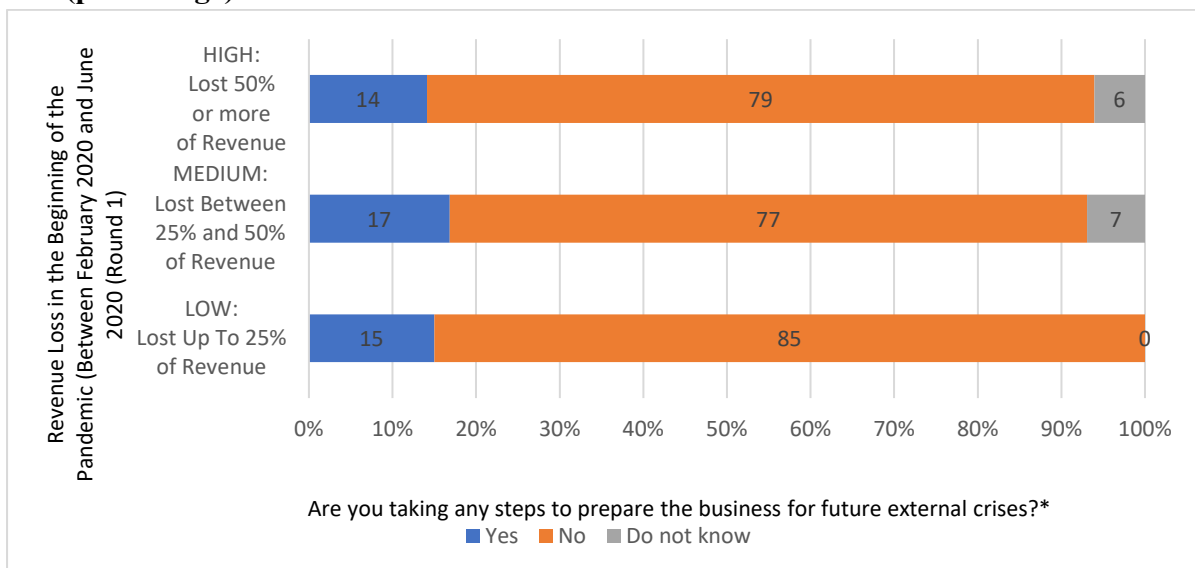


Figure 12 shows that SMEs that experienced much higher losses of revenue (50 percent or more of their normal revenue) are slightly less likely to be taking steps now, one and a half years into the pandemic, to prepare for future external crises compared to those that experienced smaller losses (below 50 percent). Loss of revenue does not seem to be a selection criterion for preparing for the future. Medium-sized businesses are more likely to be taking steps to prepare for future crises.

**Figure 12. Likelihood that the business is preparing for future crises by degree of revenue loss (percentage)**



*\*Asked in Round 4 in June 2021*

The degree of loss during the pandemic after one and a half years does not seem to have affected the likelihood to prepare for future crises. However, this is not because SMEs do not wish to prepare. Instead, among the firms that indicated they were not taking steps to prepare for future crises, the three main reasons included difficulty identifying risks and/or potential impact on the business (48 percent), lack of financial resources (43 percent), and difficulty identifying effective measures (28 percent). Therefore, SMEs are not equipped to prepare their business for future external economic hardship. All the findings of this section show that the structural conditions of the Iraqi SMEs in our sample are at the base of the lack of initiative to better cope with the current crisis as well as to prepare for new, eventual internal and external shocks that lead either to the closure of the businesses or to their increasing fragmentation or fragilization. The main concerns and constraints are related to the prevalence of informality in strategic markets (such as credit and banking systems) and to the output market that also depends on the general capacity of the national economic system to cope with internal and external shocks (IMF, 2019).

### **Part 6: Conclusion and recommendations**

The study shows that over the first year and a half of the COVID-19 pandemic in Iraq, production, revenue, and employment have been severely affected – including along gender lines – and have yet to recover to pre-pandemic levels.

Overall, among all sectors, revenue decreased by 67 percent by April 2020, and by June 2021, revenue remained 37 percent below pre-pandemic levels. Almost all of the surveyed SMEs (95 percent) experienced a decrease in monthly revenue between February, before the pandemic, and April 2020. The education and technology sector saw the highest losses in the initial months of the pandemic, a decrease in monthly revenue of 96 percent, followed by carpentry and construction with a decline of 87 percent. All these findings show the structural fragilities of these enterprises in the Iraqi context in all the phases of the value chain from the input markets – such as f.i. credit – to the output markets where they are facing import competition and difficulties in accessing broader domestic or international markets.

Employment has still not reached pre-pandemic levels, hovering on average at about one employee fewer than February 2020. Along with revenue and production, employment saw the biggest drop during the first few months of the pandemic. This trend is consistent across sectors. Job loss among female employees was higher throughout most of 2020 (first and second rounds, but not the third round) and remained higher by the end of the study. By the fourth round, one and a half years into the pandemic, female employment remained at -19 percent and male employment at -11 percent compared to pre-COVID-19 levels. Finally, the job loss of female workers was higher among unregistered businesses compared to those registered with an official entity. Employment overall is characterized by an elevated level of informality, especially among smaller enterprises and in some economic subsectors such as services (UNIDO, 2011; Marouani et al., 2021). For what concerns female involvement, the structural deficit of women's participation reduces the capacity of the entire economic systems – both in conflict-affected (OCHA, 2019) and non-affected areas – to recover from the crises

that had affected the country in the last decade, including the one following the spread of the COVID-19 pandemic.

The education and technology sector saw the largest drop by the first round at -88 percent, followed by the chemical, metal, and plastic sector at -37 percent. One and a half years into the pandemic, the food and agriculture, medical services, automotive, and services sectors all returned close to pre-pandemic employment levels while the education and technology, hospitality, manufacturing and textile, chemical, metal, and plastic, and carpentry and construction sectors remain far behind. General trade is the only sector that saw more employees by November 2020 compared to pre-pandemic levels (February 2020).

The size of the firm affected its likelihood to adopt the use of online sales as a coping mechanism to raising business. The use of online sales was more commonly adopted by medium-sized enterprises. Medium-sized enterprises – both immediately after the beginning of the pandemic and in every round – more often adopted the use of online sales to cope with the pandemic. Medium-sized enterprises have more access to ICT technologies and more access to strong and soft infrastructures. Small enterprises were less able to cope with the effect of COVID-19 restrictions with the use of online sales. Nevertheless, there is an increase in the adoption of online sales among both firm sizes throughout the study period.

Informal borrowing was preferred by SMEs at the beginning of the pandemic and decreased slightly over time. Formal borrowing was less common (due to low access) at the beginning of the pandemic and increased over time. Changes to the banking system and increasing access to forms of credit can enable these SMEs to have more stable access to credit and therefore implement the necessary investments (IMF, 2019).

Businesses are not equipped to shield themselves from future external crises. Most businesses (78 percent) are not taking steps to prepare their businesses for future external crises, such as the one they experienced in 2020. This lack of preparation is not because they are reluctant to invest in such measures; rather, it is because many either have difficulty identifying what risks and/or potential impact on the businesses would look like, have difficulty identifying effective measures, or lack the financial resources to do so (or all three).

### **Recommendations**

Despite the low or almost non-existent movement restrictions in Iraq at this point during the presence of COVID-19, businesses continue to suffer economically and are unable to recover from the revenue and production losses experienced in 2020. Therefore, the policy recommendations provided orient around general economic recovery after a crisis as well as steps to mitigate the negative impact of future crises, including the possibility of the reoccurrence of lockdowns and restrictions on business operations due to potential future outbreaks of COVID-19 and other potential socio-economic internal and international shocks. Vaccination rates in Iraq remain low, therefore the likelihood of a continuation of the crisis, at

least at local and regional levels, is not negligible now.<sup>13</sup> This may continue to affect the economy if outbreaks spark local or regional shutdowns. Therefore, these policy recommendations should be considered in the nearer term. They are as follows:

1. Supporting e-commerce should be pursued as one of the main avenues utilized for sustainable development in Iraq and support of the private sector. Training sessions can be held to encourage businesses to accept online payment systems (such as Fast Pay) and advertise that these payment methods are accepted in their shop window as well as on social media. Create possibilities for small businesses to conduct e-commerce without the use of banks. For example, digital credit cards that can be reloaded using an app or by buying scratch cards. The ease of re-loading money onto a wallet will rapidly encourage adaptation in a cash-based economy.
2. Introducing overall skill-enhancing programs, with an emphasis on e-commerce and marketing, among other essential competitive skills. Employees laid off during the pandemic should be targeted for these programs.
3. In future crises, make formal capital such as grants to businesses quickly available and accessible. The Iraqi government offered little to no relief for businesses during the pandemic. SMEs in the study often borrowed money from friends and family due to the COVID-19 crisis and the effect on their businesses. Create a crisis-relief fund for businesses with fewer than 100 employees. This includes fostering trust among firms of official financial institutions.
4. Increasing businesses' capacities to shield themselves from maximum loss during future external crises. Many businesses reported not knowing how to prepare for future external crises.
5. Supporting the formalizing of informal businesses and industries. Instruct business owners how to communicate with local Chambers of Commerce (and vice versa) and what to ask for to ensure that informal workers have access to social safety nets. This will also allow businesses to remain aware of certain requirements they need to meet to qualify for other financial assistance. Inform local Chambers of Commerce on the benefits of maintaining these safety nets and being informed about the businesses in their area as well as their needs.
6. In the study, only three percent of top managers of businesses were women, and women were more likely to lose their job during the pandemic than men. To address this, policy toward the private sector, formalization, and small businesses should be conceived while considering the goal of breaking down barriers to women's employment and equal economic opportunities. These include, but are not limited to, equal access to finance, education, training, and support (mentorships or official cohort programs) to encourage females to establish firms.

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<sup>13</sup> By 25 September 2021, 7.6 million vaccine doses had been administered out of Iraq's population of 40 million, World Health Organization, <https://covid19.who.int/region/emro/country/iq>.



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## Annexes

### Overview of the displacement situation in the locations of SMEs

This section aims to emphasize the role of IDP-hosting localities and the relevance of this population and migrant group in the Iraqi context. This section provides a recent overview as of 31 July 2021 of the population of internally displaced persons (IDPs). The IDP and returnee populations come from the periods of ISIL occupation starting in 2014 and the subsequent fighting against the Iraqi Army to expel ISIL from territorial control. Data collection for Round 122 of IOM's Displacement Tracking Matrix (DTM) took place in May through July 2021. As of 31 July 2021, IOM's DTM recorded 4,884,612 returnees (814,102 households) and 1,191,470 IDPs.<sup>14</sup>

**Table A1. Displacement situation during study period**

Governorate	Number of SMEs	Number of IDP Individuals			Number of Returnee Individuals		
		February 2020 (beginning of pandemic)	July 2021 (one month after the end of the study)	% Change between February 2020 and June 2021	February 2020 (beginning of pandemic)	July 2021 (one month after the end of the study)	% Change between February 2020 and June 2021
Anbar	59	36,384	34,711	-5%	1,479,720	1,511,658	2%
Babylon	17	17,016	16,944	0%	--	--	--
Baghdad	47	38,076	26,856	-42%	90,072	91,638	2%
Basrah	67	6,528	5,706	-14%	--	--	--
Dahuk	41	318,786	250,437	-27%	768	768	0%
Diyala	55	54,132	44,417	-22%	230,190	238,878	4%
Erbil	40	237,408	231,976	-2%	52,878	55,002	4%
Kerbala	20	15,846	11,754	-35%	--	--	--
Kirkuk	86	99,534	90,486	-10%	340,092	350,598	3%
Missan	22	2,262	2,004	-13%	--	--	--
Najaf	28	12,504	9,324	-34%	--	--	--
Ninewa	105	331,170	257,589	-29%	1,785,738	1,920,360	7%
Salah al-Din	59	74,484	58,752	-27%	680,946	715,710	5%
Sulaymaniyah	31	140,304	138,058	-2%	--	--	--
Thi Qar	39	3,426	3,222	-6%	--	--	--
<b>Total</b>	<b>716</b>	<b>1,387,860</b>	<b>1,182,236</b>	<b>-17%</b>	<b>4,660,404</b>	<b>4,884,612</b>	<b>5%</b>

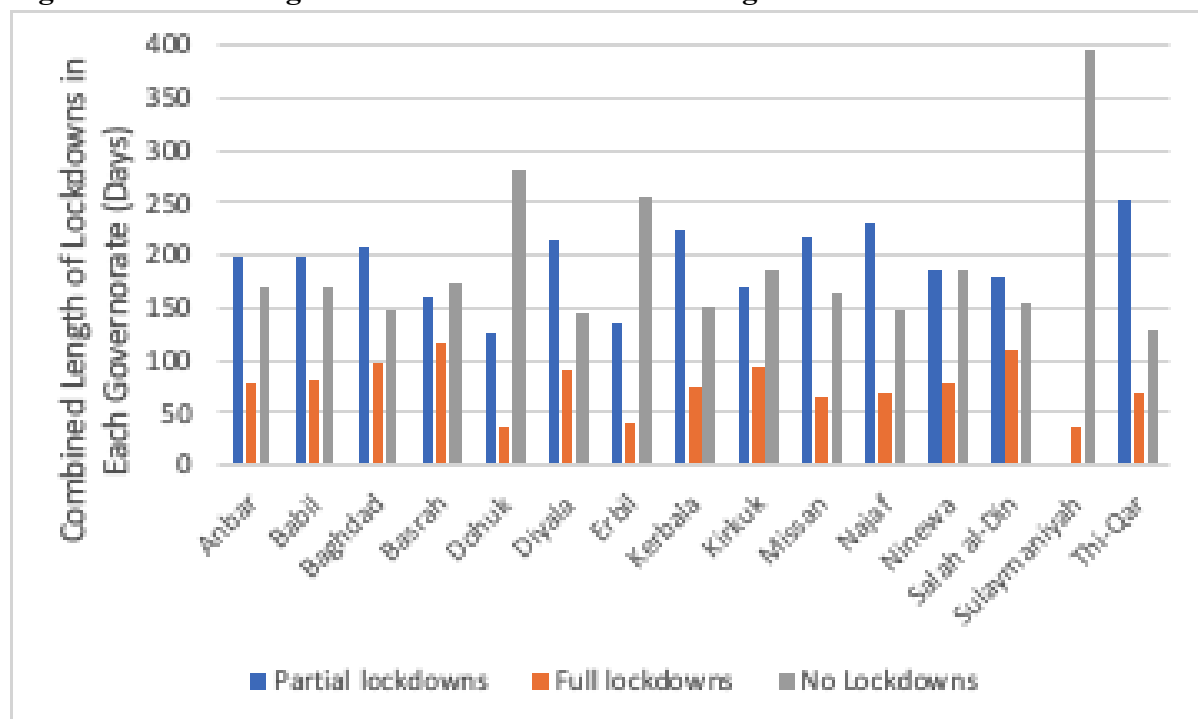
Source: IOM Iraq Displacement Tracking Matrix, Master List, Rounds 114 to 122.

### Lockdowns and curfews in Iraqi governorates

From February 2020 to June 2021 (pre-COVID-19 until the fourth round), each governorate in Iraq underwent at the least 36 days (Sulaymaniyah) and at most of 304 days (Diyala) with some level of mobility restrictions. Figure 8 presents the number of days under lockdown by governorates. Basrah, Dohuk, Erbil, Kirkuk, and Sulaymaniyah had more days without restrictions than with restrictions, about 160, 180, 270, 250, and 390 days respectively. The rest of the governorates saw more days with restrictions than not (see Figure A1).

<sup>14</sup> IOM Iraq Displacement Tracking Matrix (DTM), Master List Report 122, May-July 2021, [http://iraqdtm.iom.int/images/MasterList/20218225710558\\_DTM\\_122\\_Report\\_May\\_July\\_2021.pdf](http://iraqdtm.iom.int/images/MasterList/20218225710558_DTM_122_Report_May_July_2021.pdf).

**Figure A1. Total length of lockdown measures across governorates**



### **Correlations with lockdowns and with gender**

In this Annex, we aimed at studying the correlation between the number of lockdowns per month and the performance of SME owners by estimating an Ordinary Least Squares (OLS) model. The dependent variable in Table A2, Panel A is the revenue growth comparing February 2020 (pre-COVID-19) with four time periods: May 2020 (Column 1), August 2020 (Column 2), November 2020 (Column 3), and May 2021 (Column 4). The principal independent variable is the number of days the governorate where a firm is located underwent lockdowns or curfews. We also control for the following dummy variables: having a woman as the top manager, the manager is less than 35 years old, the business is not registered with a national authority, and categorical variables for selling products to local consumers, regional clients, or at the national level. We also included the revenue and the value of firms in February 2020 (pre-COVID-19). Finally, we control for the number of male and female employees before the economic crisis started in the beginning of 2020 (see Table A2).

**Table A2: Changes in revenues and employment by lockdowns**

<b>Panel A: Dependent variable monthly revenue growth</b>				
	(1)	(2)	(3)	(4)
	Mid-March to End of June 2020	Mid-March through Mid-September 2020	Mid-March to Mid-December 2020	Mid-March 2020 to June 2021
Number of lockdowns days per month	-0.00 (0.00)	-0.03*** (0.01)	-0.04*** (0.01)	0.03*** (0.00)
Dummy for having a woman manager	-0.08 (0.05)	0.11 (0.27)	-0.24 (0.20)	-0.13 (0.16)
Dummy for having a manager who is less 35 years old	-0.04** (0.01)	-0.02 (0.04)	-0.05 (0.03)	0.05 (0.05)
Dummy for SME owners not business not registered in the national authority	-0.00 (0.02)	-0.01 (0.05)	0.02 (0.06)	0.06* (0.03)
Dummy for selling products to consumers regionally	0.05 (0.04)	0.07 (0.06)	0.02 (0.05)	0.12* (0.06)
Log. of value firms in Round 1	0.02 (0.02)	-0.01 (0.02)	-0.04** (0.01)	-0.06** (0.02)
Revenue in Feb. 2020	-0.00 (0.00)	-0.00*** (0.00)	-0.00*** (0.00)	-0.00** (0.00)
Number of male employees in Feb. 2020	0.00 (0.00)	0.00 (0.00)	0.01*** (0.00)	0.01*** (0.00)
Number of female employees in Feb. 2020	0.04* (0.02)	0.01 (0.01)	-0.02 (0.01)	0.01 (0.01)
Constant	-1.17*** (0.23)	-0.27 (0.20)	0.43** (0.19)	-0.20 (0.23)
Observations	617	617	617	617
R-squared	0.18	0.21	0.21	0.20
<b>Panel B: Dependent variable employment growth</b>				
	(1)	(2)	(3)	(4)
	Mid-March to End of June 2020	Mid-March through Mid-September 2020	Mid-March to Mid-December 2020	Mid-March 2020 to June 2021
Number of lockdowns days per month	-0.05*** (0.00)	-0.01*** (0.00)	-0.01** (0.00)	0.04*** (0.01)
Dummy for having a woman manager	0.11 (0.09)	0.08 (0.17)	0.05 (0.22)	0.16 (0.24)
Dummy for having a manager who is less 35 years old	-0.00 (0.04)	-0.05 (0.03)	-0.02 (0.04)	0.05 (0.07)
Dummy for SME owners not business not registered in the national authority	0.02 (0.04)	0.03 (0.06)	0.01 (0.06)	0.02 (0.05)
Dummy for selling products to consumers regionally	0.00 (0.03)	0.03 (0.07)	0.01 (0.07)	-0.01 (0.08)
Log. of value firms in Round 1	0.01 (0.02)	-0.00 (0.02)	0.01 (0.02)	-0.04 (0.03)

Revenue in Feb. 2020	0.00 (0.00)	0.00* (0.00)	0.00 (0.00)	0.00 (0.00)
Number of male employees in Feb. 2020	-0.00* (0.00)	-0.01** (0.00)	-0.01** (0.00)	-0.01 (0.01)
Number of female employees in Feb. 2020	-0.01 (0.01)	-0.01 (0.01)	-0.00 (0.02)	0.02 (0.02)
Constant	-0.19 (0.13)	0.16 (0.15)	0.04 (0.19)	-0.13 (0.25)
Observations	617	617	617	617
R-squared	0.26	0.19	0.14	0.10

Note: In both panels, we include fixed effects for sectors and governorates. We also control for a dummy equal to one for firms trading at the national level, and another dummy for SME owners selling at the local consumers.

Between February (pre-COVID-19) and May 2020, Panel A shows that the correlation between revenue growth and the number of lockdown days is not statistically significant from zero for the revenue growth (Column 1). Comparing February and August 2020, we find that one additional day of lockdown per month reduces the revenue growth by three percentage points (Column 2). Similarly, we find a decline in revenue growth after an increase in lockdown days between February and November 2020 (Column 3). After the relaxation of the lockdowns, we see a positive correlation between the revenue growth comparing February 2020 and May 2021 and the number of lockdown days per month (Column 4). The positive correlation can be explained by a reactivation of the economy and the increase in revenues reported by some of the SME owners in the sample.

Using employment growth as a dependent variable, the model shows similar correlations between revenue growth and lockdowns (see Panel B in Table A2). One additional day of curfew per month decreases the employment growth by five percentage points when comparing February and May 2020 (Column 1). Similarly, the employment declined in governorates with an additional day under lockdowns, comparing February with August 2020 (Column 2) or with November 2020 (Column 3). We also see an increase in employment growth comparing the levels before the pandemic started with the number of employees in May 2021 (Column 4). The results presented for the two regressions with respect to the main independent variable show the same increasing trend. It can be linked to the effects of the closures in the first part of the pandemic that is followed by fewer COVID-19 cases that resulted in fewer closures that consequently is linked to the economic recovery in the observed dependent variables.

Table A2 also presents the correlation with a dummy equal to one for SME owners with female top managers on revenue and employment growth. The coefficient is neither statistically significant for any of the dependent variables nor the rounds. One explanation could be the low source of variation: only three percent of the firms had a woman as the top manager. Similarly, the number of female employees in February 2020 did not have a relationship with revenue and employment growth. This is in line with the results observed in the paper where both genders were affected by the crisis equally. What is important to reveal here are the structural differences in employment and managerial female involvement in the Iraqi SMEs.

The overall effects show the presence of a negative effect on employment among firms led by female managers, but this can be, in our opinion, related to the fact that smaller enterprises such as those led by women were not able to cope with the economic crisis in the short and long term. Moreover, it is interesting to observe the same U-trend of the effects of this variable over time.

Finally, Table A3 runs a similar specification as Table A2 but replacing the number of female employees (intensive margin) with looking at the dummies relative to the presence of enterprises with only female employees (extensive margin). We observe interesting and, in some cases, statistically significant results. In the first regression, we can see the impact on the dependent variable is negative for those who only have male workers compared to those with at least one female worker employed in the enterprise. This is also in line with the results relative to the female manager variable as commented above. On the other hand, in the second regression, we would like to emphasize that an increasing trend from negative values to positive and statistically significant ones for what concerns the presence of only male-run (i.e. a male top manager) enterprises that might have experienced the first shock, but the following recovery and the opposite trends are recorded for enterprises with at least one female worker. In the end, the value of the coefficient of the constant is high in terms of the value of the coefficient and statistically significant values showing the presence of missing variables in the model and in the dataset itself that can refine the results of this model.

**Table A3: Changes in revenues and employment by lockdowns – dummy for at least one female employee**

<b>Panel A: Dependent Variable Monthly Revenue Growth</b>				
	(1)	(2)	(3)	(4)
	Mid-March to End of June 2020	Mid-March through Mid-September 2020	Mid-March to Mid-December 2020	Mid-March 2020 to June 2021
Number of lockdowns days per month	-0.00* (0.00)	-0.03*** (0.01)	-0.04*** (0.01)	0.03*** (0.00)
Dummy for at least one female in Feb. 2020	0.08* (0.05)	-0.10 (0.08)	-0.18** (0.07)	-0.03 (0.08)
Dummy for having a woman manager	-0.10*** (0.03)	0.19 (0.30)	-0.11 (0.20)	-0.10 (0.16)
Dummy for having a manager who is less 35 years old	-0.04** (0.01)	-0.02 (0.04)	-0.05 (0.03)	0.05 (0.05)
Dummy for SME owners not business not registered in the national authority	-0.00 (0.02)	-0.01 (0.05)	0.01 (0.06)	0.05 (0.03)
Dummy for selling products to consumers regionally	0.06 (0.04)	0.10 (0.06)	0.07 (0.04)	0.18*** (0.06)



Log. of value firms in Round 1	0.02 (0.02)	-0.01 (0.02)	-0.03* (0.01)	-0.04** (0.02)
Revenue in Feb. 2020	-0.00 (0.00)	-0.00*** (0.00)	-0.00*** (0.00)	-0.00** (0.00)
Constant	-1.12*** (0.20)	-0.30 (0.18)	0.33* (0.17)	-0.32 (0.24)
Observations	617	617	617	617
R-squared	0.15	0.20	0.20	0.18
<b>Panel B: Dependent Variable Employment Growth</b>				
	(1)	(2)	(3)	(4)
	Mid-March to End of June 2020	Mid-March through Mid-September 2020	Mid-March to Mid-December 2020	Mid-March 2020 to June 2021
Number of lockdowns days per month	-0.05*** (0.00)	-0.02*** (0.00)	-0.02*** (0.01)	0.04*** (0.01)
Dummy for having a woman manager	-0.03 (0.04)	-0.12*** (0.03)	-0.06 (0.08)	-0.10 (0.08)
Dummy for having a manager who is less 35 years old	0.13 (0.09)	0.17 (0.17)	0.11 (0.22)	0.25 (0.19)
Dummy for SME owners not business not registered in the national authority	-0.00 (0.04)	-0.06 (0.03)	-0.02 (0.04)	0.05 (0.07)
Dummy for selling products to consumers regionally	0.03 (0.04)	0.04 (0.06)	0.03 (0.06)	0.03 (0.06)
Log. of value firms in Round 1	-0.02 (0.03)	-0.02 (0.06)	-0.04 (0.07)	-0.04 (0.08)
Revenue in Feb. 2020	0.01 (0.02)	-0.02 (0.02)	-0.00 (0.02)	-0.05 (0.03)
Number of male employees in Feb. 2020	0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
Number of female employees in Feb. 2020	-0.15 (0.15)	0.30* (0.16)	0.17 (0.18)	0.00 (0.29)
Constant	617	617	617	617
	0.25	0.17	0.12	0.09
Observations	617	617	617	617
R-squared	0.26	0.19	0.14	0.10

Note: In both panels, we include fixed effects for sectors and governorates. We also control for a dummy equal to one for firms trading at the national level, and another dummy for SME owners selling at the local consumers.

### Additional Figures

Figure A2. Number of SMEs by sector and governorate

