ERF Policy Brief

COVID-19, Vulnerability, and Policy Response: The Case of Egypt

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In a nutshell

- *The economic impacts of COVID-19 vary from country to country based on timing, degree of containment and extent of dependence on the global economy. This policy brief examines the effect of the COVID-19 shock on the Egyptian economy using a dynamic computable general equilibrium (CGE) model.*
- *In this brief, we explain how the pandemic affected the Egyptian economy through supply and demand shocks and how these effects vary in the short-term and long-term. Moreover, we modify the model to simulate the impact of the pandemic and the stimulus package provided to informal and irregular workers.*

COVID-19: Between Vulnerability and Resilience

The economic impacts of COVID-19 vary across nations based on the timing, degree of containment measures and the extent of their dependency on the global economy. Moreover, lockdown measures led to a severe contraction of the global economic activity and to a significant reduction of labor and capital mobility. This is why the global growth contraction for 2020 is estimated at -3.5 % (IMF, 2021). Simultaneously the pandemic has led to a demand shock or reduction in private consumption (OECD, 2020). It further led to a sharp fall in world fuel prices since the spot price of Brent oil went from over $66 per barrel in December 2019 to $23 in April and is floating around $55 in January 2021 (World Bank, 2021). Emerging economies, including Egypt, were not spared of this unprecedented shock.

At the national level, the Egyptian government has imposed partial containment measures for a period of 90 days (partial closure of commercial activities and limitation of air and ground transportation), which represented demand and supply shocks to Egypt's economy. On the supply side, social distancing has affected the process of producing goods and services, disrupted global value chains, and reduced the availability of imported intermediate inputs. Consequently, the overall output growth was hurt, leading to employment losses and an increase in informality. On the demand side, reduced household income and uncertainty about the future are expected to drive down private consumption and investment. Indeed, Egyptian GDP fell by 3.1% in the fourth quarter of fiscal 2019/20 from a positive GDP growth of 5.2% in the same quarter of 2018/19. Externally, Egypt's major currency sources experienced a sharp decline as a direct result of COVID-19. Oil exports decreased by 34%, from $2.4 billion in the first quarter of 2019/20 to $1.6 billion in the same period in 2020/21. With the interruption of international flights, tourism revenues in Egypt have declined drastically over this period by more than 80% to less than $1 billion down from $4 billion. Furthermore, net direct investment inflows decreased by 32% in the first quarter of fiscal year 2020/2021 to $1.6 billion compared to $2.4 billion, during the similar period a year before. In addition, payments received from the Suez Canal fell by 8% in the first quarter of F2020/21 compared to the same period in 2019/20. However, remittances inflows to Egypt, the region's largest recipient in MENA, have so far been countercyclical to the pandemic. They increased by 20% to reach $8 billion up from $6.7 billion (World Bank, 2020). These remittances were one factor that prevented private consumption in Egypt from falling.

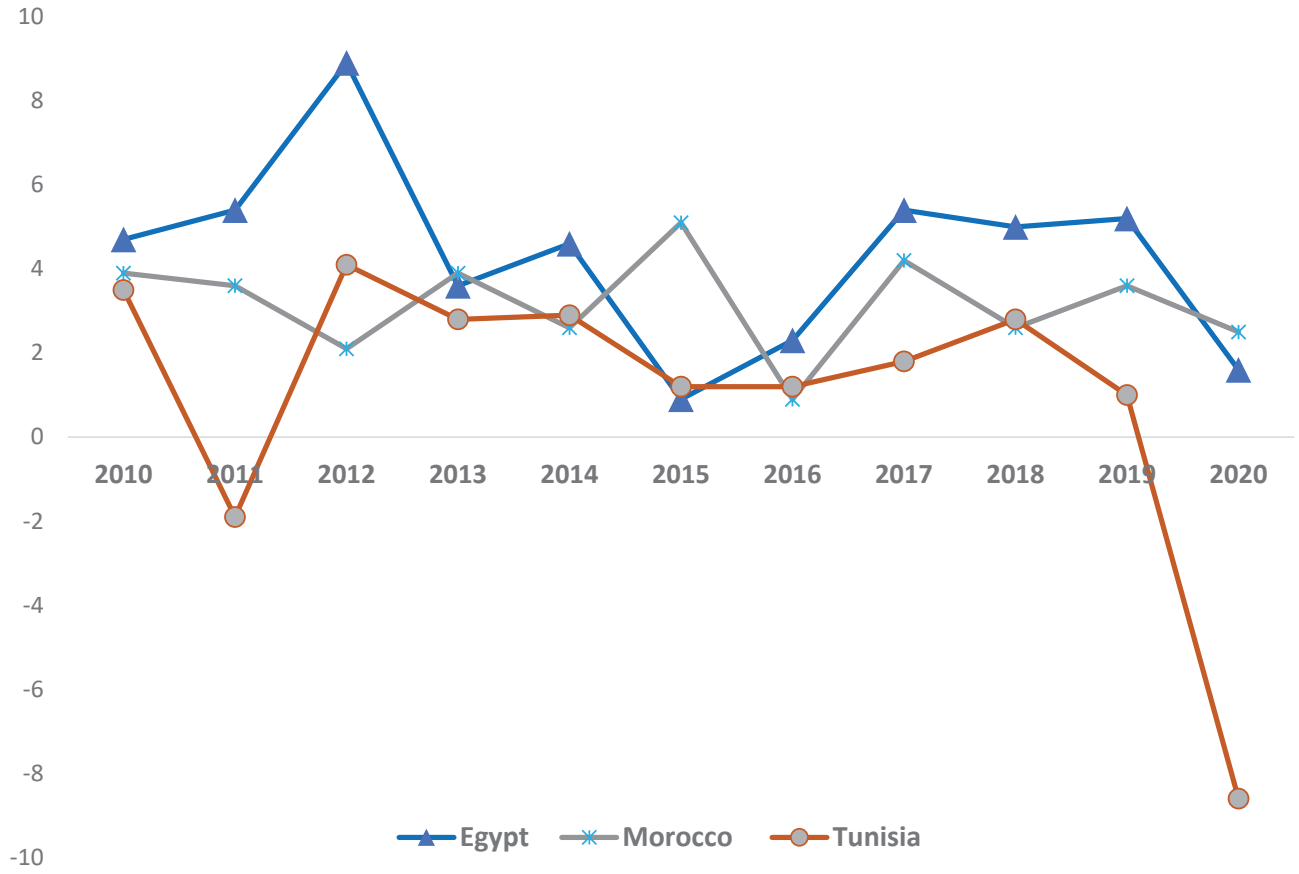
Similar to most of the emerging economies, Egypt was negatively affected by the pandemic at both the supply and demand levels. At the supply level, with confinement and social distancing, several plants had to reduce their production, leading to a lower supply of goods, which, in turn, would reduce the demand for labor, whether formal or informal. Yet, informal labor would suffer more given that informal employment accounted for more than half of total employment in Egypt. At the demand level, with the decline in labor demand, wages dropped. Moreover, being highly dependent on tourism, Egypt has suffered from the restrictions measures imposed domestically and internationally. Yet, compared to other countries, Figure 1 shows that Egypt was the least affected by the shock as it was the only country having positive growth rates that reached 1.6% in 2020 down from 5.2% in 2019. The decrease was more pronounced for Tunisia and Morocco whose GDP growth rate was -8.6% and -7.5% down from 1% and 3.6% respectively in 2019. In light of the decline in production, demand for labor and wages, a negative consumption shock is expected, but this did not happen since official data reported an increase in domestic consumption as it will be shown later.

At the labor market level, informal labor[1] accounted for about 56.3% of non-agricultural employment in Egypt in 2019, compared with almost 47.2% in 2015. Two main reasons can explain this surge in informality. First, the Egyptian economy was unable to create enough jobs to accommodate new entrants to the labor market. Second, low standards of living have forced many families to send their children to work earlier. In fact, the informal sector acts always as a buffer helps mitigate recessions in the formal sector (such as the one of the pandemic).

In terms of the policy response, the Egyptian government has provided recovery measures to mitigate the negative impacts of the pandemic. The government implemented thus expansionary policies either by increasing public spending or providing tax exemptions or delays. It announced a stimulus package amounting to USD 6.13 billion (EGP 100 billion, 1.8 percent of GDP). Yet, to support the government revenues, a Corona tax of 1% on all public and private sector salaries and 0.5% on state pensions have been imposed to support the sectors that are negatively affected by the pandemic. In parallel, the Central Bank has adopted several measures such as reducing interest rates and introducing additional refinancing instruments. The bank has also eased the

[1] The informal worker refers to anyone who works in an informal or formal establishment without a contract and/or social/health insurance (see Al-Mahdi, 2005).

Figure 1: Real GDP growth rates



Source: World Development Indicators online dataset.

deadline for the payment of loans and the postponement of the repayment of credit by employees. Lower interest rates were possible as inflation rates were typically lower in 2020 than in 2019.

How Do the Health Crisis and the Policy Response Affect the Economy?

Methodology

In order to examine the various effects of COVID-19 outbreak and the policy response, we employ a recursive dynamic computable general equilibrium model for the Egyptian economy. This model is a modified version of the PEP1-t single-country recursive dynamic CGE that is developed by Decaluwé et al. (2013). We calibrate our model based on the 2014/2015 Egyptian SAM that is jointly constructed by the International Food Policy Research Institute (IFPRI) and Central Agency for Public Mobilization and Statistics (CAPMAS). To introduce informal labor, first, we modify the Egyptian SAM and split the labor account into formal and informal labor. In addition, we divide sectoral demand for labor into demand for informal and formal labor. To do this, we use ILO data for the percentage of informal employment by economic activity in 2015.

To examine the economy-wide effects of COVID-19 and the stimulus package provided by the Egyptian economy, we run two sets of simulations. The first one is dedicated to examine the macroeconomic and sectoral effects of the COVID-19 shock and the second one simulates the impact of the policy response adopted by the government. The first set includes the following simulations: the decrease in the sources of foreign currency (decrease in oil prices (OIL), tourism revenue (TOUR), and Suez Canal (TRANS) revenues). We also simulate the increase in remittances inflow (REM), the decrease in total labor supply (LS), the increase in informal labor by 25% (INF-LS) and the positive demand shock (CONS). As per the policy response, we investigate the effect of fiscal stimulus (by distinguishing between current and productive spending, GOVS1 and GOVS2), the changes in monetary policy (such as the decrease in interest rates IR), and the different cash transfers to household/firm (SOCH+SOCF), informal labor (INF-TR) and activities (SUBP).

Simulation Results

Our key findings show the extent to which the Egyptian economy has been relatively vulnerable to the global economy as most of its foreign exchange sources have declined. Moreover, the analysis also shows how important remittances, private consumption, and informal work are in supporting economic growth in the short term. However, our simulations show that most of the effects of COVID-19 disappear over time. Therefore, while this shock is temporary, further reforms are necessary to make the economy more resilient and less dependent on the global economy.

With regard to policy response, we identified five key impacts. First, the increase in current public consumption without sectoral targeting has positive effects on well-being, but undermines long run economic growth and employment (see Table 1). Second, increased government investment without sectoral targeting has a limited impact on short-term growth, well-being and employment. Yet, it increases jobs and long-term well-being with a negative budgetary balance and economic growth. Third, cash transfers to households and business agents increase private consumption but negatively affect economic growth and employment. This is because of its adverse effect on the government's budgetary position as it diminishes the resources that can be allocated to other more productive sectors. Fourth, increased subsidies for production can have similar effects on social welfare as cash transfers, while ensuring economic growth and positive effects on employment. Finally, monetary policy has significant growth and employment effects compared to fiscal policy thanks to a lower investment cost and higher levels of investment that positively affects growth in the long run.

The Way Forward

First, this brief shows how different policy responses have led to different results (because we distinguish between budgetary and monetary policy and between current and productive expenditure). Indeed, productive spending in general is associated with higher externalities, which explains why it has a stronger long run positive impact compared to current spending. Second, targeted stimulus measures for individuals, geographic areas, and sectors are important because of the heterogeneity of different economic agents. Third, most stabilization measures do not have a long-term impact, except monetary policy if it stimulates investment. Thus, while stabilization policies (both fiscal and monetary) are necessary in the short term to curb the negative effects of the pandemic, they are not sufficient to increase the resilience of these economies given the need for deeper allocation or structural policies. Fourth, social policies are generally reactive not proactive, especially for the most vulnerable categories of the population (such as informal workers). Thus, more targeted support based on the socio-economic characteristics of individuals, their income groups, economic activities and geographical locations is needed to reduce their vulnerability. Without health and social insurance, such a work is extremely vulnerable to any

Table 1: Simulations Summary

	Growth		Welfare		Trade balance		Fiscal Balance		Employment	
	SR	LR	SR	LR	SR	LR	SR	LR	SR	LR
Oil	↑	↑	↑	↑	↑	↓	↓	↓	↓	↓
REM	↑	↑	↑	↑	↑	↑	↓	↓	↑	↑
TOUR	↓	↓	↑	↑	↓	↓	↑	↑	↓	↓
TRANS	↓	↓	↑	↓	↑	↑	↑	↑	↓	↓
LS	↓	↓	↓	↓	↑	↑	↑	↑	↓	↓
INF-LS	↑	↑	↑	↓	↓	↓	↑	↑	↑	↑
FCUR	↓	↓	↑	↑	↑	↑	↑	↑	↓	↓
CONS	↑	↑	↑	↑	↑	↑	↑	↑	↓	↓
GOVS1	↑	↓	↑	↑	↑	↑	↑	↑	↑	↓
GOVS2	↑	↓	↑	↑	↓	↓	↓	↓	↑	↑
SOCH+ SOCF	↓	↓	↑	↑	↑	↑	↑	↑	↓	↓
SUBP	↑	↓	↑	↑	↓	↑	↑	↑	↑	↑
TR_INF	↓	↓	↑	↓	↑	↑	↑	↑	↑	↑
IR	↑	↑	↑	↑	↑	↓	↓	↓	↑	↓

Source: Authors' own elaboration using GAMS.

shock. This is why it is important to rethink the way such categories are formalized and protected.

The pandemic has also shown that a paradigm shift is needed at three levels. First, while most of focus was on macroeconomic stabilization that led to the improvement of macroeconomic aggregates in the short term and a deterioration of social outcomes, more efforts are needed to mainstream social policies in macroeconomic ones. Second, digitalization is a must for more resilient economies. Indeed, the crisis has demonstrated the potential of digital technologies in education, health, and government services. Third, governments have to overcome the problem of time inconsistency where short term stabilization objectives are always preferred at the expense of long term structural reforms that are highly needed to make the economies more resilient.

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