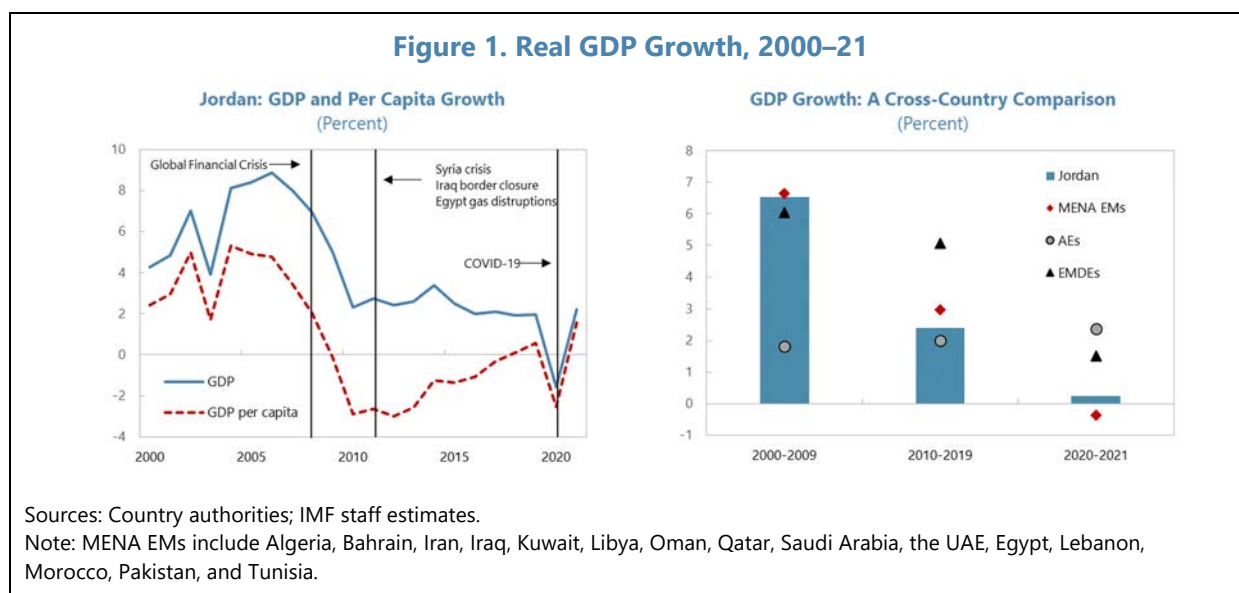


ECONOMIC GROWTH IN JORDAN: RETROSPECT AND PROSPECT¹

Economic growth in Jordan has weakened substantially since the Global Financial Crisis (GFC), following several external shocks. This paper dissects Jordan's GDP growth by sector, expenditure, and factor of production over the past 20 years. It then examines trends in labor and total factor productivity to assess the competitiveness of the economy. The analysis identifies four key policies for strengthening Jordan's growth potential in the post-COVID era: reducing business costs, attracting financing for productive investments, facilitating labor participation and reallocations, and enhancing firm dynamism and competition.

A. Economic Growth Since the 2000s

1. Economic growth slowed significantly in the past decade amid several external shocks after having achieved impressive growth during 1999–2009. Real GDP growth was 6.8 percent on average from 1999–2009 but only stood at 2.4 percent during 2010–19 (Figure 1). The global financial crisis (GFC), the disruption of energy supplies during the Arab Spring, closure of borders with Iraq and Syria, and the Syrian refugee crisis caused severe strains on the economy. Debt increased dramatically over the past 10 years, leading to a period of fiscal consolidation and tepid public investment (Hausmann and others, 2019).

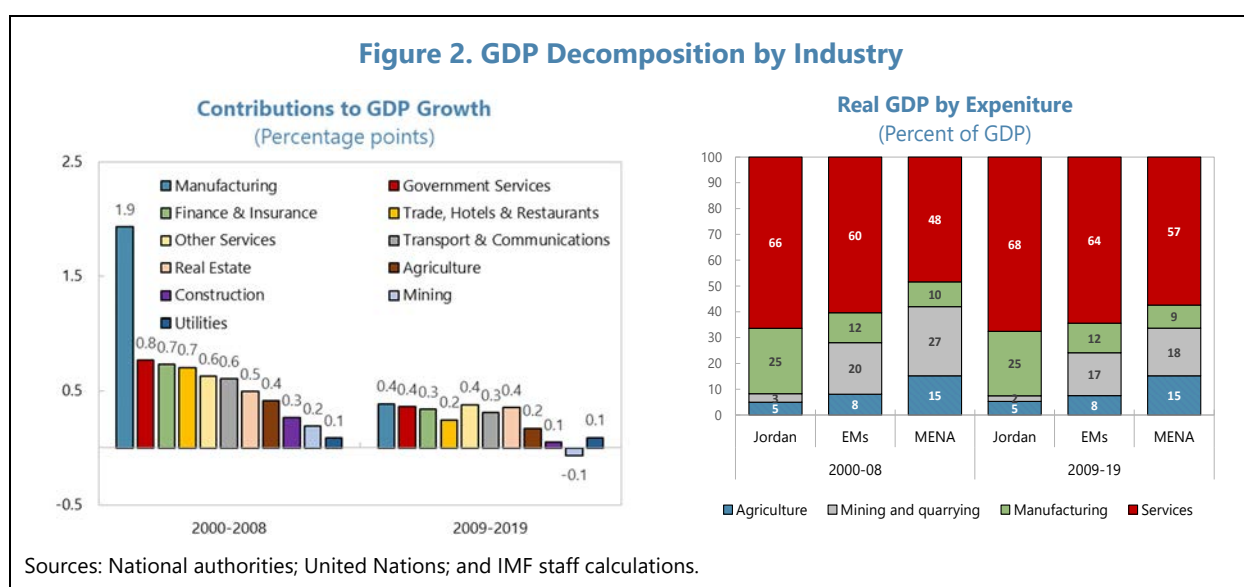


¹ Prepared by Yang Yang and Rayah Al Farah (both IMF), Feras S. Bseiso (Central Bank of Jordan) and Yazan Fanous (Ministry of Finance). Jonathan Saalfeld provided research assistance.

2. The COVID-19 pandemic has inflicted further strains on the structural challenges of the economy. While the initial recession in 2020 appeared to be less severe than the rest of the world, the subsequent recovery has also been slower than advanced economies (AEs) and emerging and developing markets (EMDEs), albeit at a faster rate than that of Middle East and North Africa emerging markets (MENA EMs). Without decisive structural reforms, economic scarring risks hurting Jordan's growth potential long after the immediate impact of the crisis has dissipated.

B. Dissecting GDP Growth in Jordan

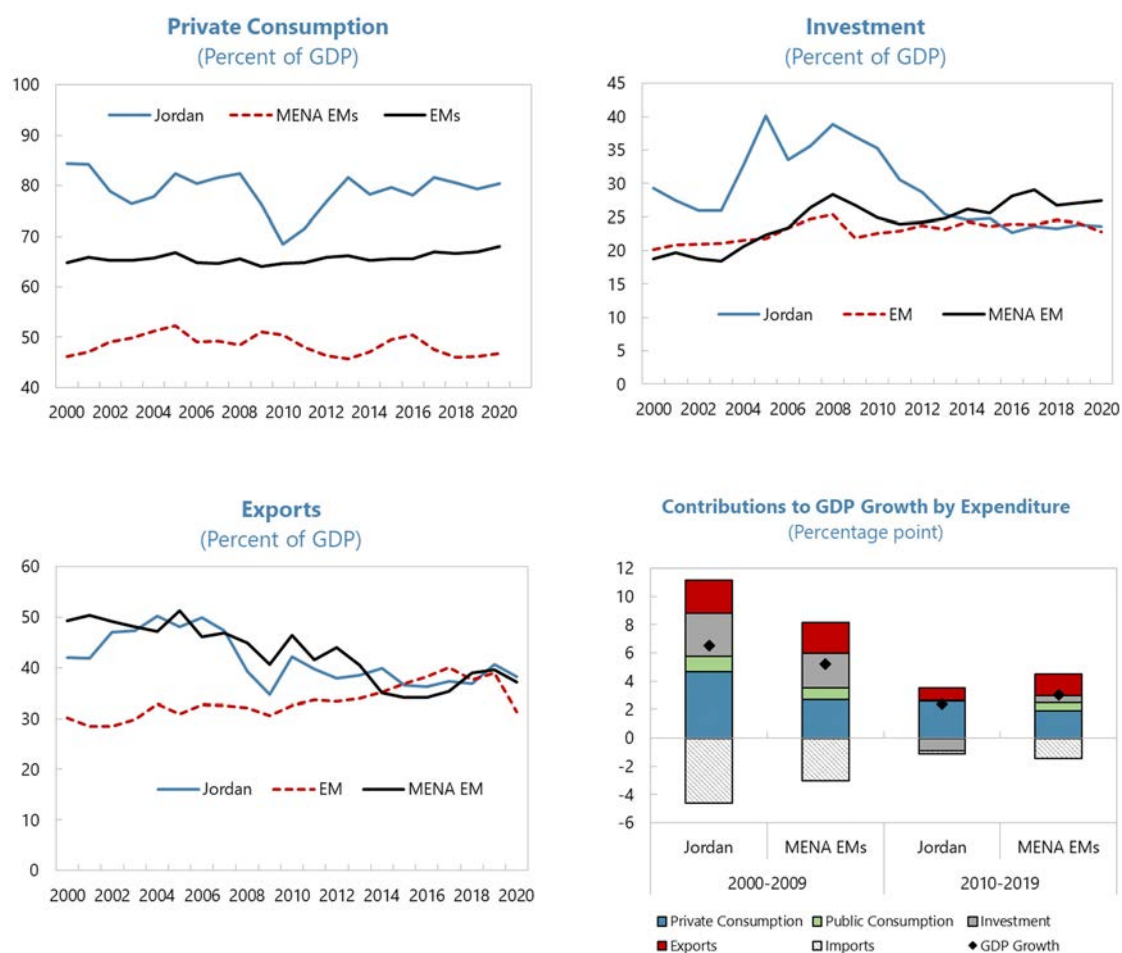
3. Growth deceleration has been broad-based, affecting almost all industries (Figure 2). Manufacturing used to be a main driver of growth prior to the GFC contributing to around 2 percent of GDP growth on average from 2000–08, but its growth has declined since then. The contribution from financial services and government services also declined from 1.8 and 1 percent respectively in 2008 to 0.6 and 0.7 percent in 2019. The contribution of several other sectors also declined, most notably transportation, in light of instability in the region during the period of 2009–20 resulting in almost complete closure of land borders with a number of neighboring countries.



4. Private consumption has been the largest contributor to growth, even more so today than before. The share of private consumption in total GDP is about 80 percent of GDP in Jordan, much higher than its MENA peers (about 60 percent of GDP on average). The high private consumption largely sustained despite slower growth after the GFC, mostly attributable to the high rate of population growth following the influx of Syrian refugees into Jordan in 2011. Growth of government spending has been very modest after the GFC, primarily due the fiscal consolidation measures the government undertook to contain public debt. The already elevated levels of debt suggest continued consumption growth is unlikely to be the main driver of growth going forward.

5. Investment growth has slowed significantly. Gross capital formation (GCF) was trending upward during 2000–08, due to the substantial inflow of FDI (predominately from the GCC)—FDI’s share of GDP increased from 2.5 percent in 2002 to 23.5 percent of GDP in 2006. Investment growth declined from 32 percent during the period 2000–08 to -22 percent during the period 2011–19 on account of multiple exogenous shocks in the region as regional instability increases and large swings in oil prices created uncertainties. Consequently, investment’s share in GDP declined from 39 percent in 2008 to 24 percent in 2019 (Figure 3). This sharp decline in capital accumulation risks hindering Jordan’s growth potential over the medium and long term.

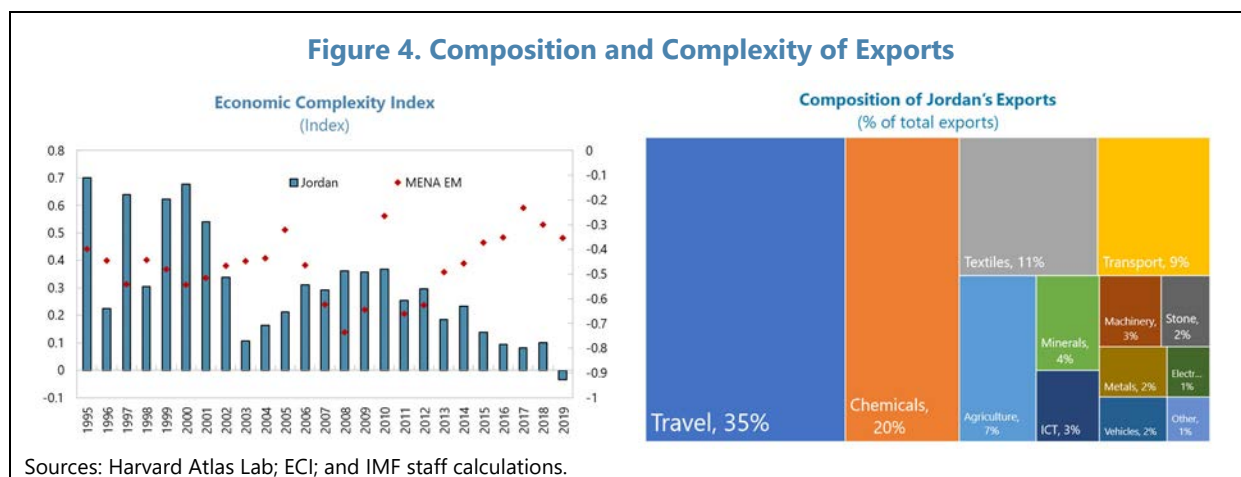
Figure 3. GDP Decomposition by Expenditure



Sources: National authorities; United Nations; and IMF staff calculations.

6. Jordan’s export growth has also decelerated as regional geopolitical tensions disrupted trade. Jordan’s trade linkages with the rest of the world expanded rapidly in the 2000s, with both exports and imports becoming more important for its economy. Both export and import growth, however, have slowed significantly since the GFC and the collapse of trade with Iraq and Syria (Figure 3). Tourism, transport and ICT, and chemicals are the main exports of Jordan, jointly

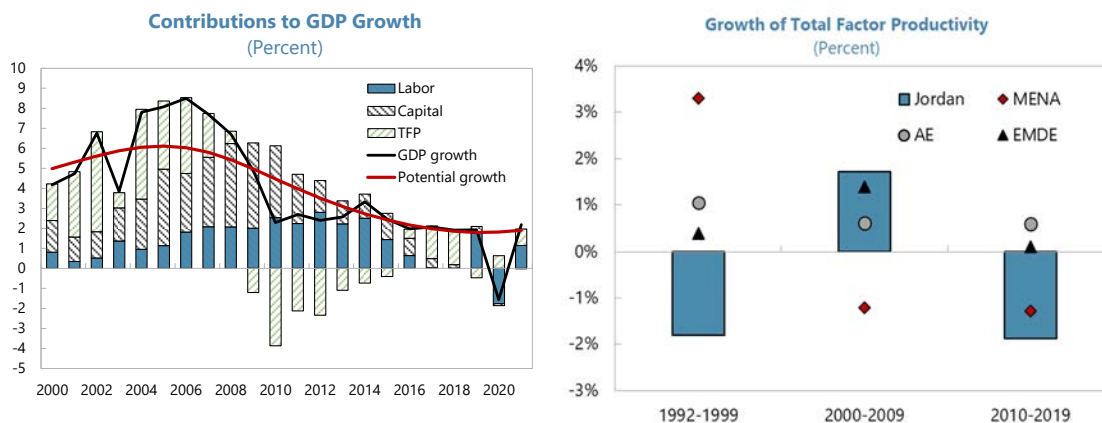
contributing to over 50 percent of total exports. The complexity of the economy, which is often seen as an indicator of diversity and complexity of a country's goods exports, has declined sharply after the GFC (Figure 4). Economists have argued economic complexity reflects a country's accumulation of productive knowledge and is predictive of a country's future growth (Hausmann and others, 2007). This is particularly relevant for Jordan—given Jordan's relatively small domestic market, its future growth hinges crucially on its ability to compete on the international market.



7. A growth accounting exercise reveals weaker contributions to growth from all factors of inputs after the GFC, although TFP growth rebounded somewhat in recent years. A simple Cobb-Douglas production function is applied to the Jordanian economy to estimate potential output. Trend labor, capital and in total factor productivity (TFP) are estimated using a standard Hodrick-Prescott filter.² Growth pre-GFC was driven by robust growth in TFP and capital accumulation. After the GFC, TFP growth declined drastically, particularly in the midst of the cutoff of the Egyptian gas supply and closure of the borders of neighboring trade partners. Capital accumulation also slowed significantly as fiscal space became more constrained. Growth after the GFC was initially driven by rapid population growth but rising Jordanian unemployment rate starting in 2015 dampened employment growth, with COVID-19 further damaging the labor market. Potential GDP growth has slowed substantially from around 6 percent before the GFC in to only 2 percent currently (Figure 5). Nonetheless, TFP growth turned positive in recent years—a positive indication for future growth if sustained.

² Estimated TFP using the HP filter appears to be better correlated with other measures of efficiency such as labor productivity and economic complexity, compared to using other filters such as the Christiano-Fitzgerald filter and the Hamilton filter.

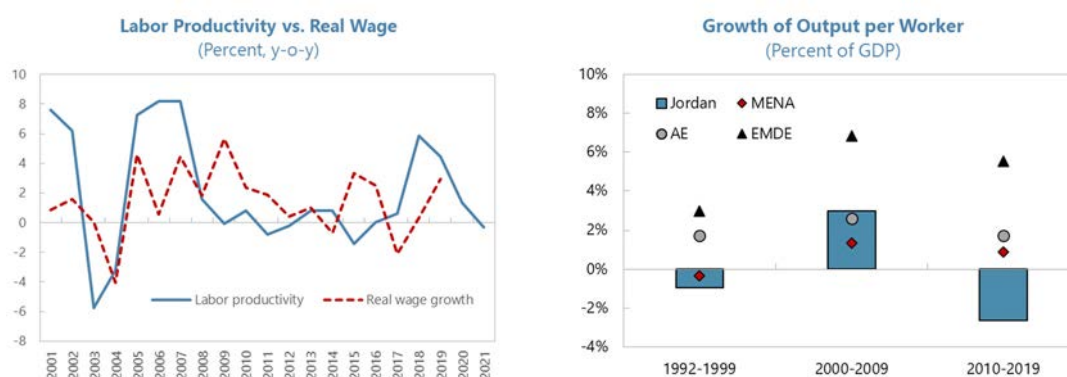
Figure 5. Contributions to GDP Growth by Factor Input



C. Productivity and Competitiveness

8. Aggregate labor productivity growth had stagnated since the GFC, although there was a pick-up in 2018–19 before the pandemic hit the economy. Labor productivity growth has been low since 2008 and outpaced by real wage growth (Figure 6). Labor productivity is calculated as value added divided by number of Jordanian workers given the sparsity of employment data for non-Jordanians. This suggests that the trend of labor productivity inclusive of non-Jordanian workers could be even weaker as the non-Jordanian population has expanded rapidly since 2011.

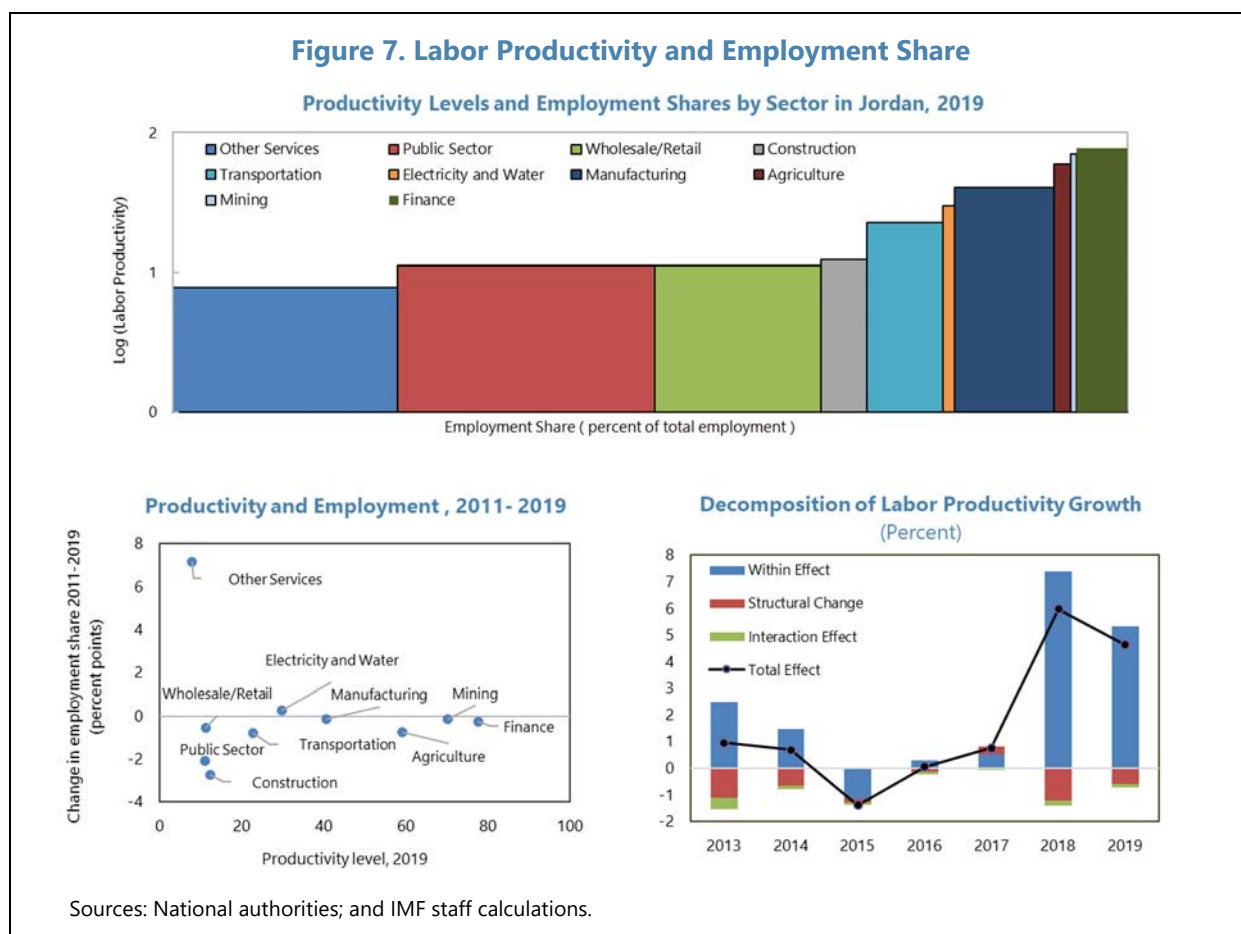
Figure 6. Labor Productivity in Jordan



9. We analyze the drivers of aggregate labor productivity changes using established decomposition techniques. A variant of the canonical decomposition originating from Fabricant (1942) is used (also see Timmer and De Vries 2014):

$$\Delta P = \sum_i (P_i^T - P_i^0) S_i^0 + \sum_i (S_i^T - S_i^0) P_i^0 + \sum_i (P_i^T - P_i^0) (S_i^T - S_i^0)$$

where S_i is the share of sector i in overall employment, P_i the labor productivity level of sector i , and superscripts 0 and T refer to initial and final period. In the equation, the change in aggregate productivity is decomposed into three terms. The first term on the right-hand side is the “within-effect,” which is positive when the net change in labor productivity for all sectors (weighted by their employment shares) is positive. The second term measures the contribution of labor reallocation across sectors, being positive when labor moves from less to more productive sectors (structural change). The third term is the cross or interaction term and represents the interaction of changes in employment shares and sectoral productivity growth.



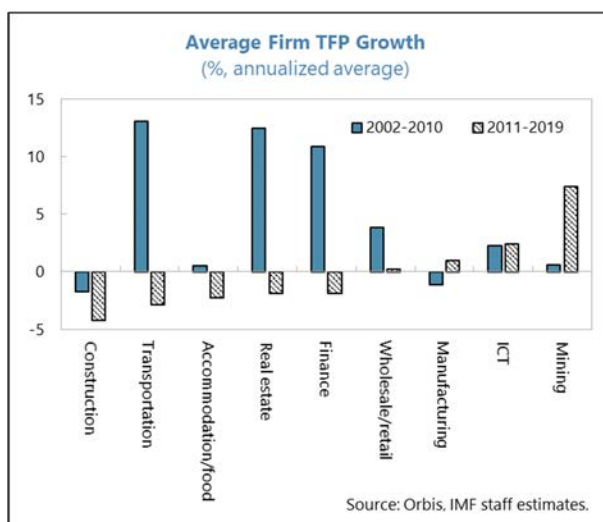
10. It is found that labor remains concentrated in low productivity and non-growing service sectors, dragging down aggregate productivity growth. Structural change, or the shift of labor from low to higher productivity sectors, has been an important source of aggregate productivity growth for both advanced and emerging economies (McMillan and Harttgen 2014, Dabla-Norris and others. 2013, and Hnatkovska and Lahiri 2014). Jordan, however, has been on an opposite trajectory in the past decade. The public sector, other services (community, social, personal, household and non-profit services) and wholesale/retail represent half of the total Jordanian employment in the economy, but these sectors have relatively low labor productivity and do not have a large (Figure 7). In contrast, finance, manufacturing, transportation, and ICT have higher productivities and have been proved to have great potential for further expansion in high-growing

countries. The share of higher-productivity sectors (finance, agriculture, transportation) did not increase from 2011 to 2019 and workers migrated to low productivity sectors (other services). A potential source of bias lies in the observation that employment of non-Jordanians is concentrated in the informal sector, other services and construction.³ As a result, labor productivities in other services and construction are likely to be even lower than staff's estimates and the employment shares of the two sectors are likely to be even larger.

11. We also examine the evolution of TFP at the sectoral and micro level. While Jordan's macro data does not allow us to estimate TFP at the sectoral level, the Orbis database can be used to estimate firm-level TFP for Jordan for the period 2000–19.⁴ The methodology proposed in Gandhi, Navarro and Rivers (2020) is used to estimate firm level TFP. Gross output is assumed to be a function of two types of inputs—flexible inputs including material inputs and costs of labor, and capital as the inflexible input. A simple Cobb-Douglas production function is estimated using firm data for each industry. The number of observations for Jordan is too small to directly estimate factor shares by industry. Instead, input shares are estimated for 28 major economies for which there are enough observations and the necessary data for TFP estimation. Averages of the estimated input shares are used for estimating firm TFP for Jordan. Input shares and firm TFP are estimated at the two-digit NACE level.

12. TFP growth at the firm level was negative for many industries during 2010–19.

Firm-level data suggests that TFP growth were very high during 2002–10 across almost all industries but has slowed significantly. During 2011–19, transportation, real estate and finance saw sharp declines in productivity growth, whereas manufacturing, mining, and ICT experienced some positive TFP growth. The unfavorable micro level evidence confirms the weak productivity growth at the aggregate level revealed by the growth accounting exercise. This suggests a slowdown of technological, product and process innovations in Jordan's corporate sector, which is likely to pose a fundamental obstacle for achieving higher potential growth as technical progress is arguably the ultimate source of growth in the long term.



³ Some studies estimate the share of non-Jordanians in the informal sector is as high as 85 percent in 2017. According to the Jordan Labor Force Survey in 2021Q4, 43 percent and 12 percent of non-Jordanians work in other household service activities and construction sector, respectively.

⁴ The Orbis database has the necessary information to estimate firm TFP for 120 publicly listed Jordanian firms.

D. Catalyzing Growth in the Post-COVID Era

13. The pandemic has significantly exacerbated Jordan's weak growth momentum and raised risks of scarring over the medium term. The economy risks scarring from multiple channels including debt overhang and fiscal consolidation, persistent weakness of employment in high contact-intensive sectors, loss of schooling and high-skill expatriates. It is imperative to identify potential drivers of growth in the post pandemic era and accelerate structural reforms to unleash Jordan's growth potential. In this regard, the analysis conducted in this note and previous diagnostics of Jordan's growth and private sector offer useful guidance (Hausmann and others, 2019; International Finance Corporation, 2019).

14. A post-pandemic growth strategy should focus on promoting investments in strategic sectors and improving export competitiveness. Given Jordan's already high private consumption, limited fiscal space and small domestic markets, higher potential growth will need to come from investments in growth-enhancing capital and expansion of exports. To this end, reforms will need to support investments in critical infrastructures that benefit and transform the economy in a broad way. A set of industries with high export and employment potential should also be identified for policy to promote the expansion of these sectors. To this end, the government recently launched an Economic Modernization Vision, which will serve as the overarching strategy for promoting economic growth (Box 1).

Box 1. Jordan's Economic Modernization Vision

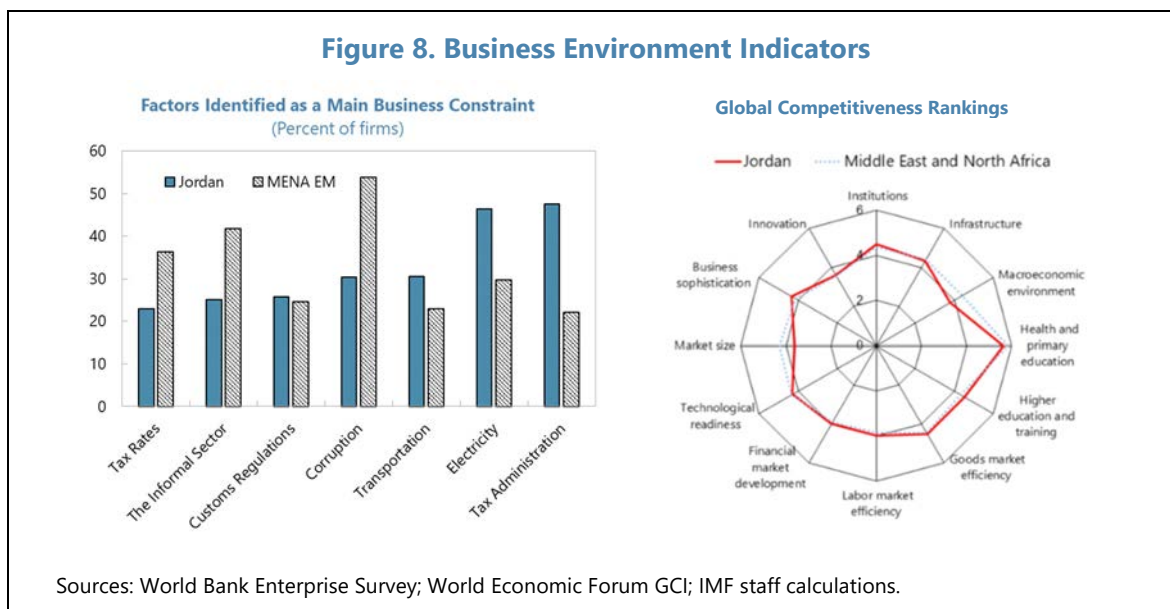
In early June 2022, the government launched the Economic Modernization Vision, which aims to improve both economic growth and quality of life in Jordan. The Vision was developed through the participation of more than 500 specialists, stakeholders and representatives of the public and private sectors, the parliament, and civil society organizations. The Vision is expected to be implemented in 3 phases over a period of 10 years to create employment opportunities and raise Jordanian's standard of living. Ambitious targets are set under the Vision, including boosting real GDP growth rate to 5.6 percent per year and creating one million employment opportunities by 2033. The government will produce a multi-year executive implementation program to achieve the objectives set in the Vision.

The Vision envisions achieving several strategic goals by end of 2033. These goals include creating one million economic opportunities by 2033; increasing the real income per capita by an average of 3 percent per year; improving Jordan's ranking in the WEF Global Competitive Index to be among the top 30 percentile; improving Jordan's ranking in the Global Environmental Performance Index to the top 20 percentile; improving Jordan's ranking in the Legatum Prosperity Index to the top 30 percentile; improving Jordan's Global Sustainability Ranking to the top 40 percentile.

Eight areas are identified as the main drivers to realize the objectives under the Vision: (i) High Value Industries (manufacturing industries, agriculture and mining); (ii) Future Services (ICT, healthcare, financial services, creative industries, trade and mobility); (iii) Destination Jordan (tourism and filming) (iv) Smart Jordan (human resources development and entrepreneurship); (v) Sustainable Resources (energy and water); (vi) Invest Jordan (investment and doing business); (vii) Green Jordan (green growth and climate change) and (viii) Vibrant Jordan (quality of life and urban development).

Large investments are expected to be made to achieve the Vision. The government estimates an overall investment of about JD 41 billion will be required in the next 10 years. About 72 percent of the investment is expected to be mobilized from the private sector (including both domestic and foreign investors) and the remaining 28 percent will come from the government's budget, with support from donors.

15. The broad-based growth deceleration suggests key cross-cutting bottlenecks need to be tackled to attract investment and promote exports. Global Competitiveness Index innovation and macroeconomic environment as key constraints (Figure 8). On the other hand, Jordan performed well on health and education. Businesses often cite tax administration and electricity costs as the two main business constraints. High energy cost is considered one of the most important challenges for vital sectors such as retail and whole trade and hospitality, industrial and agriculture. It is worth noting that in the last two years, Jordan has implemented important reforms to improve the administrative efficiency of tax administrations and the electricity tariff structure.



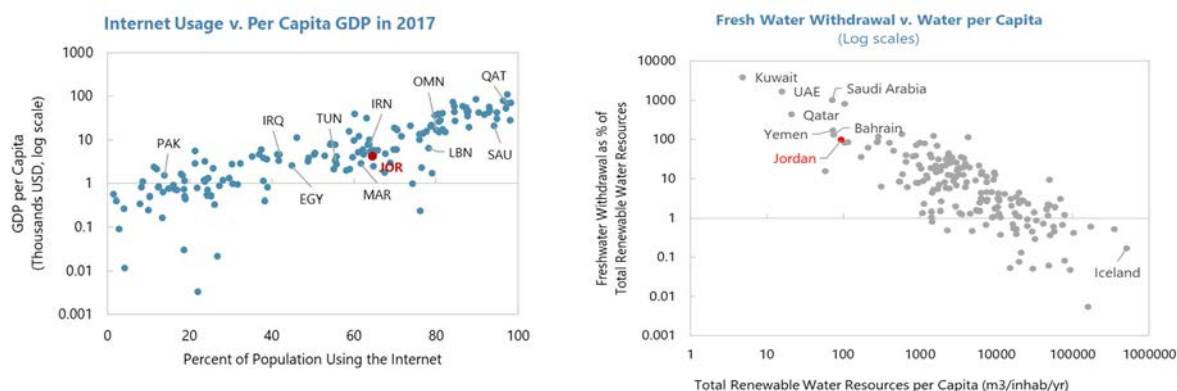
16. Investments in digital infrastructure and climate adaptation could foster the transformation into a more productive, inclusive, and resilient economy. Digital technologies are essential for innovation and business efficiency across the board in any modern economy. Digital access and ability also foster inclusion (e.g., fintech) and enhance the economy's resilience against shocks such as the pandemic (Abidi and others, 2022). Climate challenge, in particular water shortage, is a key risk for Jordan's economy (see Annex IX). Only adequate adaptation could mitigate the negative impact of global warming on social and economic outcomes. Therefore, investments in these two areas are mostly likely to generate high economic and social returns in the long run.

17. Lifting key business constraints can help unlock Jordan's full export potential in services and chemicals with positive spillovers to the rest of the economy⁵. Tourism, chemicals, and business (including ICT) services have been identified by many previous studies and the Economic Modernization Vision as sectors where Jordan might enjoy a comparative advantage (International Finance Corporation 2019; O'Brien and others 2021). The tourism sector provides an

⁵ Some sectors are large in the economy but have limited potential for stimulating further growth and creating new job opportunities. For example, a recent study conducted by the Central Bank of Jordan (Hello, 2019) showed that the finance, insurance, and real estate sector has very weak (direct and indirect) interlinkages with the remaining economic sectors despite its large share in total GDP.

importance source of jobs and drives activities in other sectors such as hotels and restaurants, finance, and retail trade. In this regard, the authorities' tourism strategy for 2021–25 aims to boost medical tourism, develop sites, upskill workers, and remove regulatory hurdles. Next, Jordan could consider expanding fertilizer production (for which it mines the raw materials locally) to boost its value-added exports and productivity, especially at a time of global fertilizer shortages. Finally, Jordan's highly educated labor force provides the necessary soil for developing a regional hub in business and IT services. While it is relatively small in the Jordanian economy, it should be a key sector for development.

Figure 9. Internet Usage and Water Scarcity



Sources: FAO, World Bank; IMF staff estimates.

18. Structural reforms to catalyze strategic investments and export growth should address key cross-cutting bottlenecks to enhance productivity and competitiveness of the economy:

- *Reducing costs of doing business, in particular electricity costs and tax administration burdens.* To this end, the new electricity tariffs rolled out on April 1, 2022 serve to address high electricity costs faced by businesses, which will see electricity tariffs reduced by 13 percent on average for the corporate sector. Reforms to streamline tax rules and incentives under the EFF will also help establish a simpler and more efficient tax administration system. Continued reforms in tackling these cross-cutting constraints are needed to enhance productivity growth and makes Jordan a more attractive destination for FDIs and an origin of exports.
- *Mobilizing financing for digital infrastructure and climate adaptation.* Digital and ICT infrastructure and climate adaptation are crucial for Jordan's future growth but also require large investments. Participation of the private sector and external donors will be needed to fulfill the investment needs given limited fiscal space. In this regard, strengthening governance and transparency will be important for attracting FDI and mobilizing private sector and donor financing. The PPP law and the new legislation on investment climate will reduce policy unpredictability and investment risks.

- *Promoting labor market flexibility and participation.* Labor market policies should focus on facilitating labor reallocations including changing the incentives for Jordanians from public sector and low-productivity services to more productive sectors. Incentivizing participation requires removing gender-biased articles from labor legislation (see Annex IV) and job training. The lackluster performance of innovation highlights the need to attract entrepreneurs and skilled workers that can bring specific technologies and skills into priority sectors such as professional business services, tourism, and logistics.
- *Increasing firm dynamism by enhancing competition.* Policy distortions that lead to misallocation of resources should be removed to promote aggregate productivity growth (Dabla-Norris and others, 2015). Industry-specific subsidies, size-dependent policies and subsidies to state-owned enterprises are examples that could lead to price distortions and resource misallocation. In this regard, removing barriers to entry, strengthening the competition and anti-corruption frameworks, streamlining licensing requirements, and reducing the economic footprint of the state will help promote entrepreneurship and productivity growth. The new competition law currently being drafted serves as an important step towards enhancing competition.

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