

Distressed firms in the time of Covid-19: the case of MENA SMEs

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- 1 Introduction and Motivation
- 2 Data and empirics
- 3 Results
- 4 Remote Work, the role of the government, and international trade
- 5 Conclusion

- Covid-19 is both a health and economic crisis.
- The crisis is global in scope, but developing countries may be disproportionately affected.
- This research is concerned with the effects of the pandemic on SMEs in the MENA region.
- SMEs form the backbone of many economies in MENA.
- It is therefore imperative that we understand how the pandemic affects these firms.

Research question

- What are the effects of the pandemic on the labor force and operations of MENA SMEs?
- How do SMEs adapt to the crisis?
- How can these firms be supported going forward?

- First study to investigate the effects of the pandemic on SME outcomes in the MENA region.
- Contributes to the emerging literature on the effects of Covid-19 in economics and finance.

- Data come from the Covid-19 MENA Monitor Enterprise Survey (CCMMENT) provided by Economic Research Forum (ERF) - 2 waves.
- Approximately 500 SMEs were surveyed from each of Jordan, Egypt, Morocco, and Tunisia.
- The survey takes a snapshot of the firm before the pandemic (Feb 2020) and 2 subsequent periods (Feb and June 2021).
- ▶ Firm size
- ▶ Firm activity

Difficulties and adaptation

- The firms were asked about the main difficulties faced by them.
- The firms also report how they adapted to the new constraints brought about by the pandemic.
- [▶ Difficulties](#)
- [▶ Adaptation](#)

The Effects of Covid-19: Empirical Identification

- Identification equation:

$$outcome_{ft} = \beta_0 + \sum_{t=1}^2 \beta_t wave_t + \sum_{t=1}^2 \gamma_t wave_t * X_{C,i,f} + \alpha_f + \epsilon_{ft} \quad (1)$$

- The coefficients of the wave variable will capture the change in the outcome variable relative to pre-pandemic levels.
- The coefficients γ of the interaction terms $wave_t * X_{C,i,f}$ capture the heterogeneous differential changes across firm size categories, countries, and industries.

Results: The Effects of Covid-19 on the workforce

- There is some evidence of layoffs (on average 5%) in Jordan, Morocco, and Egypt in wave 1.
- However, firms resorted largely to wage and work hours reductions rather than layoffs. There is clear recovery in Q2 versus Q1 2021.
- The industry most negatively affected is accommodation and food services.
- The workforce of the largest firms recover the most in Q2 2021.
- While firms expect further layoffs and wage reductions in the near future, the prospects improve significantly in Q2 2021.

Results: The Effects of Covid-19 on other firm outcomes

- Closures: On average, around 7 to 9% of MENA SMEs in the sample close their businesses (temporarily) at any time during the pandemic.
- Adaptation: The majority of firms choose to adapt their business models in the aftermath of the crisis, mostly by switching to the internet and social media to reach their suppliers and clientele.
- Sales and Investments: SMEs expect, on average, a drop in sales of one third in wave 1 and 17% in wave 2 of the survey compared to 2019 levels, suggesting some improvement in sales in Q2 2021. The same applies to investment.
- There is, however, plenty of heterogeneity in outcomes across firm size categories, countries, and industry.

Results: Heterogeneity

- Larger firms: larger firms within SMEs are found to be more resilient and adaptable to the crisis.
- Compared to their smaller counterparts, larger firms are less likely to close, more likely to adapt their business models, and expect lower sales and investment drops.
- Industry: SMEs in agriculture, fishing, and mining as well accommodation and food services are found to be more likely to close (temporarily) during the pandemic. The education sector is most likely to adapt their business model. Accommodation and food services expect the highest drops in sales and investment(wave 1).
- Country: Tunisian firms are least impacted in the first wave of the survey across all outcomes. Countries converge in the second wave. Tunisian and Moroccan firms are less likely to close. Egyptian countries are most likely to adapt. Moroccan and Egyptian firms have the best recovery in sales and investment in Q2 2021.

The Differential Effects of Covid-19: Remote work, Government Assistance, and International Trade



$$outcome_{ft} = \beta_0 + \sum_{t=1}^2 \beta_t wave_t + \sum_{t=1}^2 \gamma_t wave_t * remote_{ft} + \alpha_f + \epsilon_{ft} \quad (2)$$

- What are the differential effects of Covid-19 on firm that choose remote work, participate in government assistance programs, or partake in international trade?
- We estimate a DiD equation.

The Differential Effects of Covid-19: Remote work, Government Assistance, and International Trade

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The Differential Effects of Covid-19: Remote work, Government Assistance, and International Trade

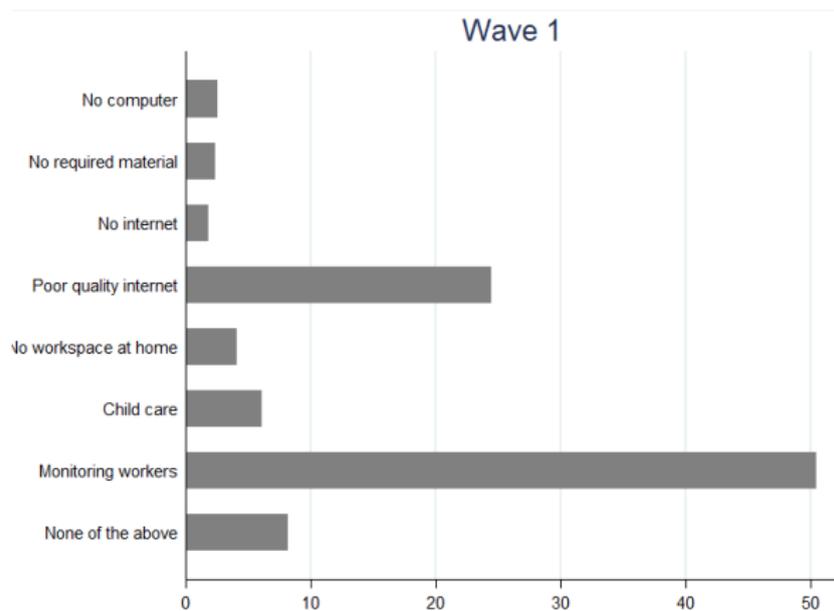


Figure: The challenges of switching to remote work.

The Differential Effects of Covid-19: Remote work, Government Assistance, and International Trade

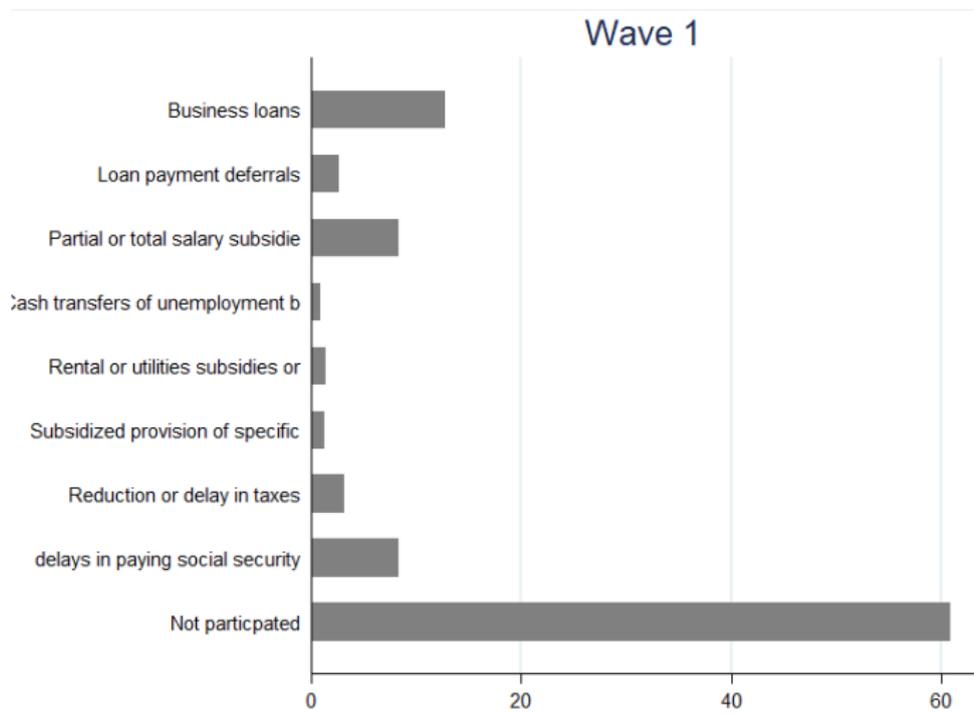


Figure: The most popular government assistance programs

The Differential Effects of Covid-19: Remote work, Government Assistance, and International Trade

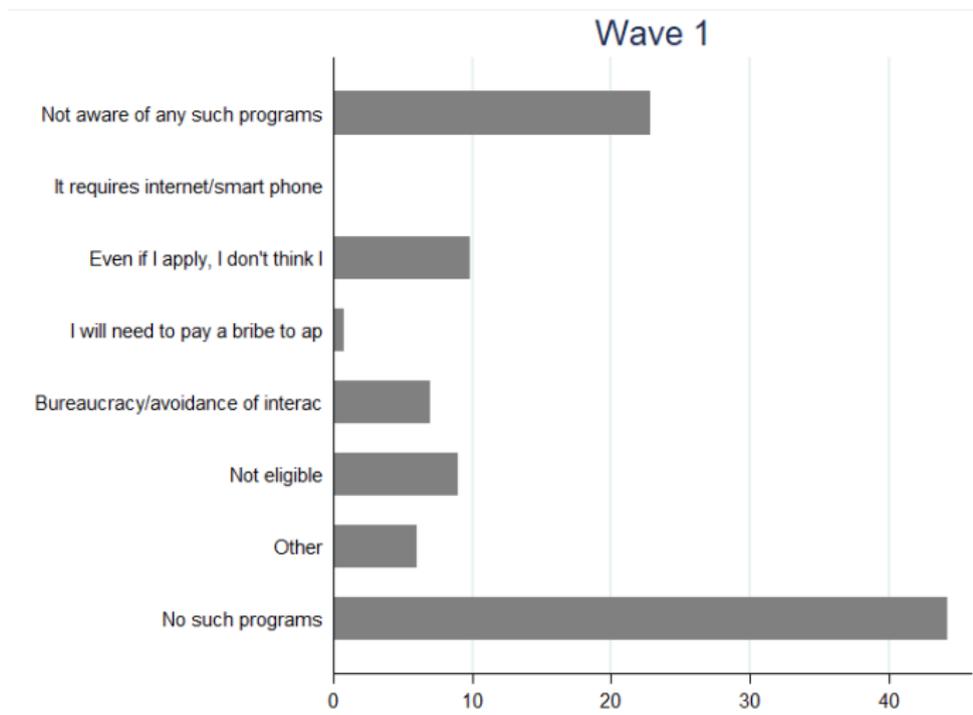


Figure: Reasons for not applying for a government assistance program

The Differential Effects of Covid-19: Remote work, Government Assistance, and International Trade

- Remote work safeguards the firms against closures (resilience).
- Firms that switch to remote work are significantly more likely to adapt their business model.
- With respect to government assistance, we find no evidence that participation in such programs improves firm outcomes.
- Importing and exporting strongly improve firm outcomes across the board and in all waves.

Results: Does remote work matter?

	total workers	wages reduced	hrs reduced	layoffs	closure	adapt	sales	inv
wave 1	-0.047* (0.024)	0.069*** (0.007)	0.126*** (0.010)	0.128*** (0.009)	0.103*** (0.010)	0.537*** (0.016)	-32.356*** (1.200)	-25.165*** (1.259)
wave 2	0.012 (0.018)	0.020*** (0.004)	0.055*** (0.006)	0.121*** (0.008)	0.088*** (0.008)	0.733*** (0.013)	-19.712*** (1.181)	-17.535*** (1.193)
remote*wave 1	0.034 (0.030)	0.038** (0.015)	0.078*** (0.021)	-0.020 (0.019)	0.010 (0.019)	0.133*** (0.030)	-10.302*** (2.724)	-11.113*** (2.787)
remote*wave 2	0.017 (0.023)	-0.003 (0.008)	-0.002 (0.011)	-0.006 (0.014)	-0.046*** (0.012)	0.146*** (0.019)	7.668*** (2.011)	6.217*** (2.015)
Number obs.	7,057	7,057	7,057	6,730	7,266	7,266	7,036	7,030
N firms	3,219	3,219	3,219	3,219	3,288	3,288	3,288	3,288
R ²	0.00	0.09	0.16	0.15	0.07	0.70	0.31	0.23

Table: The effects of Covid-19 and remote work

Results: The role of government assistance

	total workers	wages reduced	hrs reduced	layoffs	closure	adapt	sales	inv
wave 1	-0.024 (0.022)	0.079*** (0.008)	0.159*** (0.011)	0.098*** (0.008)	0.088*** (0.009)	0.665*** (0.015)	-31.031*** (1.236)	-26.216*** (1.243)
wave 2	0.011 (0.018)	0.016*** (0.004)	0.046*** (0.006)	0.100*** (0.008)	0.082*** (0.009)	0.764*** (0.014)	-14.577*** (1.230)	-13.422*** (1.243)
gov*wave 1	-0.026 (0.034)	0.003 (0.015)	-0.027 (0.019)	0.003 (0.019)	0.026 (0.017)	-0.082*** (0.031)	0.560 (2.582)	3.106 (2.770)
gov*wave 2	0.017 (0.024)	0.007 (0.008)	0.020* (0.011)	0.046*** (0.014)	-0.025** (0.012)	0.042** (0.020)	-6.302*** (1.955)	-5.192*** (1.960)
Number obs.	7,057	7,057	7,057	6,730	7,266	7,266	7,036	7,030
N firms	3,219	3,219	3,219	3,219	3,288	3,288	3,288	3,288
R ²	0.00	0.08	0.15	0.16	0.07	0.69	0.31	0.23

Table: The effects of Covid-19 and government assistance

Results: The role of international trade

	total workers	wages reduced	hrs reduced	layoffs	closure	adapt	sales	inv
wave 1	-0.029* (0.017)	0.090*** (0.007)	0.168*** (0.009)	0.125*** (0.007)	0.095*** (0.008)	0.662*** (0.013)	-34.505*** (1.001)	-28.028*** (1.056)
wave 2	0.021 (0.013)	0.022*** (0.004)	0.059*** (0.006)	0.115*** (0.007)	0.076*** (0.007)	0.777*** (0.011)	-16.811*** (1.077)	-15.384*** (1.062)
exporter*wave 1	0.010 (0.042)	-0.053*** (0.013)	-0.091*** (0.018)	-0.054*** (0.017)	-0.056*** (0.015)	-0.094*** (0.036)	9.812*** (2.822)	8.047*** (2.912)
exporter*wave 2	-0.022 (0.054)	-0.021*** (0.005)	-0.032*** (0.010)	0.026 (0.021)	-0.025* (0.015)	0.024 (0.026)	-2.248 (2.237)	-0.709 (2.495)
Number obs.	7,057	7,057	7,057	6,730	7,266	7,266	7,036	7,030
N firms	3,219	3,219	3,219	3,219	3,288	3,288	3,288	3,288
R ²	0.00	0.09	0.15	0.15	0.07	0.69	0.30	0.23

Table: The effects of Covid-19 and export status

Conclusions

- SMEs in the MENA region resorted mainly to wage and hours of work reductions.
- The larger firms among SMEs are the most resilient and adaptable.
- The sector that is most affected negatively is the accommodation and food services sector (tourism).
- Tunisian firms are least affected across the board in wave 1, but clear recovery occurs especially in Morocco, which leads to convergence in wave 2.
- Most firms adapt their business models which reflects capacity to adapt to shocks. Innovations in ICT seem to have helped.
- Remote work makes the firms somehow more resilient and adaptable.
- Government assistance programs do not improve firm outcomes.
- Firms that partake in international trade are significantly more resilient and adaptable.

Conclusions - Policy recommendations

- Special attention is needed for SMEs especially the smallest of them. Government assistance programs that cater specifically to these firms are needed.
- Governments need to communicate their assistance programs more effectively.
- Since firms resorted to wage and work hours reductions, salary subsidies and furlough schemes are appropriate.
- Export promotion programs and lower barriers to trade could serve as a way to improve firm resilience and adaptability in the face of disruptions.
- Subsidize internet access and improve internet quality.

Distribution by Firm size

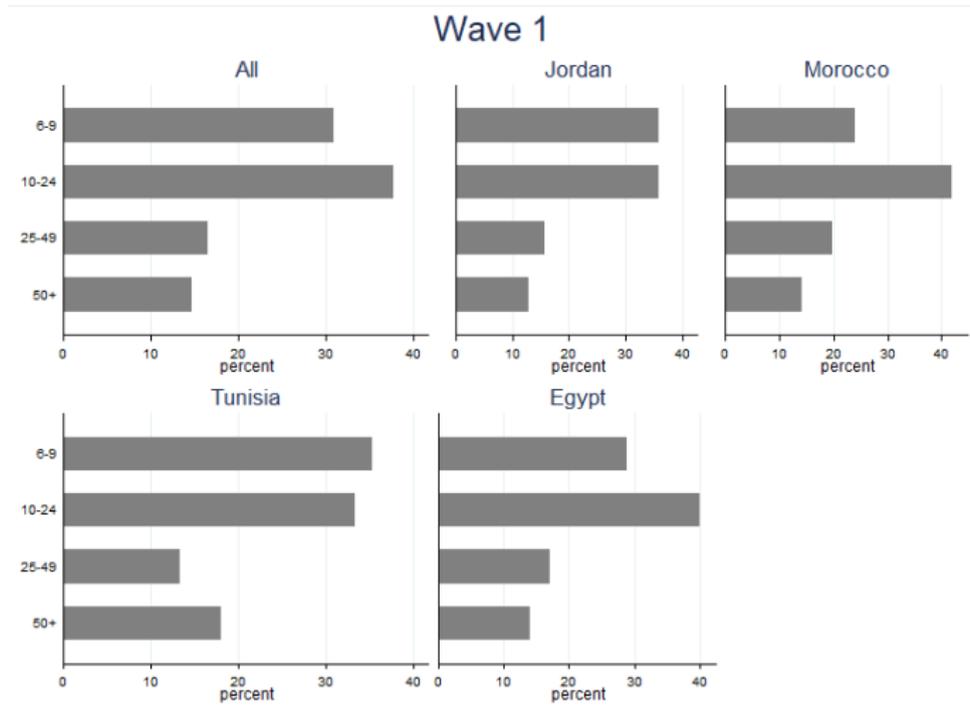


Figure: The distribution of firms by firm size

Firm distribution by activity

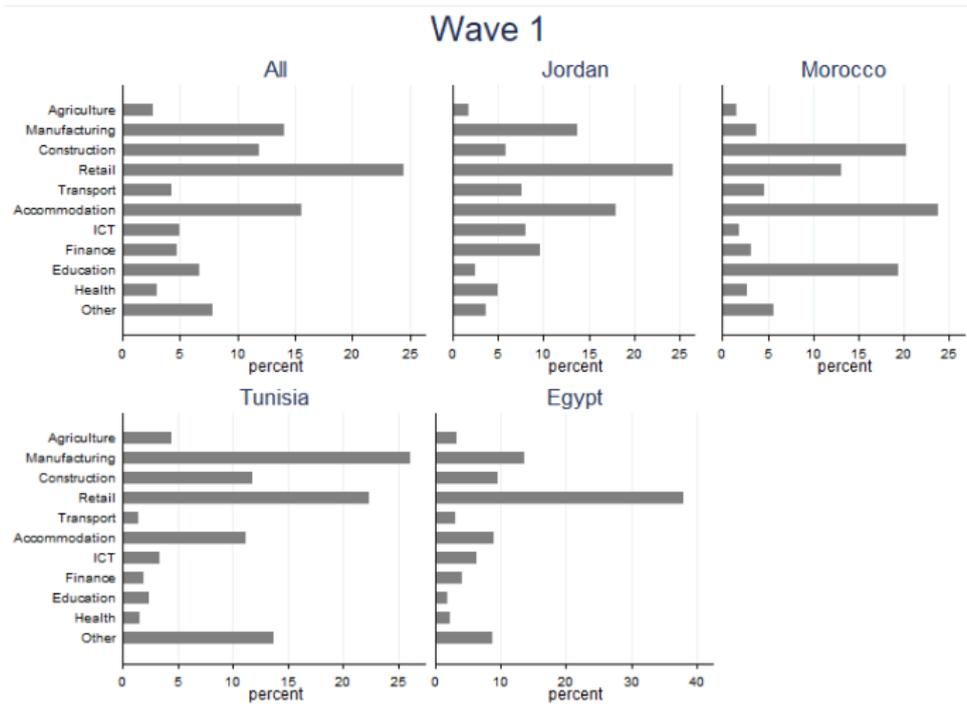


Figure: The distribution of firms by industry

Difficulties in the wake of Covid-19

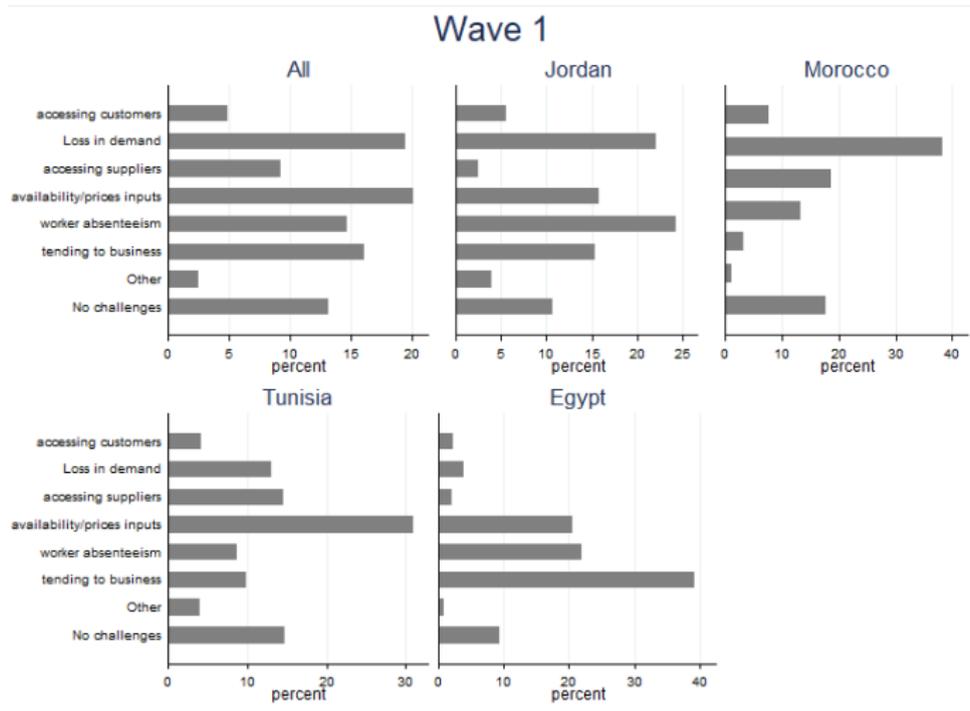


Figure: The type of difficulties faced by SMEs

Adaptation approaches

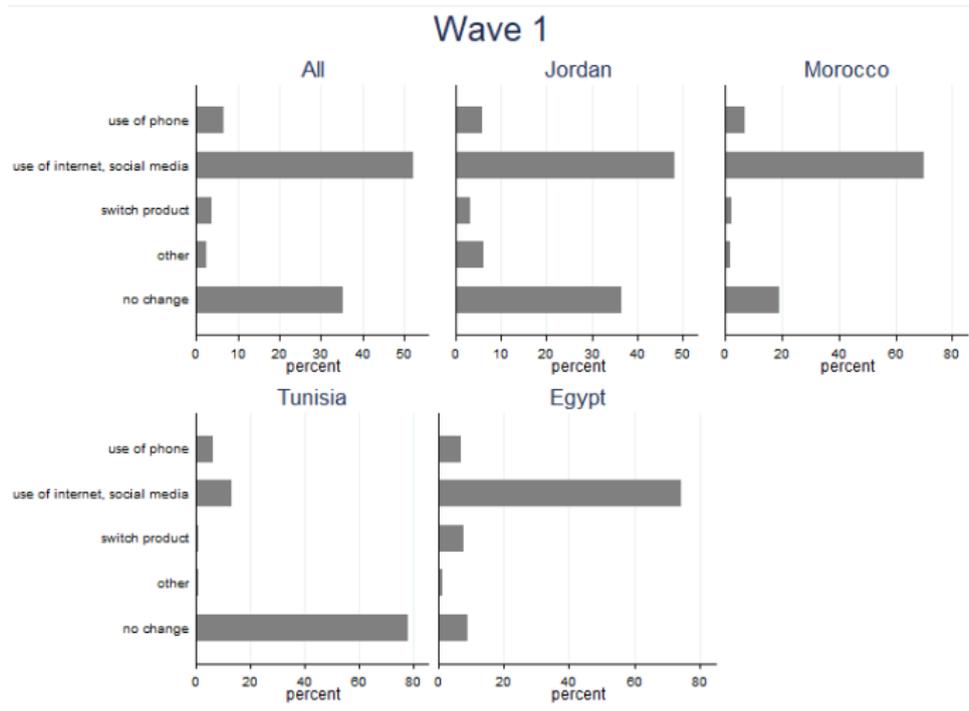


Figure: How do firms adapt to the pandemic?