



JOBS DIAGNOSTIC JORDAN

Hernan Winkler and Alvaro Gonzalez



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Jobs

DIAGNOSTIC JORDAN

Hernan Winkler and Alvaro Gonzalez

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1818 H Street NW, Washington, DC 20433, USA.

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ABBREVIATIONS

EU	European Union
EUS.....	Employment and Unemployment Survey
FDI.....	foreign direct investment
GCC	Gulf Cooperation Council
GDP.....	gross domestic product
GEM.....	Global Entrepreneurship Monitor
ILO.....	International Labour Organization
JLMPS.....	Jordan Labour Market Panel Survey
LFS	Labor Force Survey
OLS	ordinary least squares
PISA.....	Programme for International Student Assessment
SOE	state-owned enterprise



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EXECUTIVE SUMMARY

Labor market outcomes have been slowly worsening in Jordan over the past decades. The country has one of the lowest levels of labor force participation in the world, and only one of every three working-age Jordanians has a job. An increasing number of workers are not covered by social insurance or do not have a legal contract. Low rates of firm entry and exit suggest that the Schumpeterian process of creative destruction is limited or non-existent. Most private sector firms are either very small—and tend to stay small—or large and old. Small firms, which tend to be less productive, are becoming even smaller. Employment is shifting from high- to low-productivity sectors with high levels of informality, a factor that drives down overall levels of labor productivity and suggests that important distortions affect the allocation of resources in the economy.

This lack of dynamism has coexisted with dramatic changes in the composition of the labor market. Since 2009, only nine other countries in the world had a higher rate of working-age population growth than Jordan. This is explained not only by the large inflows of Syrian refugees and economic migrants, but also by the very high fertility rates of Jordanians. The influx of non-Jordanians increased the supply of unskilled labor substantially. However, massive improvements in women’s educational attainment meant that the potential supply of skilled workers also rose significantly, exacerbating the polarization of the skills landscape.

These demographic changes make the jobs challenge even greater, as the job creation rate needed to raise the employment rate to “normal” levels is dramatic. The current elasticities of employment to growth in gross domestic product (GDP) indicate that Jordan needs annual GDP growth of at least six percent, about three times the levels experienced since 2010.

Nevertheless, although economic growth tends to be a necessary condition for job creation, it is not a sufficient one. Before the 2009 crisis, Jordan had experienced modest to high levels of economic growth, accompanied by job creation. However, these levels were not enough to keep up with the outstanding inflows of new entrants into the labor force. Moreover, these jobs were mostly created in low-productivity sectors. At the same time, the dynamic sectors that experienced higher levels of productivity growth were not labor-intensive and absorbed a small fraction of the labor force.

By all measures, Jordan is a labor-abundant country: it is abundant in domestic labor and in migrant workers. The evidence analyzed in this report suggests that several challenges prevent the economy from leveraging this strategic resource. In particular, the multiplicity of segmented labor markets thwarts the efficient allocation of human capital.

Labor market segmentation across genders, nationalities, and employment statuses—formal and informal sectors, public and private sectors—became even more acute over the past two decades:

- a. First, despite massive increases in college graduation rates over the past 18 years, women’s participation in the labor force increased only slightly. Although on average they now earn wages comparable with those of men, this is because they have on average higher education levels. In fact, when comparing men and women with the same educational level and experience, the gender wage gap persists: women earn, on average, wages that are 15 percent lower than men’s wages. Acceptance of social norms regarding traditional gender roles is still widespread, and most of the jobs created are not compatible with women’s traditional roles as caregivers in the household. Most women in Jordan never enter the labor market. Among those who do, about 40 percent become inactive before age 40. Marriage seems to be the most important predictor of labor force exit, as women marry at age 21, on average—more than four years

earlier than women in Bulgaria, Chile, Mexico, and Turkey. Paradoxically, this gender gap is not evident in educational attainment statistics, including standardized skills tests, as younger cohorts of women are in fact more skilled than their male peers.

- b. Second, the share of workers who are unprotected against important risks (because they work in the informal sector) has increased since 2010, to almost 60 percent of all workers. This increase in the supply of workers in the informal sector took place as their earnings relative to those of formal workers also rose (although they still earn less than formal workers). This suggests that the relative market value of informal work arrangements may have increased.
- c. Third, the large inflows of non-Jordanians and their disproportionate concentration in the informal and unskilled sectors have magnified the segmentation of the labor market across nationalities. Since many non-Jordanians are not allowed to work formally, segregation across sectors has increased substantially. In 2016, these workers dominated such key industries as agriculture, construction, administrative services, and real estate.
- d. Finally, the public sector continues to play a key role as an employer of half of Jordanian workers. While real wages in the private sector remained stagnant over the last 10 years, the wage premium for government jobs increased 300 percent. The private-public sector wage gap may crowd out human resources from the private sector, affecting their labor costs and competitiveness. This increase in the cost of labor may affect mostly the demand for workers with high school education or less, since the public-private sector wage gap is greater for this group.

The decline in the skill wage premium suggests that the rise in demand for unskilled workers more than compensated the impact of their supply increase on unskilled wages. This holds not only when looking at the wage premium of having a college degree, but also when looking at the fall in the wage premium associated with occupations that are intensive in high-order (non-routine cognitive and interpersonal) skills. The expansion of the informal sector and the decline in the formal sector wage premium are also consistent with this hypothesis. These market forces indicate that the barriers faced by unskilled workers could be a critical bottleneck for job creation in the private sector. This bottleneck may affect the employment outcomes not only of the unskilled, but also of those with complementary skills or working in sectors with important supply and demand linkages.

External factors also played an important role in the poor performance of the labor market. Certainly, the geopolitical situation of the region, and its associated disruptions to trade, transport, and investor confidence, is likely a major factor limiting job creation. The negative impact of the decline in oil prices on the Gulf Cooperation Council countries had sizable effects on the economy, given the high level of dependence on those countries through remittances, foreign direct investment (FDI), and trade. The real exchange appreciation contributes to lowering Jordan's competitiveness in the tradable sector. Nevertheless, these problems were not as pronounced before 2009, and the economy still failed to create productive jobs despite experiencing growth. This suggests that the labor market distortions outlined above could be a more binding constraint.

This report provides a detailed diagnostic of the Jordanian labor market by studying the dimensions affecting the creation of more and better jobs. It analyzes several data sets to identify the main binding constraints, in three chapters. Chapter 1 focuses on the evolution of macro-level indicators such as GDP, productivity, the exchange rate, and demographics. Chapter 2 analyzes the labor supply, with a focus on labor market segmentation across genders, nationalities, and statuses—private or public sector and formal or informal sector. It analyzes the evolution of human capital and its wage returns in terms of both educational attainment and the skill content of jobs. It also describes the role of the Jordanian diaspora and the role of remittances. Finally, chapter 3 analyzes the demand for labor and the factors limiting the entry and growth of firms in the private sector.



1. ECONOMIC GROWTH AND JOBS

SUMMARY

Jordan is a small, open economy vulnerable to external shocks. It has one of the highest rates of population growth in the world—driven not only by the high influx of non-Jordanian workers but also by high fertility rates—with a sectoral structure that depends heavily on services and the public sector. Its labor market is characterized by extremely low employment and participation rates, particularly among women.

Economic growth in Jordan is significantly associated with job creation. However, the number of jobs created has not been high enough to keep up with the outstanding inflows of new entrants into the labor force, both locally and from abroad. Moreover, these additional jobs are disproportionately concentrated in less productive sectors. Since 2009, the rate of economic growth has plummeted and the decrease in the rate of job creation has resulted in worsening labor market outcomes across the board. In other words, the deterioration of the labor market began years before the peak of the Syrian crisis.

Investments and exports were important contributors to economic growth and job creation before 2009. Investments were led by foreign direct investment (FDI), privatizations, the real estate sector, and the government. While these external inflows fostered economic growth in the short term, they created other challenges in the longer term. The rise in external inflows may have undermined fiscal discipline and thereby limited the implementation of counter-cyclical policies after 2009, when the financial crisis, the Syrian conflict and the fall in oil prices all hit the region. The concentration of FDI in the real estate sector may have created inflationary pressures and damaged competitiveness. However, labor costs—with respect to labor productivity—continue to be relatively low in Jordan compared with those in other countries, as would be expected with such a high rate of population growth.

The lack of dynamism experienced since 2009 also revealed other weaknesses of Jordan's growth model. Most of the workforce is employed in the least productive sectors. Dynamic efficiency is lacking: the reallocation of workers across sectors has never enhanced productivity, because workers tend to move from high- to low-productivity sectors, even during boom years. At the same time, the productivity growth experienced in leading sectors did not reach most workers, because these sectors are not labor-intensive and represent a small share of the economy.

These findings suggest the existence of a dual economy in which dynamic sectors can expand and become more productive during periods of economic growth but fail to create many jobs. These sectors coexist with others in which jobs are disproportionately being created but efficiency is low and declining. This suggests the presence of barriers to leveraging Jordan's most abundant and strategic resource, its people, to foster economic growth and the creation of more and more productive jobs.

GROWTH AND JOBS

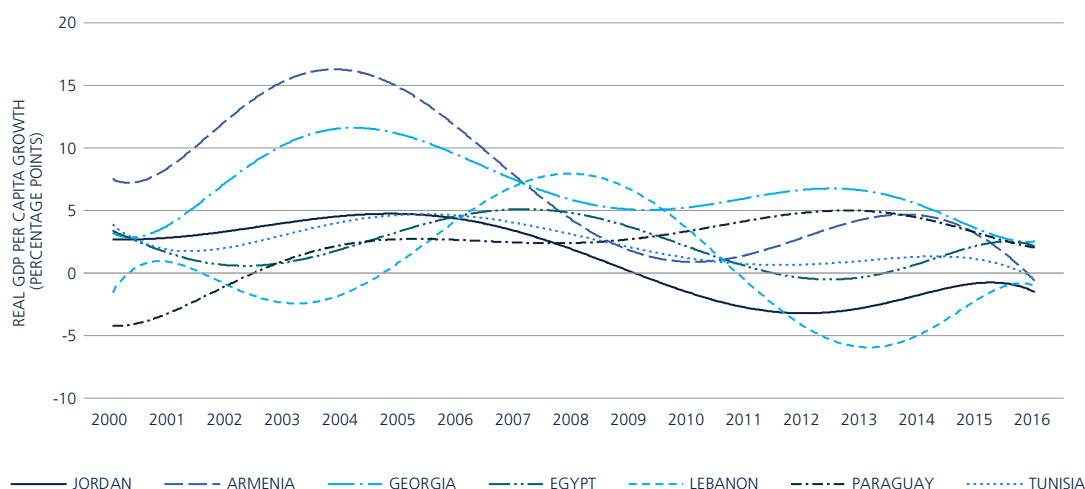
Like comparator countries, Jordan experienced sustained levels of economic growth before 2009. From 2000 until 2003, average growth was largely considered close to the potential for Jordan, despite the deceleration that took place during the U.S. invasion of Iraq in 2003.¹ A wave of economic reforms through 2008, including liberalization and privatization of several state-owned assets, contributed to push growth to

¹ World Bank Group, 2016.

record levels. The oil price boom during this period also contributed to economic growth because of larger flows of FDI, remittances, and grants from and exports to Gulf Cooperation Council (GCC) countries.²

Since 2009, however, gross domestic product (GDP) has grown at a staggeringly low level that has been insufficient to keep up with the rate of population growth. In fact, growth in GDP per capita has been negative in every year since 2010 (Figure 1).³ Several external factors may have contributed to this meager economic performance. First, the 2008–2009 financial crisis had a long-lasting impact on some of Jordan’s main foreign partners, such as the United States and the GCC countries. Second, the negative impact of the decline in oil prices on the GCC countries had sizable effects on the Jordanian economy, given its high level of dependence on those countries through remittances, FDI, and trade. Third, the Syrian conflict affected Jordan through the loss of export routes and the increase in uncertainty for potential investors. The conflict also made Jordan the country with the highest influx of Syrian refugees as a share of the total population, adding pressure to public finances. By 2017, the estimated cumulative impact of the conflict on GDP was about 18 percent of annual GDP.⁴ Other factors, such as the real appreciation of the currency and continued geopolitical tensions in the region, may also have contributed to the poor economic performance.

Figure 1
Real GDP per capita growth, 2000–2016



Source: Based on data from the World Development Indicators.

Note: Each line is smoothed using a six-degree polynomial.

BOX 1: BENCHMARK COUNTRIES

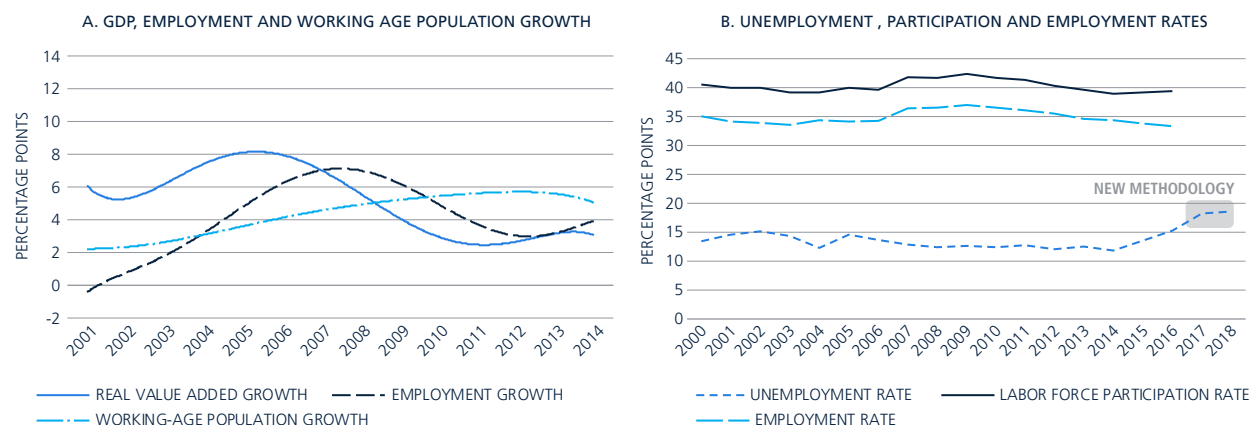
Throughout the report, we use benchmark countries to compare the performance of the Jordanian economy across different dimensions. The choice of country was based not only on geographic proximity and similar economic structures [for example, Egypt, Lebanon, and Tunisia], but also on the level of development. In particular, the choice of Armenia, Georgia, and Paraguay is explained by the fact that their levels of GDP per capita, in purchasing power parity, are very similar to that of Jordan.

² In fact, a 10 percent increase in the price of oil raises the GDP of Jordan by about 2.5 percent after 10 quarters [IMF, 2012].

³ Box 1 describes the selection of comparator countries.

⁴ IMF, 2017.

Figure 2
Economic growth and labor market outcomes



Source: Based on data from the World Development Indicators and the Employment and Unemployment Survey (EUS) conducted by the Jordanian Department of Statistics.

Note: The lines for employment growth and working-age population growth are smoothed using a six-degree polynomial. It is assumed that employment growth for Jordanians is the same as that of Jordanians and non-Jordanians. Working-age population growth is representative of both Jordanians and non-Jordanians.

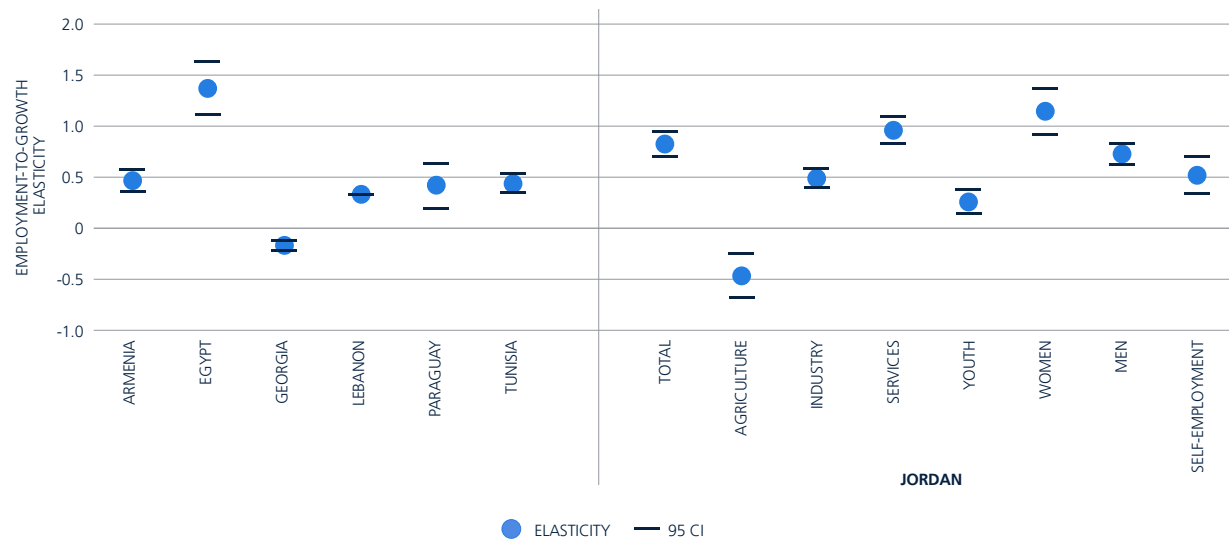
The association between economic growth and job creation has been significant.⁵ The annual rate of growth of total employment increased rapidly from about one percent before 2003 to about five percent or more between 2007 and 2009 (Figure 2). However, although job creation followed economic growth closely, it was not able to reach levels high enough to keep up with the growth of the working-age population during most of the period. The rate of job creation exceeded the rate of growth of the working-age population in only three years of the 2001–2009 period. The rate of job creation was the highest in 2007 through 2009. However, during the same period the rate of growth of the working-age population increased, as did the share of people looking for a job. As a result, the unemployment rate decreased only slightly, from 13.6 percent to 12.6 percent. In fact, both the employment and the unemployment rate were stagnant from 2000 to 2016. A worsening deterioration of labor market outcomes began in 2010, with a higher share of adults not either working or looking for a job, and declining employment rates.

The association between economic growth and job creation is high relative to that of comparator countries (except Egypt). While the employment-to-growth elasticity in Jordan was 0.80 from 2000 to 2014, it was 0.45 or less in Armenia, Georgia, Lebanon, Paraguay, and Tunisia (Figure 3). Employment of women and employment in the services sector seem to be the indicators in Jordan that are most responsive to economic growth. Although disproportionate growth of employment in the services sector is a common feature of economic development, in Jordan the services sector is the least productive and is dominated by the informal sector. Thus, although economic growth did create disproportionately more jobs for women, these jobs were not necessarily better or more productive.

Despite the relatively high association between economic growth and job creation, employment rates remain low. The low levels of economic growth since 2009 may have contributed to the stagnant labor market. More importantly, while the rate of job creation has been positive even since 2009, the rate of growth of the working-age population has been comparatively high. Jordan has a relatively young population, even when compared with economies at similar income levels (Figure 4a). The high rate of population growth is driven both by high fertility rates and by large inflows of immigrants and refugees. From 2000 to 2016, the size of the working-age population almost doubled. Only nine other countries had a higher rate of growth in the working-age population during this period.

⁵ Given that all official labor market figures exclude non-Jordanians, this analysis relies on the assumption that the employment rate of Jordanians is equal to that of non-Jordanians.

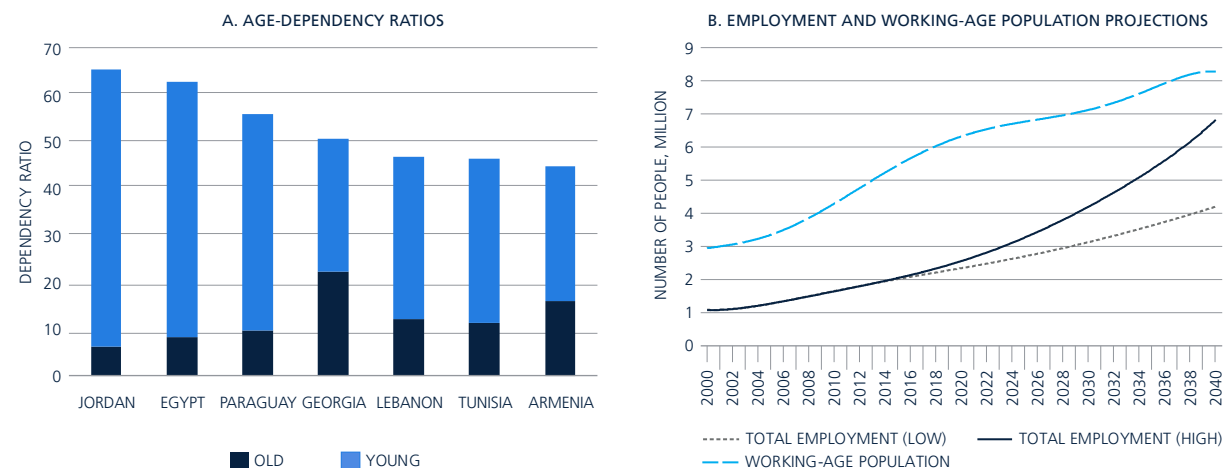
Figure 3
Employment-growth elasticities, 2000–2014



Source: Based on data from the World Development Indicators.

Population projections help illustrate the magnitude of the jobs problem. It is difficult to predict the future size of the labor force, considering that recent increases were mostly driven by inflows of foreign workers and refugees, whose likelihood of returning to their home countries is uncertain. Using existing population projections and assuming the rate of job creation remains equal to that of 2015, employment rates will remain at 50 percent or less of the labor force until 2040 (Figure 4b). In that year, employment rates will reach 80 percent of the working-age population only under the assumption that the rate of employment creation remains at five percent every year from 2015 through 2040. Given the level of the employment-to-growth elasticities, the GDP growth rate needed to achieve such a rate of job creation is 6.2 percent per year or higher.

Figure 4
Age dependency and population projections



Source: Based on data from the World Development Indicators and United Nations, 2017 Revision of World Population Prospects, accessed on December 9, 2017.

Note: The projection of employment after 2015 assumes the same rate of growth of employment as from 2015 (low) and 2008 (high).

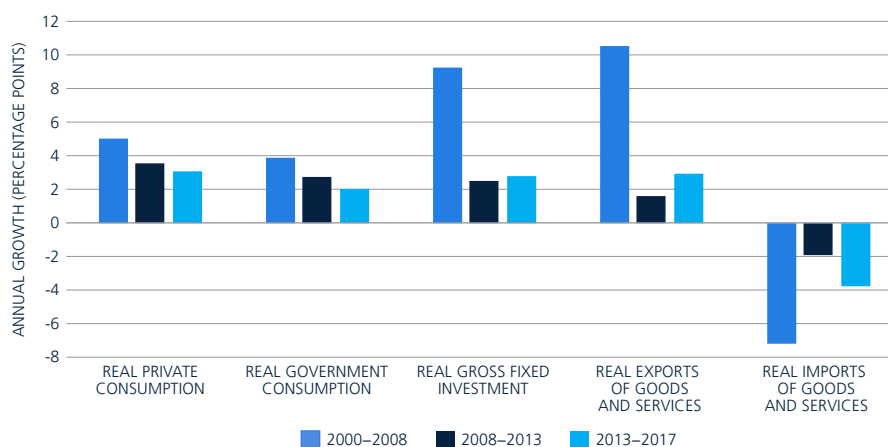
SOURCES OF ECONOMIC GROWTH

During the period of high economic growth before 2009, investments and exports led aggregate demand. The annual rate of growth of both public and private consumption was considerably lower (Figure 5). Although this may suggest that the sources of economic growth during this period could have set the economy on a sustainable path of economic development (as opposed to growth driven by shorter-term factors such as private or public consumption), a breakdown of the investment sources reveals a more nuanced picture. In fact, in every year from 2000 to 2015, the government and the real estate sector together accounted for 50 percent or more of gross fixed capital formation (Figure 6). The real estate sector was the main contributor to the large increase in gross fixed capital formation that took place between 2000 and 2007, which was largely driven by FDI inflows. On average, this sector accounted for more than 40 percent of gross fixed capital formation between 2004 and 2015. It has been argued that when FDI is concentrated in sectors where production inputs are scarce (such as land, in the case of real estate), it can drive an increase in the relative prices of these inputs, which could be detrimental to competitiveness.⁶ Moreover, the magnitude of external inflows may have undermined fiscal discipline during this period. The high level of public investment did not translate into higher physical capital accumulation when compared with other non-oil countries in the Middle East and North Africa.⁷

Stagnant or falling investments and exports help explain the sluggish economic growth since 2008. While all components of aggregate demand declined after 2008, the fall was significantly larger for investments and exports. When investments by the government and the real estate sector stopped growing in 2008, total capital formation stalled (Figure 6). The lack of growth in total investment since 2008 was slightly offset by an increase in investments in public utilities (from 2008 to 2012) and in information and communication technology (from 2011 to 2015).

A decomposition of the growth in value added per capita for 2004–2008 shows that, in fact, productivity was just as important as other factors in terms of its contribution. Whereas labor productivity growth accounted for 2.7 percentage points of per capita value added growth during this period, the increase in employment, participation, and working-age population combined accounted for 1.6 percentage points (Figure 7a). Since 2008, however, a decline in productivity, employment, and labor force participation all contributed to the total decrease in economic growth. Overall, such declines were large enough to erase all the gains achieved during the first part of the period, and consequently Jordan significantly underperformed with respect to all the comparator countries (Figure 7b).

Figure 5
Aggregate demand growth during the boom, fueled by investment and exports

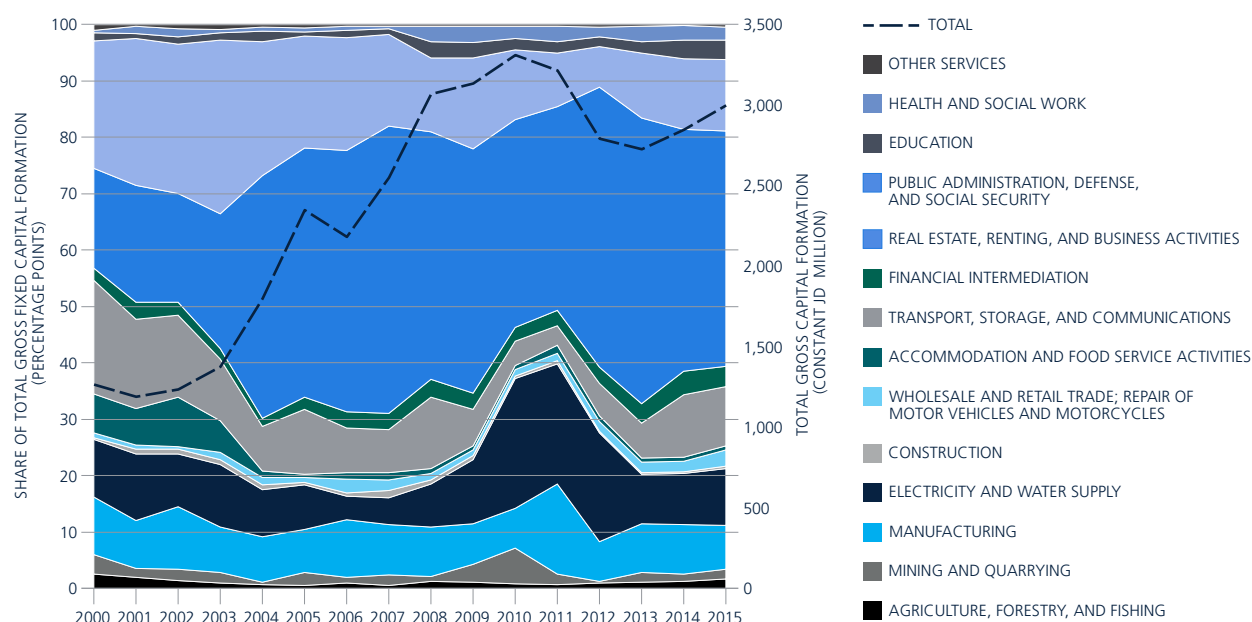


Source: Based on data from the Economist Intelligence Unit.

⁶ World Bank, 2012.

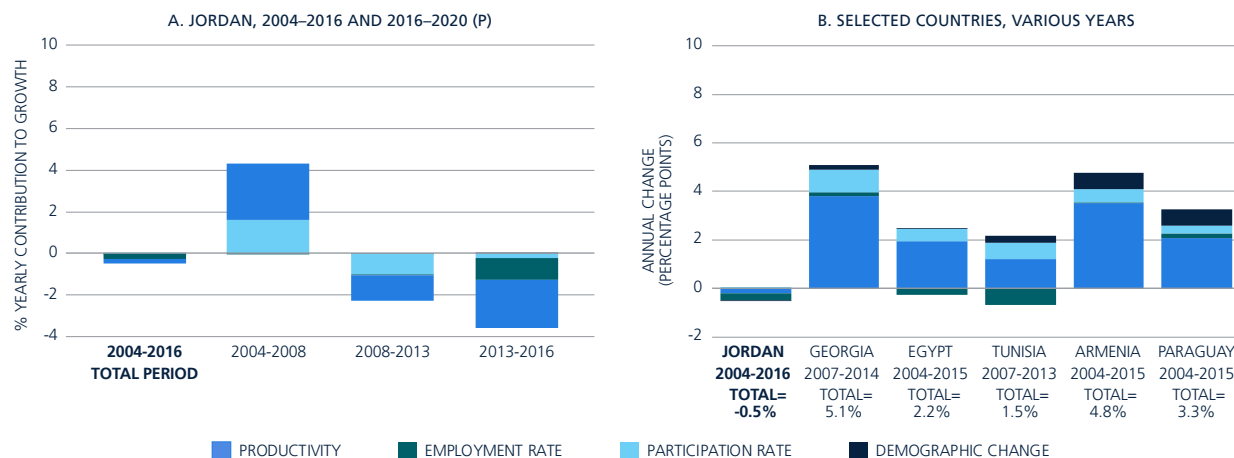
⁷ IMF, 2012.

Figure 6
Gross fixed capital formation, 2000–2015



Source: Based on data from the Jordanian Department of Statistics.

Figure 7
Decomposition of growth in per capita value added

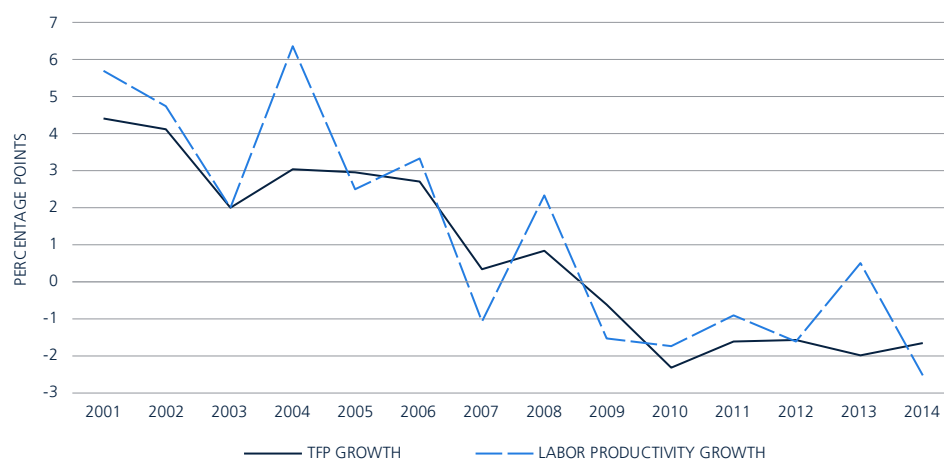


Source: Based on data from the World Data Indicators.

Labor productivity growth has largely been driven by changes in efficiency or in the quality of human capital rather than by capital accumulation. More specifically, patterns of labor productivity growth followed closely those of total factor productivity growth throughout the period (Figure 8). The increase in efficiency took place during the process of trade liberalization and privatization reforms. In addition to efficiency, education is also a key driver of total factor productivity, since it contributes almost twice as much as physical capital to growth in output per worker.⁸ As discussed in the following sections, however, the productivity gains observed before 2008 may not have benefited most workers as they were mostly driven by sectors with low labor intensity.

⁸ IMF, 2012.

Figure 8
Total factor productivity and labor productivity growth



Source: Based on data from Penn Tables and the International Labour Organization.

EXTERNAL SECTOR

Jordan's economic performance since 2000 has been highly dependent on external factors, as expected in a small, open economy. From 2008, economic growth was accompanied by high levels of exports, remittances, FDI, official development assistance, and international tourism (Figure 9). Total exports as a share of GDP increased by about 14 percentage points between 2000 and 2008. In fact, Jordan was one of the countries that experienced the largest increase in exports (relative to GDP) during this period. It was also among the top 10 countries for inflows of remittances (relative to GDP). From 2000 to 2007, remittances were equivalent to roughly one-fifth of GDP. However, both exports and remittances significantly declined after the financial crisis. By 2016, both figures stood at about half of the peak value achieved during the boom period.

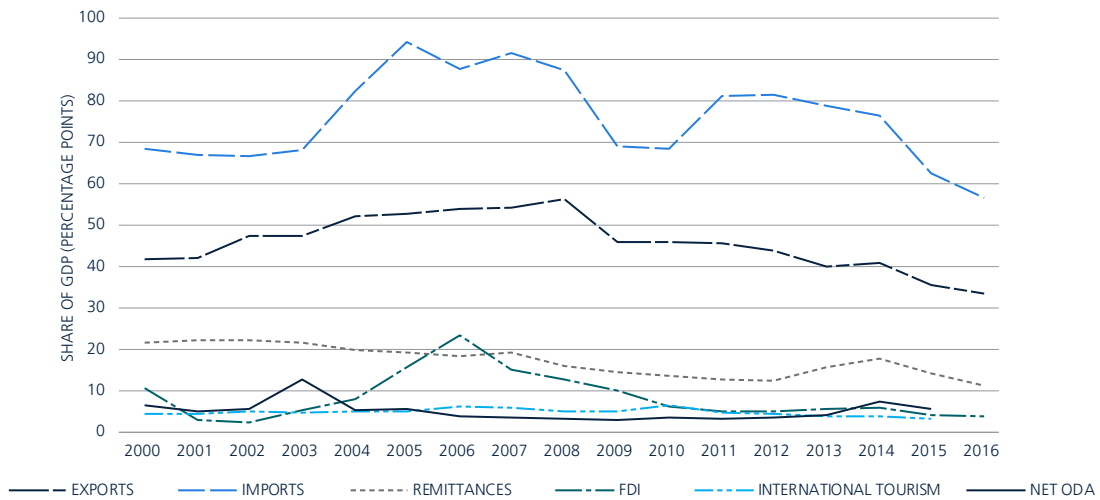
FDI, which increased continuously from 2001 to 2006, reaching 24 percent of GDP, accounted for more than 40 percent of total capital formation during the period.⁹ This is a significant contribution when compared with other countries. For example, FDI represented less than seven percent of gross fixed capital formation in lower-middle-income and non-GCC countries in the Middle East and North Africa during the same period. The rise in FDI was driven by increasing oil prices and excess savings in GCC countries, and by the comprehensive privatization program implemented in this period. FDI inflows declined significantly and have hovered around five percent since 2010.

Higher exports are linked to the labor market through job creation and higher earnings. Some of the leading sectors in terms of exports, such as food products, apparel, chemicals, and pharmaceuticals, account for a larger share of labor income in manufacturing (Figure 10). Their contribution to labor income comes not only from higher employment shares but also from higher wages. Even agriculture, which represents a small share of the total number of jobs in the economy, has a significant role in terms of exports and jobs when compared with other tradable sectors. Nevertheless, goods exports account for only a small fraction of jobs and labor income, given that the industrial sector represents 20 percent or less of total value added and employment. Moreover, Jordanian workers tend to be under-represented in the tradable sectors, a situation that became more pronounced after the refugee influx (see chapter 2).

The impacts of the financial crisis and the decline in oil prices were dramatic and long-lasting. Jordan's main foreign trade partners—the United States and the GCC countries—were severely hit by these shocks.

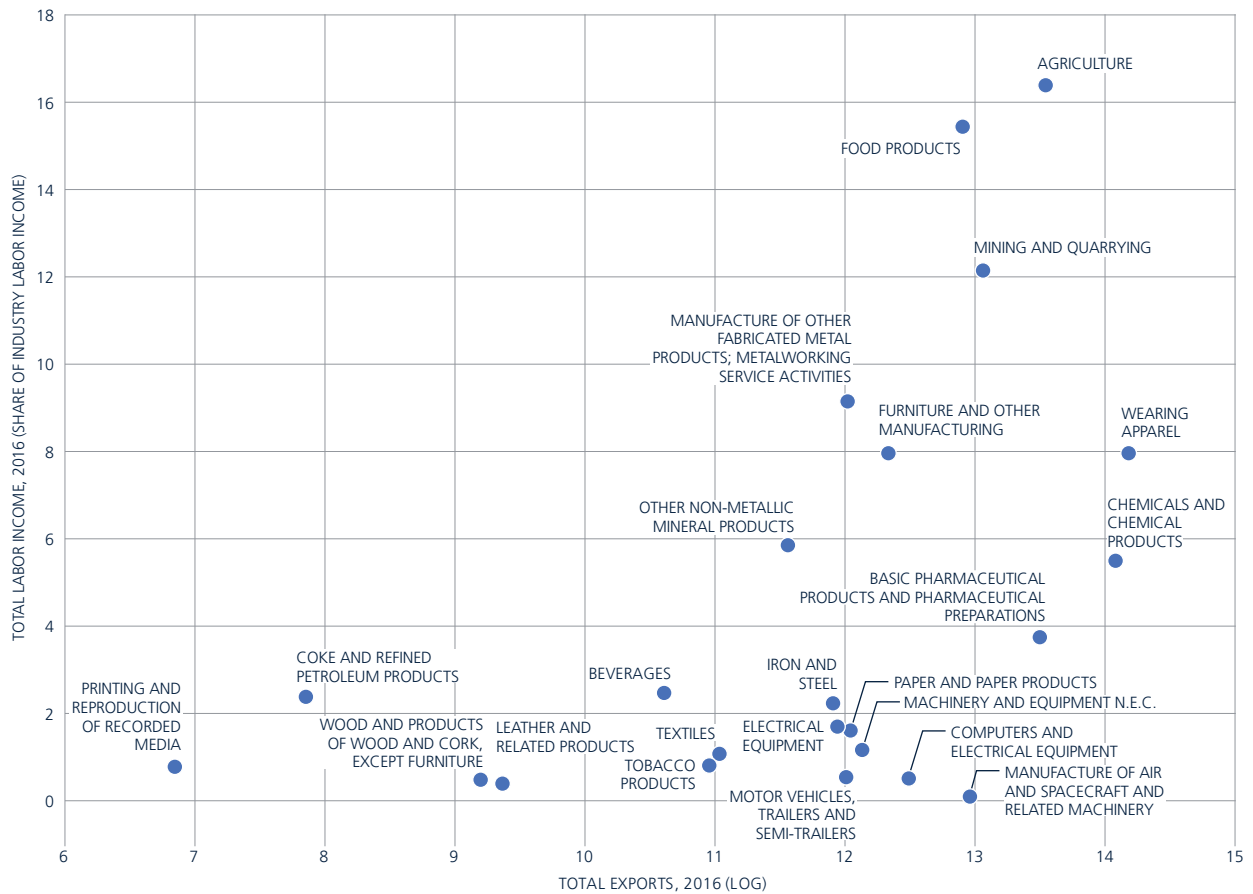
⁹ World Bank, 2012.

Figure 9
External factors



Source: Based on data from the World Development Indicators.

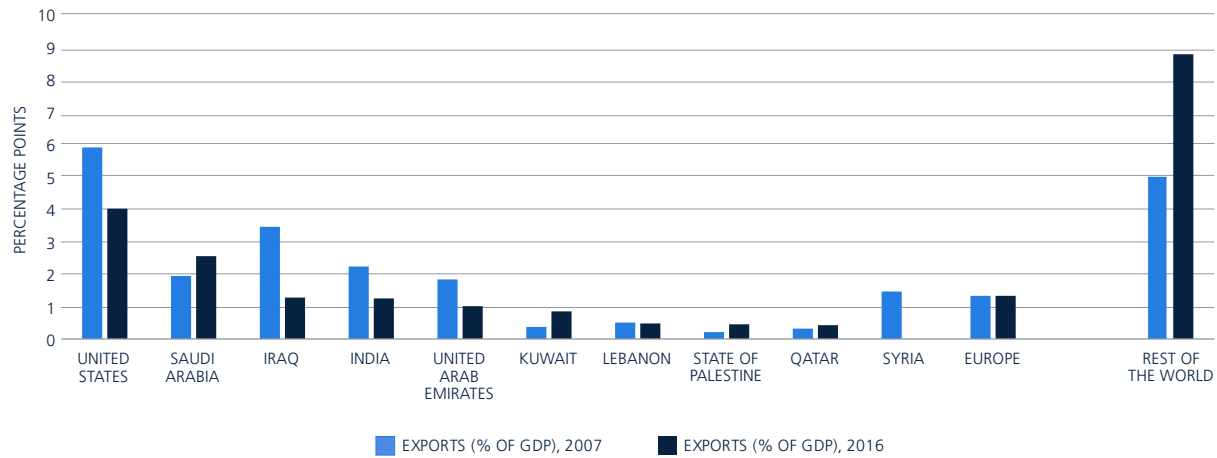
Figure 10
Exports versus labor income shares, by sector



Source: Based on data from the OECD and the Jordanian Department of Statistics.

Note: Labor income is estimated using the EUS. It is equal to the sum of all labor income by sector of economic activity of workers.

Figure 11
Jordan's main foreign trade partners, 2007–2016



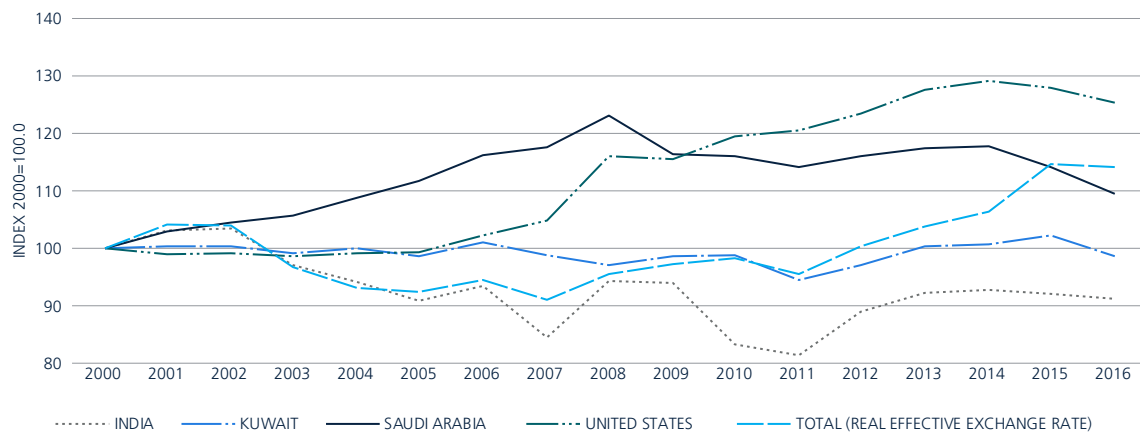
Source: Based on data from United Nations Conference on Trade and Development (UNCTAD).

Note: Each bar represents each partner's share of exports.

Exports to these destinations represent about eight percent of GDP, or about 40 percent of total exports (Figure 11). Jordan's economic performance has been highly determined by external factors, particularly through the effect of oil prices on foreign income and capital accumulation.¹⁰ Moreover, some of the export routes to major partners such as Syria and Lebanon were lost as a result of the Syria crisis. Alternative routes—including Iraq and the Aqaba Port—are considerably more expensive, which has negative implications for Jordan's competitiveness.¹¹ Although exports to other destinations increased more between 2007 and 2016, this increase was not enough to compensate for the fall in exports to the main partners.

The real exchange rate appreciation that took place since 2008 may have played an important role in the decline of exports as well. The real exchange rates between Jordan and the United States and Saudi Arabia (the two main trade partners) has increased by 25 and 10 percent, respectively, since 2000 (Figure 12).

Figure 12
Real exchange rates

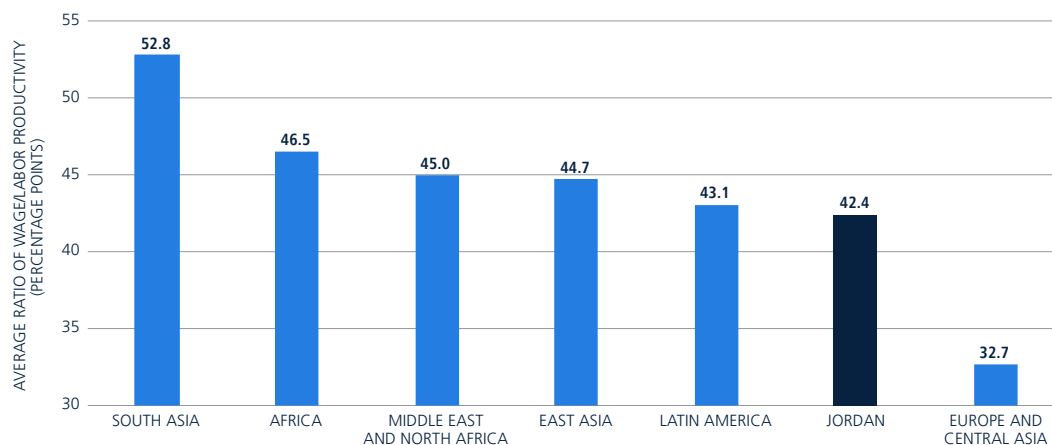


Source: Based on data from the Bank of International Settlements..

¹⁰ Mohaddes and Raissi, 2013.

¹¹ IMF, 2014.

Figure 13
Average wage-to-labor-productivity ratio, 2014–2016



Source: Based on data from the International Labour Organization and the Jordanian Department of Statistics.

Note: Latest available years are 2014–2016. Data for Jordan are for 2014.

When weighting by trade values, the average real effective exchange rate of Jordan with the world was relatively stable until 2011 but has increased 20 percent since then. The influx of Syrian refugees may have contributed to this appreciation by putting upward pressure on the prices of non-tradable goods. The impacts were the largest in the housing sector, with rent inflation increasing by five additional percentage points because of the influx.¹²

Unit labor costs (the ratio of labor costs to value added) have remained low. These costs are frequently used as a measure of competitiveness that allows for cross-country comparisons.¹³ Even though Jordan's exports became more expensive as a result of the real exchange rate appreciation, its labor costs have remained relatively low. Jordan had a labor productivity rate of 42.4 percent of labor productivity in 2014 (Figure 13). This level is low when compared with those of other regions, except Europe and Central Asia. In all other regions, this ratio is on average higher than 43 percent. The fact that labor costs are low in Jordan is not surprising, given that it is a labor-abundant economy.

SECTORAL STRUCTURE

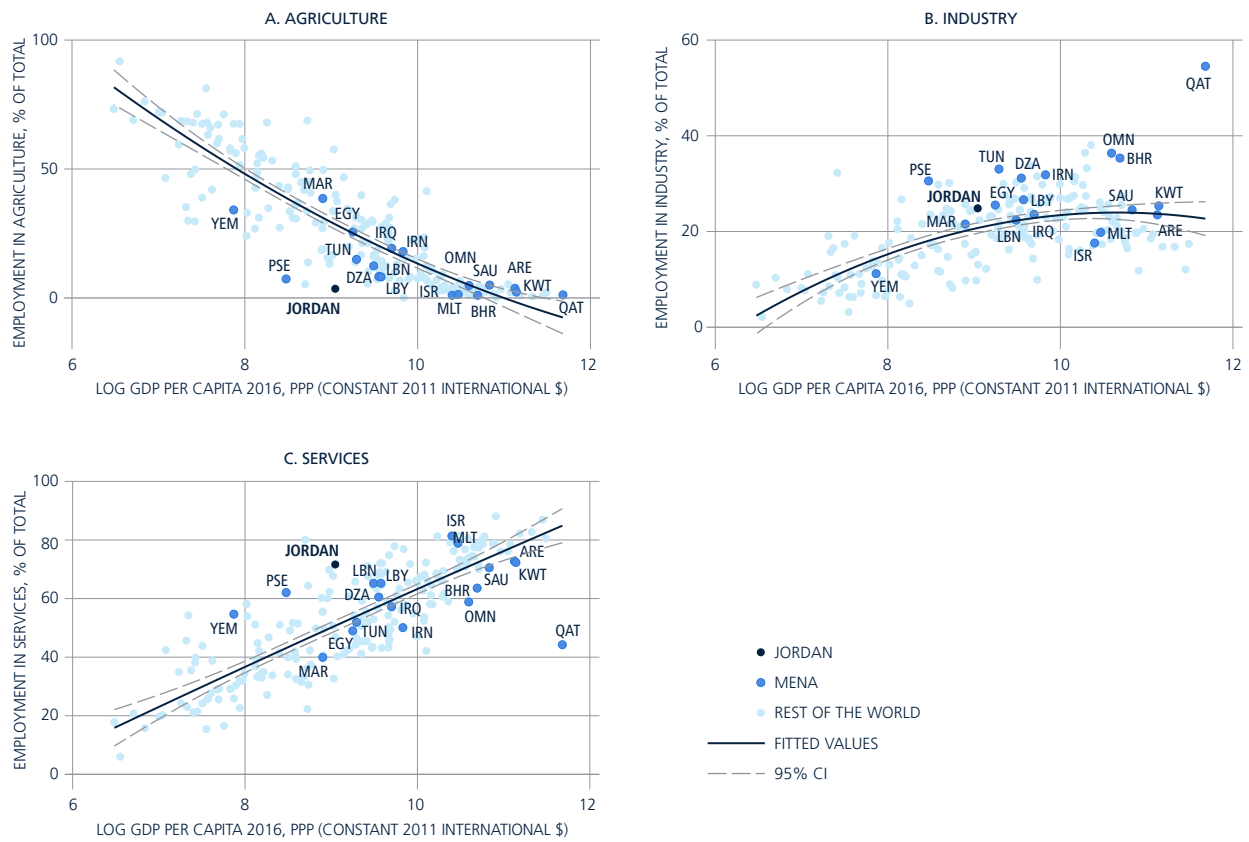
The sectoral structure is disproportionately concentrated on services, compared with countries at a similar level of economic development. More than 80 percent of workers are in the services sector, while the same figure in comparable economies is about 50 percent (Figure 14). In fact, the sector structure of employment of the Jordanian economy, on the surface, resembles that of high-income economies. The share of workers in agriculture is only two percent, while in similar economies 30 percent or more of the workers are in this sector. The large public sector accounts for an important share of the services sector, representing 40 percent (32 percentage points) of employment in services.

The sectoral structure of value added resembles that of employment. In 2016, the services sector accounted for 67 percent of total value added. However, while employment became increasingly concentrated in services since 2000, this sector's share of total output has been declining (Figure 15). More specifically, while the share of workers in services increased from 74 percent to 80 percent between 2000 and 2016, the share of value added fell from 70 to 67 percent.

¹² IMF, 2014.

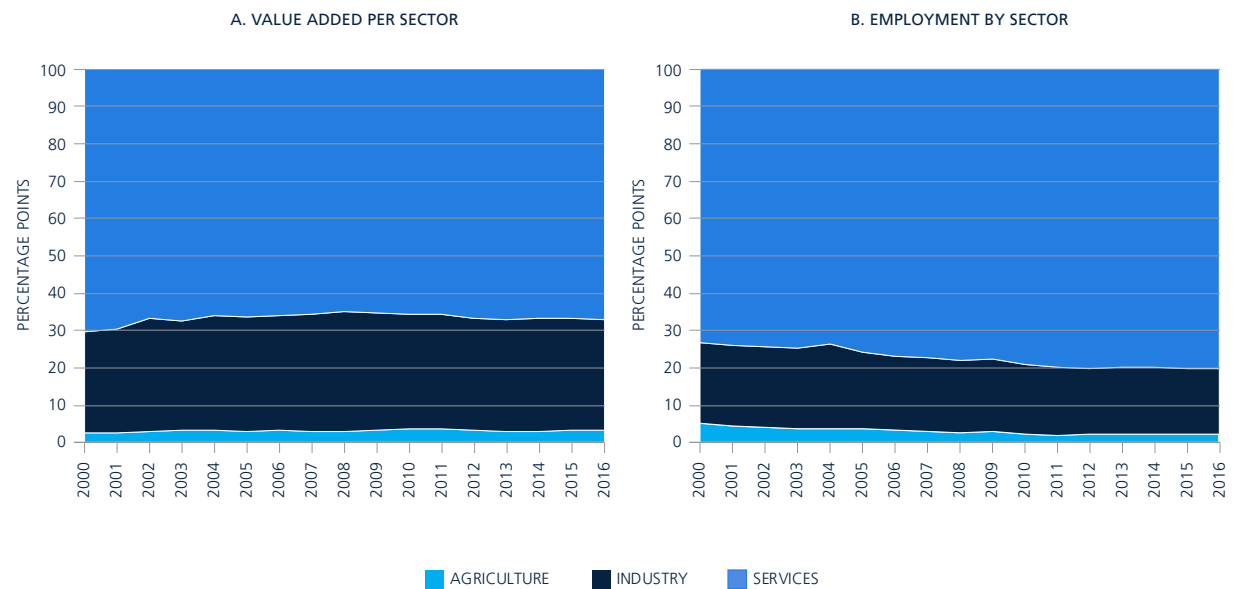
¹³ See, for instance, Gelb et al., 2017.

Figure 14
Sectoral structure of employment by level of income, Jordan, region, and rest of world



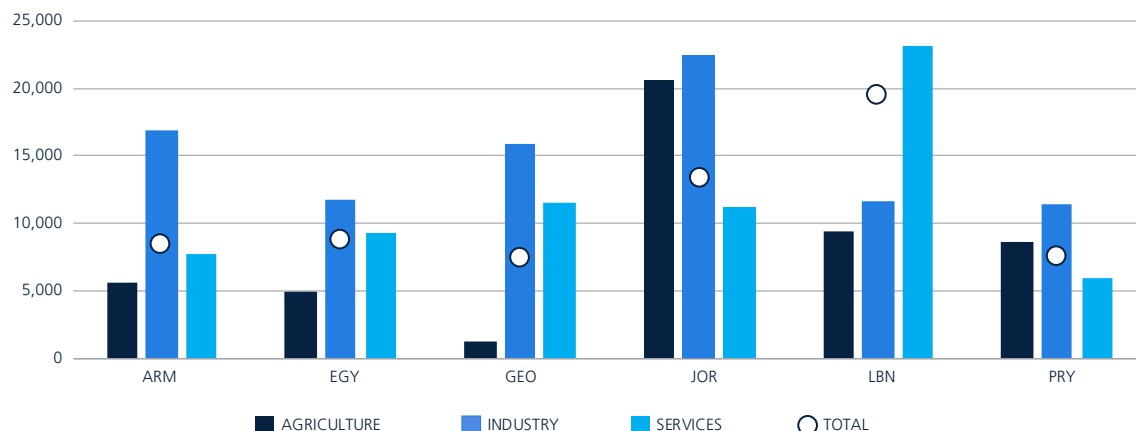
Source: Based on data from the World Development Indicators.

Figure 15
Sector structure of Jordan



Source: Based on data from the World Development Indicators.

Figure 16
Labor productivity by sector, 2016



Source: Based on data from the World Development Indicators.

Overreliance on services and the very low levels of labor productivity in the sector drive down the overall level of efficiency of the economy. Jordan's labor productivity in agriculture and the industry sector is high relative to comparator countries (Figure 16). However, the productivity level of services in Jordan is more similar to that of comparator economies such as Georgia or Egypt. The level of productivity of the services sector in Jordan is about half of that of Lebanon. Considering the strong reliance of both economies on services, these different productivity levels in the sector help to explain why in Lebanon the economy-wide labor productivity is 50 percent higher than in Jordan.

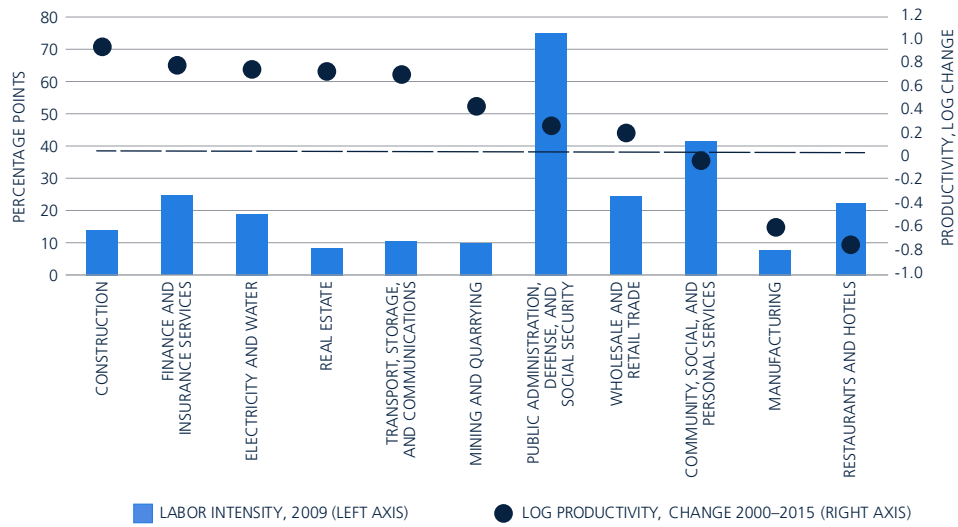
From 2000 to 2015, labor productivity grew only among non-labor-intensive sectors. Labor productivity growth was the highest in construction, finance, utilities, real estate and transport and communications, in that order (Figure 17). These positive developments did not have much impact on the average worker, considering that these sectors are the least labor intensive. Moreover, some of these sectors, such as construction, created jobs mostly for non-Jordanians (see chapter 2). In contrast, the three sectors in which labor productivity declined or remained stagnant during this period (wholesale and retail trade, other services, and manufacturing) employ more than half of workers in Jordan.

The reallocation of labor from low- to high-productivity sectors has been muted, even during the high-growth period before 2009. In general, labor productivity could increase either because each sector is becoming more productive (within-sector productivity) or because workers move from low- to high-productivity sectors (intersectoral reallocation). Any productivity gains observed from 2004 to 2016 are explained by within-sector productivity growth (Figure 18). In contrast, the reallocation of workers was never productivity-enhancing, because labor tended to move from high- to low-productivity sectors, even during the period when the economy was exhibiting high rates of economic growth. This lack of productivity-enhancing reallocation of resources has been cited as a potential explanation for the inability to scale up certain sectors in which Jordan has potential and presence, such as information and communication technology, pharmaceuticals, health services, and renewable energy.¹⁴

Patterns of reallocation from high- to low-productivity sectors also exist among more narrowly defined sectors. From 2000 to 2015, employment grew disproportionately among the least productive sectors (Figure 19). Wholesale and retail, restaurants and hotels, and manufacturing are among the sectors that experienced the largest increases in their shares of total employment. At the same time, they have some of the lowest levels of labor productivity. In contrast, high-productivity sectors such as construction and transport, storage and communications witnessed a fall in their employment shares during the period.

¹⁴ World Bank, 2016.

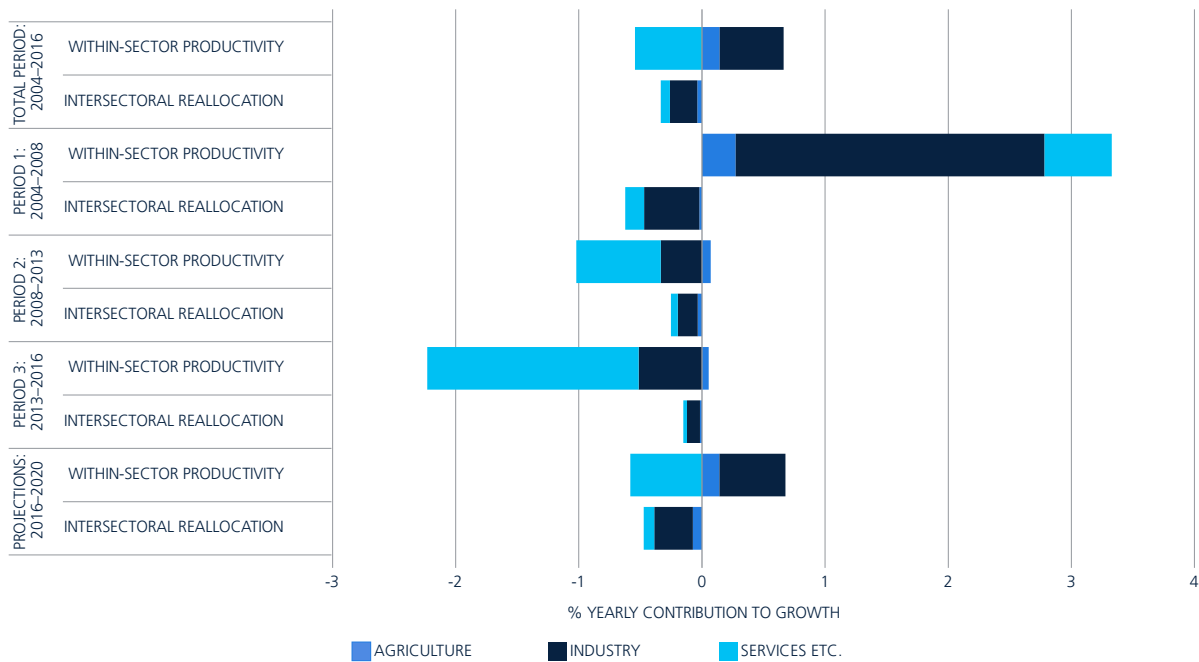
Figure 17
Labor productivity growth versus labor intensity, 2000–2015



Source: Based on data from the Jordanian Department of Statistics.

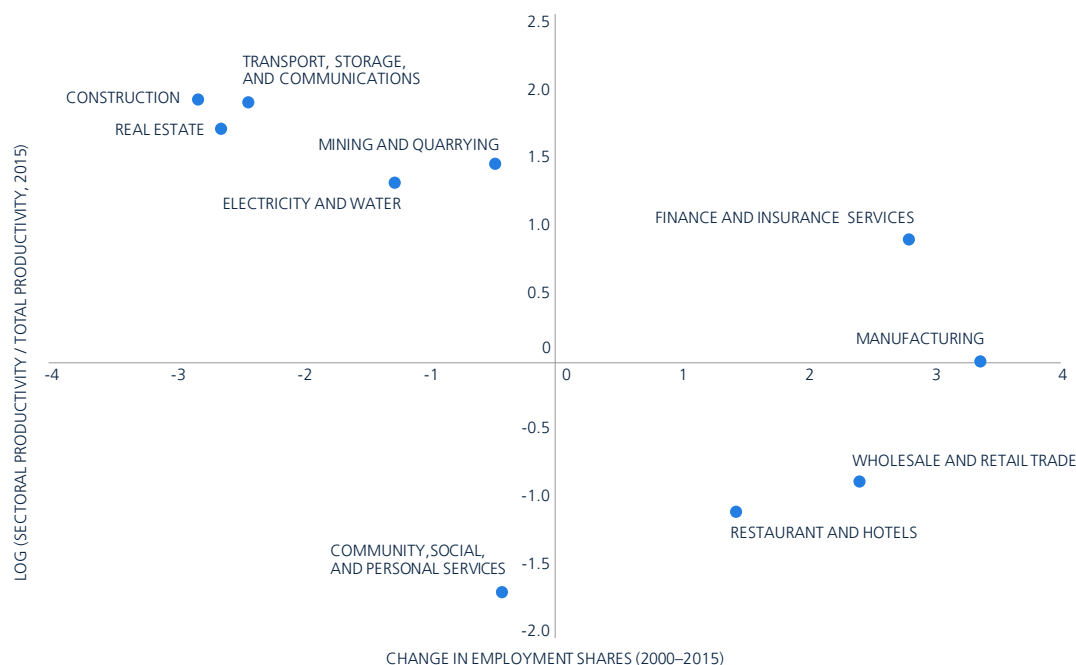
Note: Labor intensity is equal to the share of “compensation to employees” in gross value added.

Figure 18
Growth decomposition



Source: Based on data from the World Development Indicators.

Figure 19
Patterns of structural transformation, 2000–2015



Source: Based on data from the Jordanian Department of Statistics.

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2. WORKERS AND JOBS

SUMMARY

Jordan is characterized by a multiplicity of segmented labor markets and by record low rates of employment and labor market participation. These features have only become worse over recent years. The share of Jordanians without a job has remained stagnant, declining slightly between 2000 and 2016, with only 41 percent of prime-age workers having a job in 2016.

Labor market segmentation across genders, nationality, and statuses—formal and informal as well as public and private sector—have become more acute. First, Jordanian women increased their labor force participation only slightly over the last 18 years. While on average they now earn wages comparable with those of men, this is because they have on average higher education levels. In fact, when comparing Jordanian men and women with the same characteristics, the gender wage gap persisted. Second, the share of workers who are unprotected against important risks (by being informal) has increased since 2010, and they now represent almost 60 percent of all workers. Third, the large inflows of non-Jordanians and their disproportionate concentration in the informal and unskilled sectors have magnified the segmentation of the labor market across nationalities. Finally, the permanent role of the government as an employer of Jordanians, together with a rising public sector wage premium, makes private sector jobs increasingly unattractive to Jordanians.

These segmentations result in important and growing imbalances between the supply of and the demand for labor. The dramatic increase in educational attainment of Jordanian women resulted in a large increase in the potential supply of skilled labor. However, the wage returns to postsecondary education and high-order skills have declined, suggesting that the demand for skilled labor failed to keep up with the increasing potential supply. At the same time, the dramatic increase in the supply of unskilled workers driven by immigrants and refugees was accompanied by an increase in the relative wages of unskilled labor, suggesting that the demand for unskilled workers grew faster than their rising supply. However, the increased sorting of foreign workers into the informal sector reflects the barriers that they face despite the increasing demand for their skills. The rising real wages in the public sector coexist with declining real wages in the private sector, distorting the normal price adjustment mechanisms to match labor demand and labor supply.

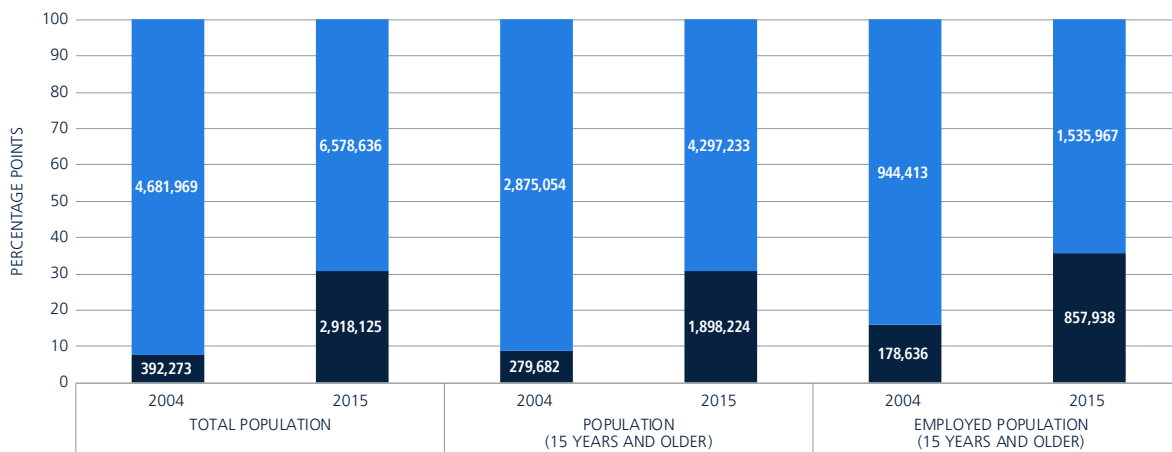
The evidence reviewed in this chapter suggests that the distortions affecting labor supply and labor demand are significant. They harm the ability of workers and firms to adjust efficiently to shocks. This results in a vicious circle in which existing segmentations result in even weaker labor supply and demand, and thereby low job creation rates.

LABOR STRUCTURE, JORDANIAN AND NON-JORDANIAN WORKERS

Accurately describing the labor market is challenging: most official statistics represent only Jordanians, yet non-Jordanians constitute a significant share of the labor force. It is even more challenging to know with accuracy what that share is, since most non-Jordanians tend to be in informal or temporary jobs that are difficult to capture in individual or firm-level surveys.

Data from the 2015 Census of Population and Housing show that the number of non-Jordanians increased dramatically since 2004 (Figure 20). Although almost one of every three persons in Jordan now is a foreigner, non-Jordanians represented only eight percent of the total population in 2004. Whereas in 2004 fewer than 400,000 foreign-born individuals lived in Jordan, in 2015 the number of refugees reached 1.3 million

Figure 20
Jordanians and non-Jordanians in the labor force, 2004–2015

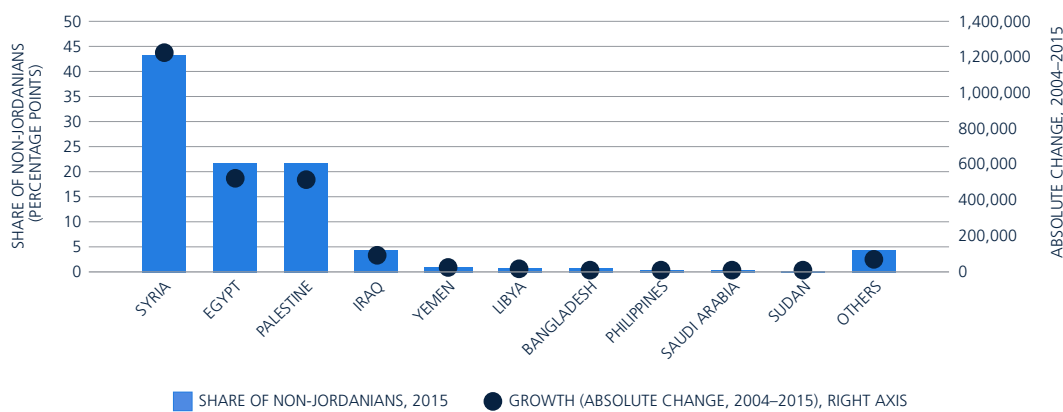


Source: Based on data from the Population and Housing Census, 2004, 2015, Jordanian Department of Statistics.

and the number of non-refugee foreign nationals reached 1.6 million. Non-Jordanians are disproportionately represented in the labor market, as they account for almost 36 percent of total employment. Their rate of employment is, in fact, almost 10 percentage points higher than that of Jordanians.

Syrians, Egyptians, and Palestinians account for 87 percent of all foreign nationals living in Jordan (Figure 21). Their inflows between 2004 and 2015 were significant, with the number of Syrians increasing by over 1.2 million people, and the number of Egyptians and Palestinians each increasing by over half a million people. Although Syrians have lower levels of education and are younger than other non-Jordanians, they are more similar in terms of the types of jobs they hold and the economic sectors of focus, which suggests that Syrians may be more likely to compete with other non-Jordanian workers than with natives in the labor market.¹⁵ Empirical evidence in fact shows that the labor market outcomes of Jordanians were not affected by the inflows of refugees.¹⁶

Figure 21
Non-Jordanians' nationality, top 10 groups, 2015



Source: Based on data from the Population and Housing Census, 2004, 2015, Jordanian Department of Statistics.

¹⁵ Razzaz, 2017.

¹⁶ Fallah et al., 2018.

Figure 22
 Characteristics of Jordanians and non-Jordanians, 2015



Source: Based on data from the Population and Housing Census, 2015, Jordanian Department of Statistics.

Whereas migrants are more likely to be in the working-age group than natives, the age profile of non-Jordanians is very similar to that of Jordanians (Figure 22a). Among those older than age 15, non-Jordanians are more likely to be in the 15–39 age group than are natives. The similar age structure of both groups is likely driven by the nature of the recent inflows of migrants. Although economic migrants are more likely to be driven by labor market opportunities and thereby more likely to be in the working-age group, push factors that involve the forced movement of entire families imply that the age structure of these migrants is more balanced.

Significant differences emerge when comparing the gender and educational structure of Jordanians with that of non-Jordanians. The sex ratio of migrants age 15 or older is far from balanced, with less than 40 percent of them being women (Figure 22b). They are also less likely to be skilled than natives, with only 18 percent having a postsecondary degree (as opposed to 30 percent of Jordanians). Moreover, almost 17 percent of working-age non-Jordanians are illiterate, while only 8.4 percent of Jordanians are.

The clear majority of both Jordanian and non-Jordanian workers reside in urban areas (Figure 24a). Moreover, the urbanization rate increased substantially between 2004 and 2015, particularly for non-Jordanian workers. In 2015, only 5.4 percent of them lived in rural areas, compared with 11 percent of their Jordanian counterparts. Syrian refugees tended to locate in areas where there is already a large presence of non-Jordanians, but their location patterns are not correlated with the labor market performance of Jordanians (Figure 23).

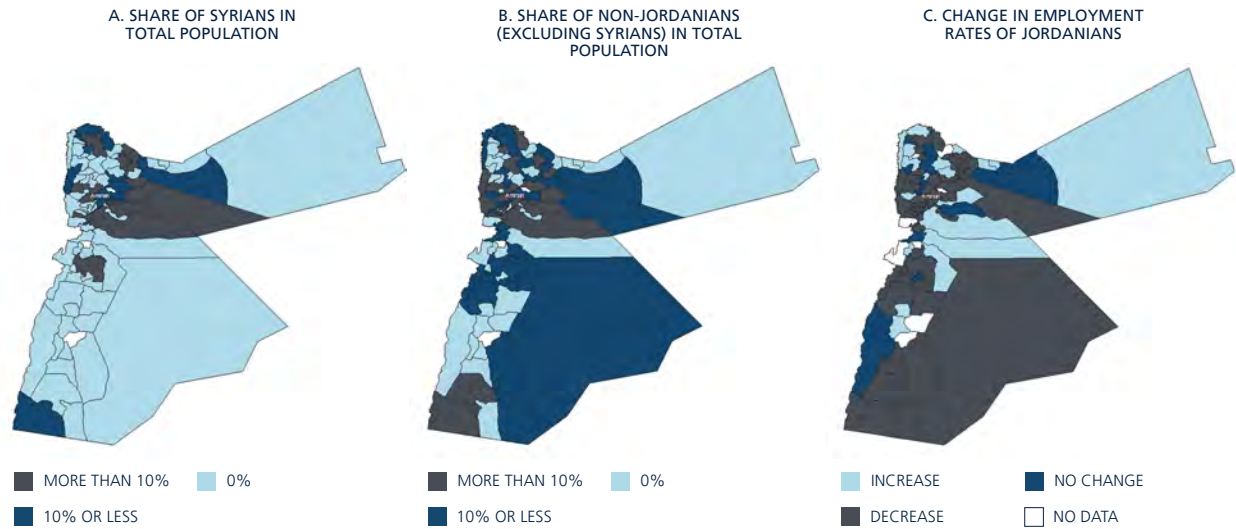
Non-Jordanians are more likely to hold more precarious forms of employment. In 2015, almost 80 percent of Jordanians held a permanent job, but only 55 percent of non-Jordanians did (Figure 24b). Almost one of every three non-Jordanians has a temporary job, compared with just 15 percent of Jordanians. The share of seasonal workers is very small among both Jordanians (1.8 percent) and non-Jordanians (3.6 percent). The Qualified Industrial Zones represent an important source of jobs for non-Jordanians.¹⁷ To some extent, the poorer labor market outcomes of non-Jordanians is explained by the fact that most Syrian refugees were not allowed to work legally before 2016, and by the fact that many non-Jordanians do not have work permits.¹⁸ Those who worked without a permit faced important risks if caught, including deportation. In early 2016, Jordan and the European Union (EU) established the Jordan Compact, which included the creation of work permits in exchange for trade opportunities and aid from the EU.¹⁹ Despite these efforts, some refugees still reside in

¹⁷ Athamneh, 2011.

¹⁸ Razzaz, 2017.

¹⁹ Krafft et al., 2018.

Figure 23
Share of Syrians and other non-Jordanians and labor market outcomes of Jordanians, by subdistrict

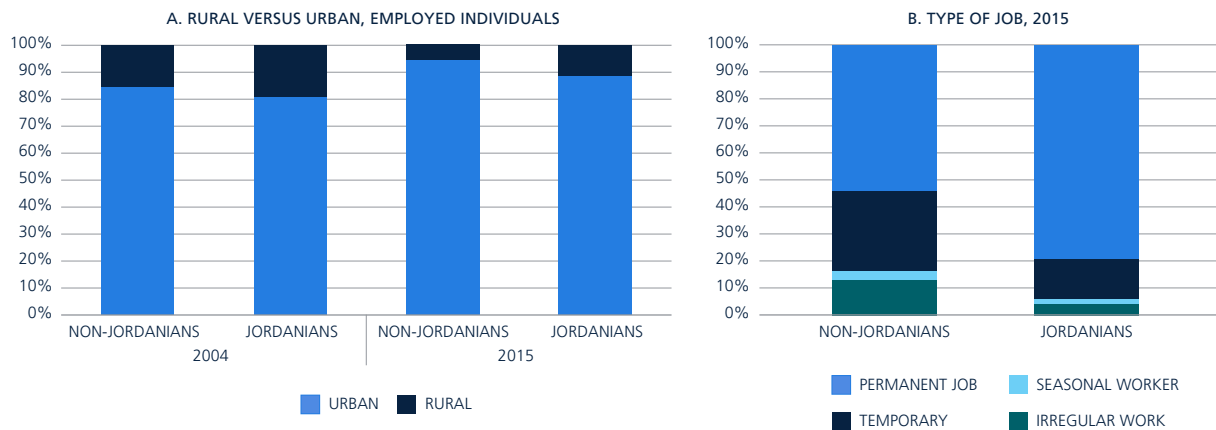


Source: Based on data from the Jordan Labor Market Panel Survey (JMLPS), 2010–2016.

camp, where job opportunities are scarce. In fact, Syrian refugees who live in camps have employment rates of about 24 percent, while the corresponding figure for those in host communities is 40 percent. In addition, work permit take-up was slower than expected, possibly driven by the perception that permits would be expensive and would tie a worker to a single employer.²⁰ Moreover, both Syrians and other non-Jordanians face important labor market barriers even with a work permit, since many sectors have quotas or are closed to non-Jordanians.

Most workers in 2010 were Jordanians, except in domestic work and administrative services, where 56 and 69 percent were non-Jordanians, but this has changed dramatically since then. Even though Jordanians are slightly more concentrated in rural areas than non-Jordanians, the latter are disproportionately concentrated in agriculture when compared with the former. Whereas in 2010 almost 80 percent of workers in agriculture were Jordanians, in 2016 that figure was only 29 percent (Figure 25). In 2016, virtually all domestic

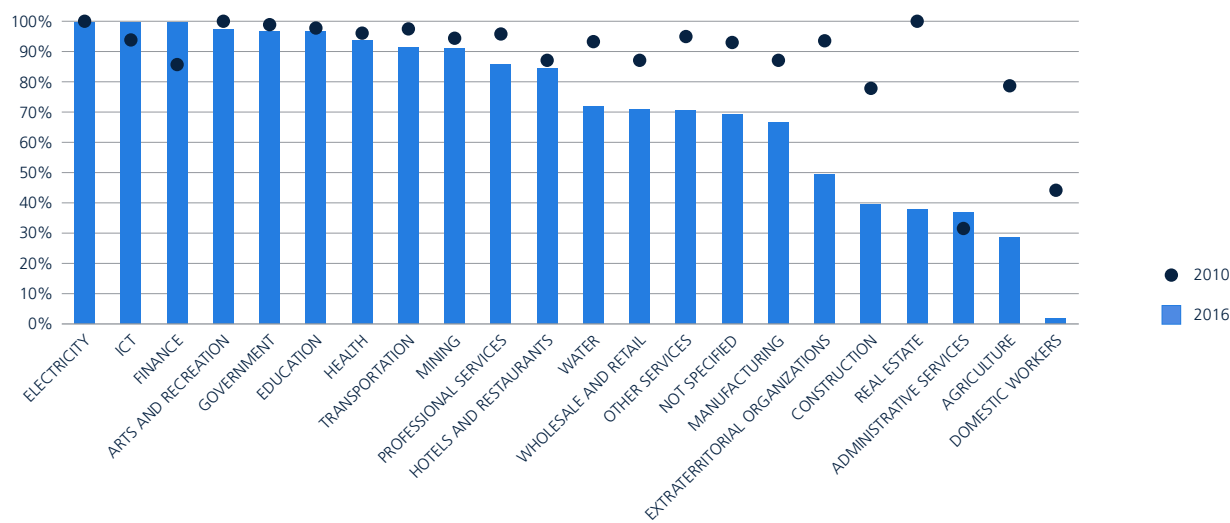
Figure 24
Characteristics of Jordanian and non-Jordanian workers



Source: Based on data from the Population and Housing Census, 2004, 2015, Jordanian Department of Statistics.

²⁰ Razzaz, 2017.

Figure 25
Share of Jordanian workers by sector of economic activity

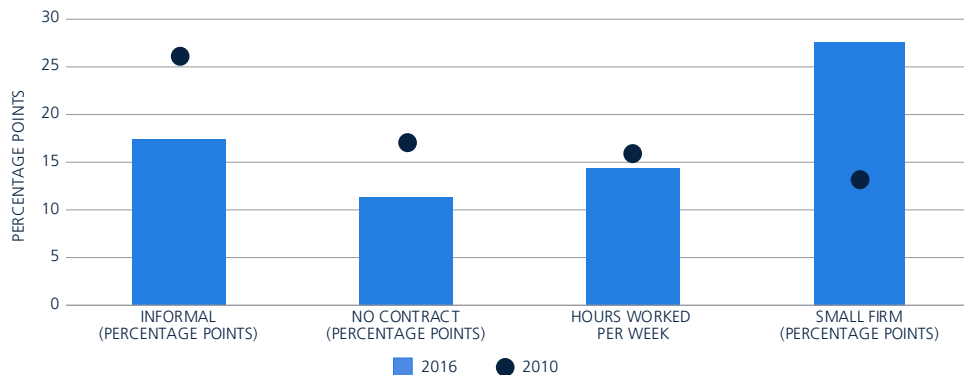


Source: Based on data from the JLMPS, 2010, 2016.

workers were non-Jordanians. They also represent many workers in construction and real estate. The relative representation of Jordanian workers has also fallen in manufacturing and retail. The lack of work permits as well as lower minimum wages for non-Jordanian workers increase the incentives for employers to hire non-Jordanians (both formally and informally).

Non-Jordanian workers are disproportionately absorbed in the informal sector. Although this chapter provides a more complete characterization of this sector later, it is worth mentioning the importance of the informal sector as an employer of last resort for non-Jordanian workers. In 2016, non-Jordanians were 17 percent more likely to be informally employed and 11 percent more likely to not have a contract than Jordanians. Non-Jordanians also work on average 15 percent more hours per week, which is equivalent to almost seven additional hours per week. Finally, non-Jordanians are 27 percent more likely to work in small firms than are Jordanians, which may also be a response to the fact that small firms are less likely to be detected by authorities and therefore more likely to operate informally.

Figure 26
Job quality gap, non-Jordanians versus Jordanians



Source: Based on data from the JLMPS, 2010, 2016.

Note: Each bar shows the difference between non-Jordanians and Jordanians. For example, the first bar is the informality rate of non-Jordanians versus that of Jordanians. Informality is defined as the lack of social insurance coverage.

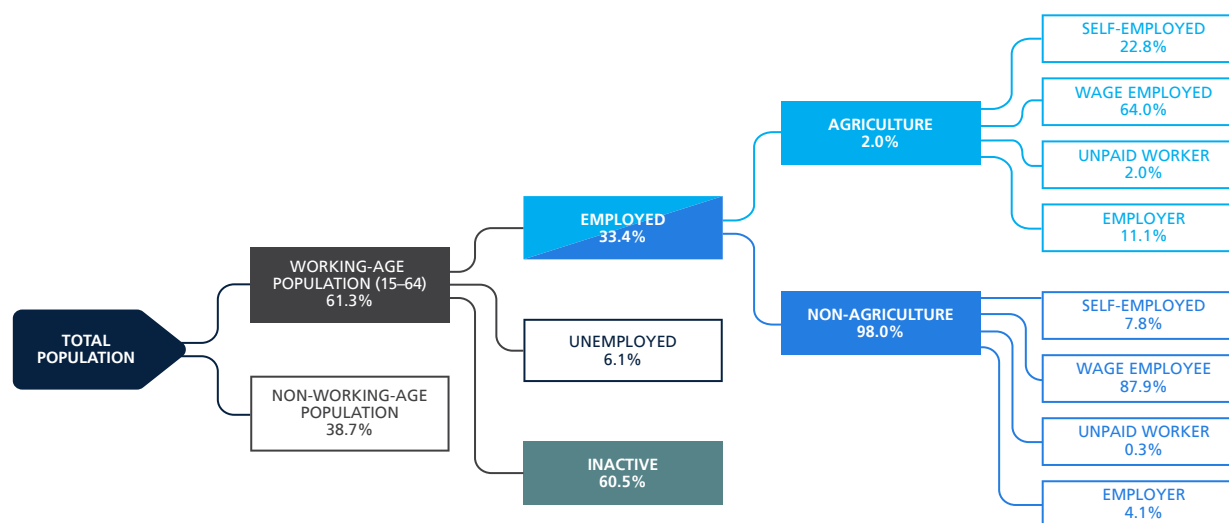
LABOR MARKET TRENDS OF JORDANIAN WORKERS

Almost 60 percent of Jordanians are not employed or looking for a job (Figure 27). Of those who are employed, only two percent work in agriculture, and almost 90 percent of those in the industry or services sectors are wage employees. The share of wage employees in total employment is very high relative to comparator countries.²¹ In fact, only rich economies have similar shares of wage employment. However, this characteristic is mostly driven by the large size of the public sector, in which half of all wage employees are concentrated. This section uses the main household survey in Jordan, the Employment and Unemployment Survey (EUS), to measure labor market outcomes. Since this survey is representative only of Jordanians, all the results presented here apply only to this group unless otherwise noted.

The structure of employment has remained stagnant over the last 17 years (Figure 28). The share of people out of the labor force is high and has increased since 2009. The increase was larger for men and prime-age people, who dropped out of the labor force from 2009 to 2016 (by an additional 4.5 percentage points). The increase for female and young workers was smaller (1.6 percent), although their inactivity rates are already staggeringly high. In fact, Jordan has one of the lowest labor force participation rates for women and one of the lowest rates for youth. Only two other countries (Yemen and Syria) have lower rates.²² Although rates are much higher for men, they are still low by international standards. Whereas all comparator countries have male labor force participation rates of 70 percent or higher, in Jordan only 64 percent of men aged 15 or older are employed or looking for a job. Given these high rates of inactivity, this report focuses on the employment rate rather than the unemployment rate as a measure of labor market performance. This is because such high levels of inactivity may hide substantial numbers of discouraged workers who are not looking for a job, given the low chances of finding one.

Recent methodological changes introduced to the main labor market survey affect the comparability of indicators over time. In 2017, Jordan replaced the EUS with the Labor Force Survey (LFS), which incorporates several improvements. First, unlike the EUS, the LFS is representative of all individuals; that is, both Jordanians and non-Jordanians. Second, the concept of “employment” was narrowed down to work for pay or profit.

Figure 27
Labor market structure of Jordanians, 2016



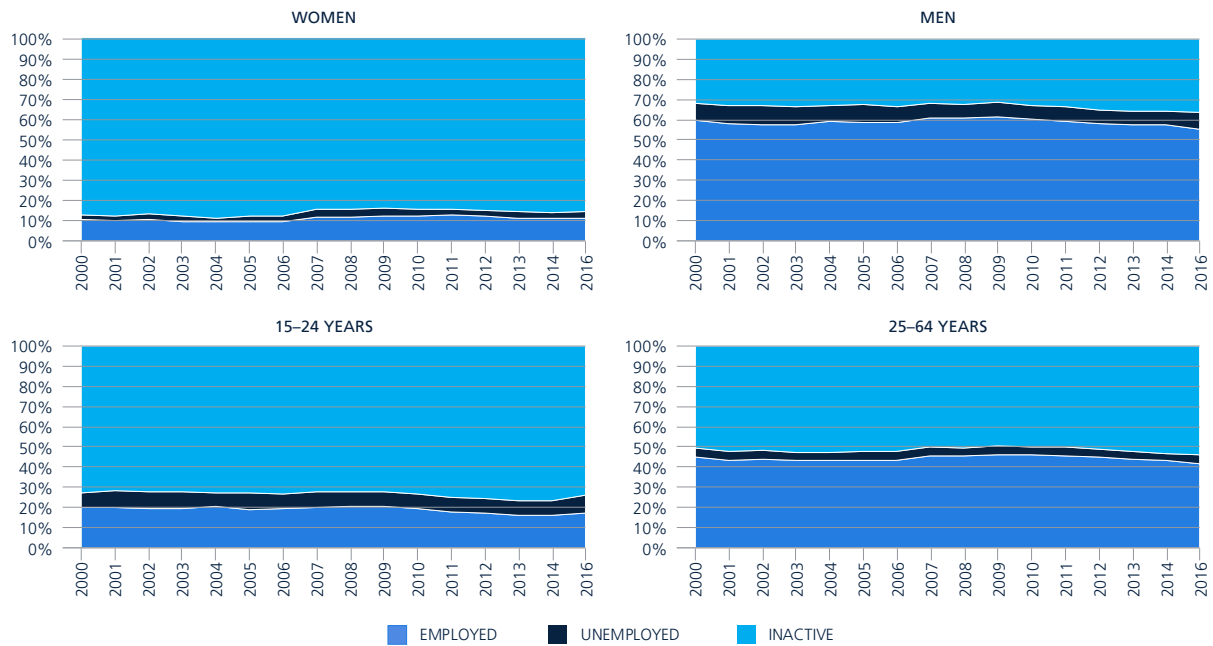
Source: Based on data from the EUS, 2016.

Note: The sample is representative only of Jordanian citizens.

²¹ For example, data from the World Development Indicators show that the share of wage employees is 57 percent in Armenia, 63 percent in Egypt, 42 percent in Georgia, 62 percent in Lebanon, 56 percent in Paraguay, and 72 percent in Tunisia.

²² Source: Female labor force participation rate for ages 15–64, total [%] [modeled estimate from International Labour Organization], World Development Indicators.

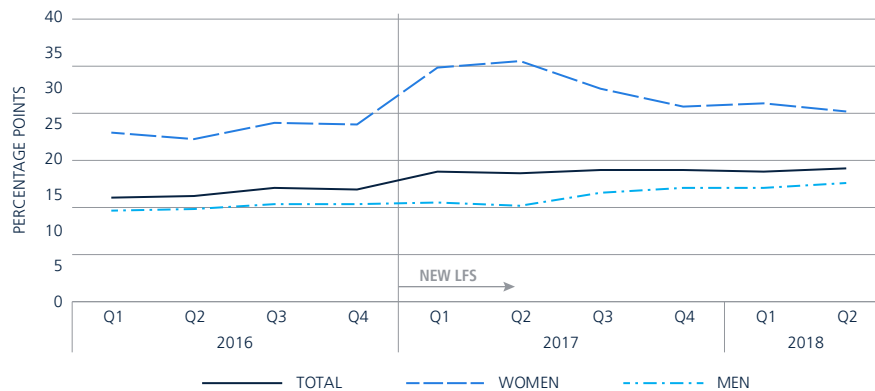
Figure 28
Labor force shares by gender and age, 2000–2016



Source: Based on the EUS, 2000–2016. The sample is representative of Jordanian citizens only.

Third, the questionnaire was updated to reflect new concepts and definitions.²³ All these changes imply that the new employment figures are not completely comparable with those from before 2017. It was expected that the new methodology would produce higher unemployment numbers by excluding unpaid workers from the “employed” category. In fact, a small kink in the unemployment trend can be observed in the first quarter of 2017 (Figure 29). Nevertheless, the unemployment trends continue to show a stagnant situation for the most recent period for which data are comparable (since the first quarter of 2017). In fact, the total unemployment rate increased 0.2 and 0.7 percentage points in the first and second quarters of 2018, respectively, compared with the same quarters of 2017.

Figure 29
Official unemployment rate



Source: Based on data from the Department of Statistics, 2018, http://dos.gov.jo/dos_home_e/main/archive/Unemp/2018/Emp_Q2_2018.pdf.

²³ See https://www.ilo.org/beirut/media-centre/news/WCMS_555754/lang--en/index.htm.

PUBLIC SECTOR JOBS

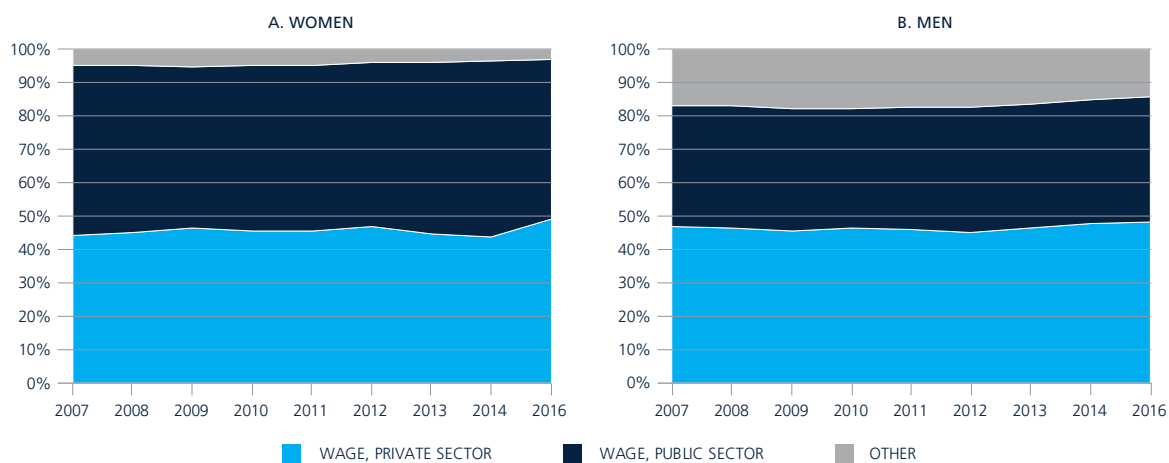
Almost 40 percent of employed Jordanians work in the public sector. Although the number of public sector jobs as a share of the population is not high relative to other regions,²⁴ it is very high relative to the small number of private sector jobs. That percentage is higher for women, as nearly half of employed women have a public sector job, while the corresponding figure for men is 37 percent (Figure 30). The share of public sector jobs was stable from 2007 to 2016, although it has increased slightly since 2011, particularly for men. Jordan has one of the largest shares of public sector employment in the world. For example, in member countries of the Organization for Economic Cooperation and Development (OECD), only 21 percent of workers are in the public sector.²⁵

The composition of public sector and private sector employment differ in important ways (Figure 31). Public employees are more likely to have tertiary education than their private sector counterparts. However, the gap has declined since 2007, with public sector employees becoming disproportionately more likely to have a secondary education. Public sector employees are also more likely to be in the prime-age group (25 to 49 years), and more likely to be women.

Despite the dramatic growth in the supply of both Jordanian and non-Jordanian workers since 2000, real wages have experienced a significant increase. Although real wages were stagnant during the boom period from 2000 to 2007, paradoxically they started to increase significantly in 2008, as the economy entered a period of low economic growth (Figure 32a). Between 2007 and 2016, real wages for Jordanians increased on average 18.5 percentage points. Between 2007 and 2013, real wages for both Jordanians and non-Jordanians increased by 14 percent on average. Such increases were led by public sector jobs, where real wages for Jordanians increased by 27 percent on average during this period (Figure 32). In contrast, the real wages of Jordanians in the private sector have been stagnant since 2009.

Public sector workers earn significantly higher wages than their private sector counterparts in Jordan. When comparing individuals with similar levels of education, age, and gender, a public sector job pays on average a 21 percent higher salary than one in the private sector (Figure 33). This premium has increased substantially since 2007, when it was just below 6.5 percent. The public sector wage premium is higher for young workers aged 15 to 24 and for those with secondary education. It has increased for workers of different ages, genders, and levels of education. Whereas university graduates working in the public sector earned wages lower than

Figure 30
Public versus private sector jobs



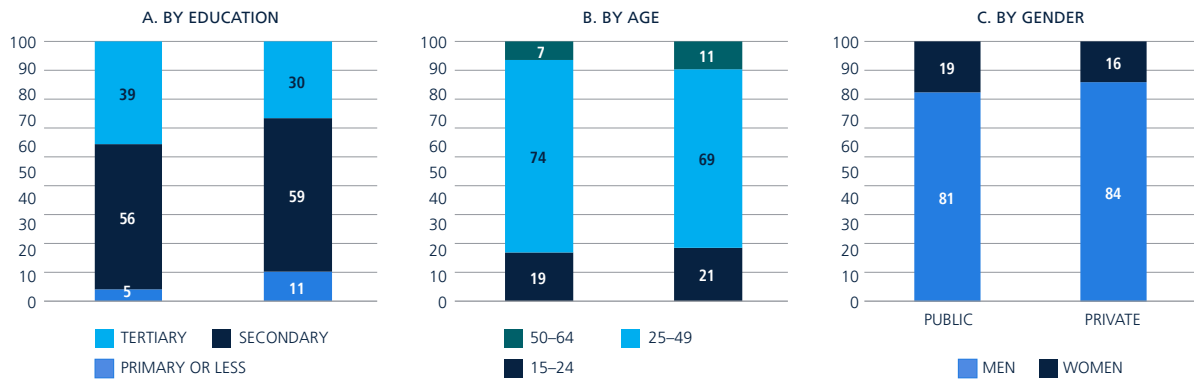
Source: Based on the EUS, 2007–2016.

Note: “Other” includes self-employed workers, employers, and unpaid family workers. The sample is representative of Jordanian citizens only.

²⁴ Baddock, Lang, and Srivastava, 2015.

²⁵ OECD, 2015.

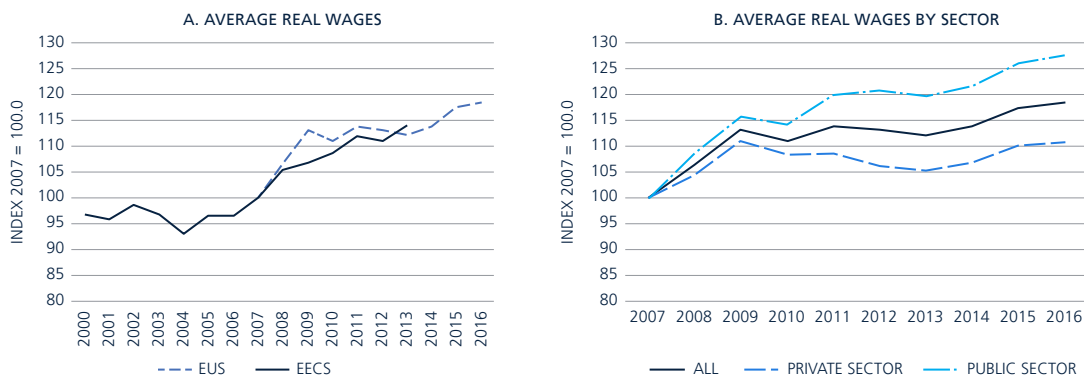
Figure 31
Composition of public and private sector employment, 2016



Source: Based on the EUS, 2016.

Note: The sample excludes self-employed workers, employers, and unpaid family workers. It is representative of Jordanian citizens only.

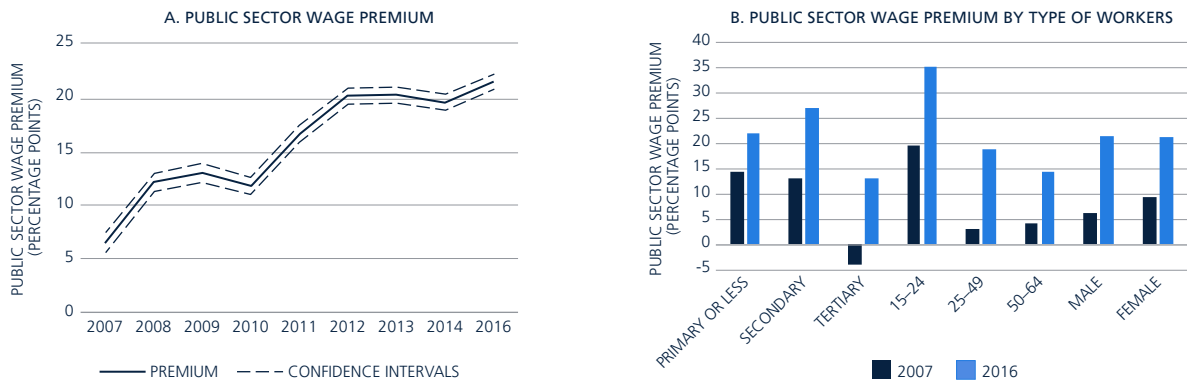
Figure 32
Real wages



Source: Based on data from the EUS and the Employment and Employees' Compensation Survey.

Note: Data from the Employment and Employees' Compensation Survey are representative of all non-agricultural workers, while data from the EUS are representative only of Jordanian citizens. Data from the EUS for 2015 are interpolated using data from 2014 and 2016.

Figure 33
Public sector wage premium



Source: Based on the EUS, 2007-2016.

Note: The sample excludes self-employed workers, employers, and unpaid family workers. Estimates are the coefficients of a Mincer equation estimated using ordinary least squares (OLS). Each line and bar is the coefficient associated with a dummy variable equal to one if the individual has a public sector job. Sample is representative of Jordanian citizens only.

their counterparts in the public sector in 2007, by 2016 the situation had reversed. The fact that public sector jobs pay significantly higher wages and provide more stable working conditions with better benefits could add distortions to the labor market by raising the reservation wage, particularly for youth and middle-skilled workers.

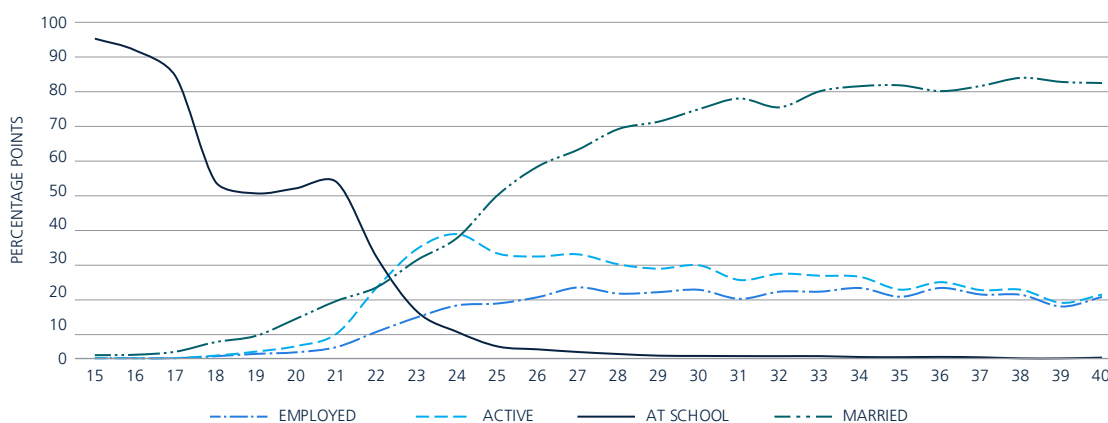
GENDER GAPS

Female labor force participation is one of the lowest in the world, not surprising given the institutional context. According to the Women, Business and the Law report,²⁶ Jordan is one of the countries with the largest number of differences in laws by gender. For example, according to the law, women in Jordan cannot get a job, work the same night hours as men, or travel outside the home without their husband’s permission. Although these laws may not be strictly enforced in practice, their existence nonetheless implies that employment of women could be considered illegal under some circumstances that do not apply to men. This is important, as broader legal differences by gender are strongly linked to poorer labor market outcomes for women. More specifically, countries with larger legal differences by gender also exhibit lower rates of female employment or entrepreneurship.

In addition to laws and regulations, social norms about women’s role in the family are typically important drivers of female labor market outcomes. In Jordan, the fastest changes in women’s activities take place between the ages of 21 and 24 years of age (Figure 34). Around this stage of the life cycle, 45 percent of women leave school, 30 percent enter the labor market, and 19 percent get married. Of those who enter the labor market, less than half find a job (12 percent of all women). Employment rates of women peak at age 27, reaching 21 percent of the female population, and remain relatively stable afterward. Participation rates peak at age 24 and slowly decline every year afterward.

Women get married at a young age (21 years, on average). The age at first marriage in Jordan is young compared with not only developed economies, but also countries at more similar levels of development. For instance, the average age of marriage for women in the United States is currently 28 years.²⁷ Jordanian women’s age at first marriage is comparable with that of women in the United States in the 1970s. In developing economies such as Turkey, Bulgaria, Mexico, and Chile, the age of first marriage for women is about 25 years or older.²⁸ The generational shift in marriage decisions by age in Jordan has been slow (Figure 35).²⁹ Between the generations of women born in 1935 and those born in 1985, the age at first marriage increased by about

Figure 34
School-work-marriage transitions among women, 2016



Source: Based on the EUS, 2016.

Note: The sample includes women aged 15–40 years. It is representative of Jordanian citizens only.

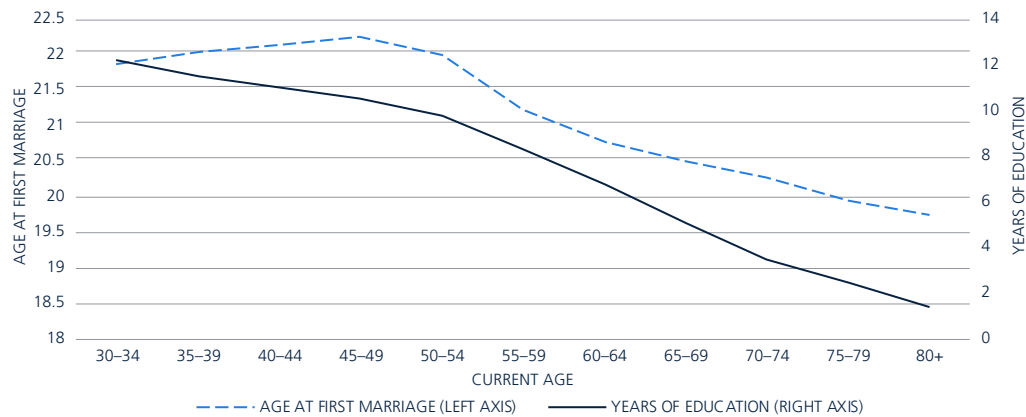
²⁶ World Bank, 2015.

²⁷ <https://www.census.gov/content/dam/Census/library/visualizations/time-series/demo/families-and-households/ms-2.pdf>.

²⁸ https://www.oecd.org/els/family/SF_3_1_Marriage_and_divorce_rates.pdf.

²⁹ The estimated age at first marriage includes non-Jordanians.

Figure 35
Women's age at first marriage and years of education, 2015–2016



Source: Based on the Census of Housing and Population, 2015, and the EUS, 2016.

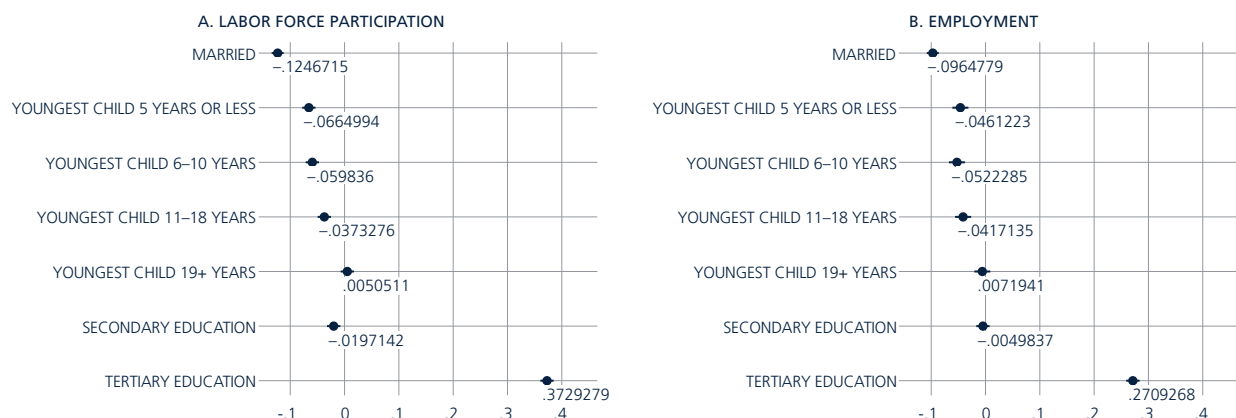
Note: The sample includes women aged 30 years and older. The sample used to compute years of education is representative of Jordanian citizens only.

two years. Such increases, albeit small, were accompanied by significant improvements in women's educational attainment, with the youngest cohort having on average 11 more years of education than the oldest one.

Marital status and educational attainment are important determinants of women's labor market outcomes. When comparing women with similar characteristics, married women are 12.5 and 9.6 percentage points less likely to be in the labor force or employed, respectively, than single women (Figure 36). Although having children is also correlated with a lower likelihood of being in the labor force, the magnitudes are considerably smaller. Women whose youngest child is five years old or less are 6.6 and 4.6 percent less likely, respectively, than women without children to be in the labor force or employed. In contrast, women with a postsecondary diploma are 37 and 27 percent more likely, respectively, than women with primary education or less to participate in the labor market and to be employed. Having secondary education is not linked to better labor market outcomes when compared with those who have primary education or less.

Women outside Amman are in general more likely to participate in the labor market than their counterparts in the capital. But they are no more likely to have a job than their counterparts, except for

Figure 36
Determinants of women's labor force participation and employment, 2016



Source: Based on the EUS, 2016.

Note: The sample includes women aged 15–64 years. Each point is estimated using OLS, with the dependent variables being labor force participation (left) or employment (right), controlling for age and geographic variables. The sample is representative of Jordanian citizens only.

Figure 37
Female labor market outcomes across areas



Source: Based on the EUS, 2016.

Note: The sample includes women aged 15–64 years. Each point is estimated using OLS, with the dependent variables being labor force participation (left) or employment (right), controlling for age, marital status, number of children, and education. The omitted categories are rural areas and Amman. The sample is representative of Jordanian citizens only.

women in the Ma’an and Karak regions, where they are respectively about four and six percentage points more likely to be employed than women in Amman. Women in urban and rural areas of Jordan have similar probabilities of being in the labor force or employed (Figure 37).

Even though monthly wages of men and women have equalized in recent years, they hide important disparities. While women earned wages about five percent lower than those of men in 2007, this difference became statistically insignificant in 2013 (Figure 38a). A Oaxaca-Blinder decomposition exercise showed that, to a large extent, the absence of a gender gap in total wages is driven by the increasing educational attainment of women and their disproportionate concentration in the public sector, where the gender wage gap is basically zero (Figure 38b). In other words, the bars associated with educational attainment (explained) and the sectoral returns (unexplained) are positive and imply that these are two important factors that are narrowing the wage gender gap. In fact, though, when comparing men and women with similar characteristics—such as educational attainment, age, sector of employment, and region—women in 2016 earned wages that were on average 14 percent lower than men’s wages (Figure 38a, lighter blue line). Although this figure does not seem large in comparison with that of other countries—for example, the unconditional gender gap for OECD countries is, on average, 13.8 percent³⁰—it may be driven by other factors. For example, while the estimated wage gender gap in countries with high levels of female employment captures the wage differences between the average female and male workers, in Jordan it may capture the differences between the wage of average male workers and the wage of female workers at the top of the (unobserved) distribution of abilities.

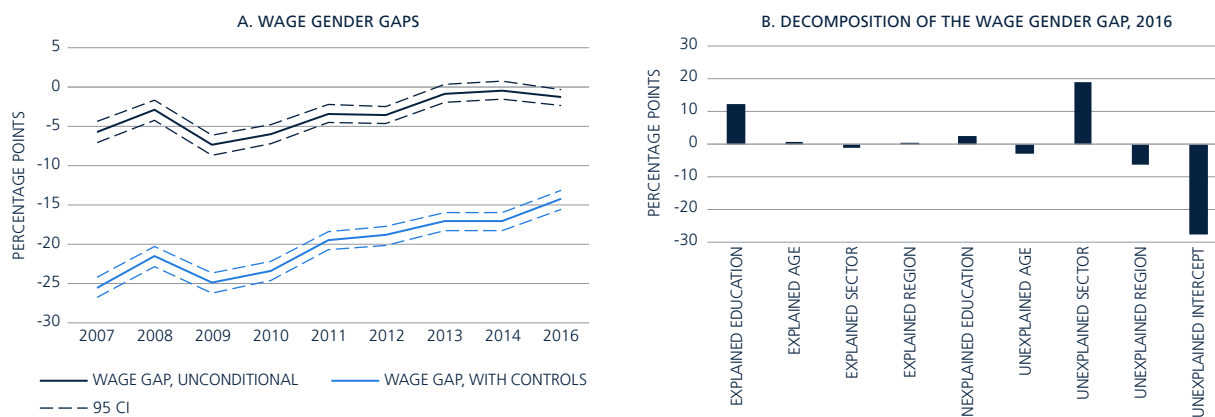
The large gender gaps result from many factors—laws, regulations, and social norms—as well as barriers such as a lack of safe transportation, family planning options, and childcare. Countries that have experienced long-term gains in female labor market outcomes also have experienced improvements on other fronts, such as increased human capital, more gender equality under the law, and less gender-biased social norms.³¹ In Jordan, the significant improvements in education attainment were not accompanied by significant reductions in negative attitudes toward women in the labor force. About 80 percent of the population agrees with the statement that **when jobs are scarce, men should have more right to a job than women** (Figure 39a).³² Jordan is an outlier in comparison with countries that have similar levels of educational attainment, where less than 40 percent of the population agrees with such a statement. As expected, women in Jordan are less likely than men to have negative

³⁰ Source: <https://data.oecd.org/earnwage/gender-wage-gap.htm>.

³¹ Jaumotte, 2003.

³² These results are consistent with those of Diwan et al. [2018].

Figure 38
Wage gender gaps



Source: Based on the EUS, 2007–2016.

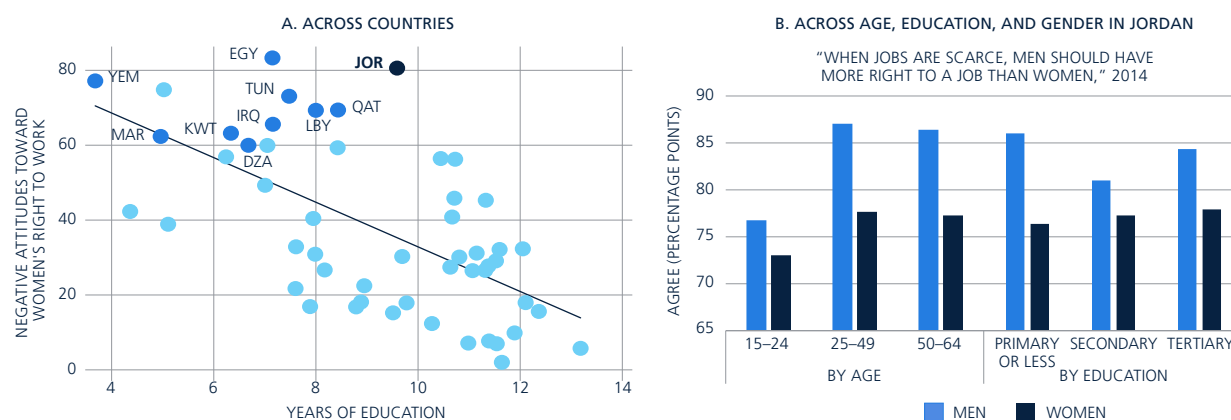
Note: The sample includes individuals aged 15–64 years. Each point is estimated using OLS, with the dependent variable being log monthly wage. The results in panel b come from a standard Oaxaca-Blinder decomposition; the sum of all the bars is the unconditional gender gap. The sample is representative of Jordanian citizens only.

attitudes toward their own labor market inclusion, but not by a large margin (Figure 39a). Moreover, although international evidence shows that in general young and skilled people are more likely to have favorable views about gender equality, in Jordan there are no large differences in attitudes across age or education groups (Figure 39).

The importance of social norms as a factor in the low levels of female labor force participation is confirmed by the recent study, “Understanding How Gender Norms in MNA Impact Female Employment Outcomes.”³³ The study found that although most Jordanian women want to work, social norms seem to matter significantly once they consider more specific practicalities. For example, most men and women agree that husbands are the ultimate decision makers of the household, including about whether their wives should work or not. Most Jordanian men disapprove of married women returning home after 5 PM, and a large fraction of respondents disapprove of women working in mixed-gender environments.

Social norms, and the associated gender gaps, regarding the role of women in the labor market are not reflected in indicators from the education system. Results from the Programme for International Student

Figure 39
Negative attitudes toward women in the labor market

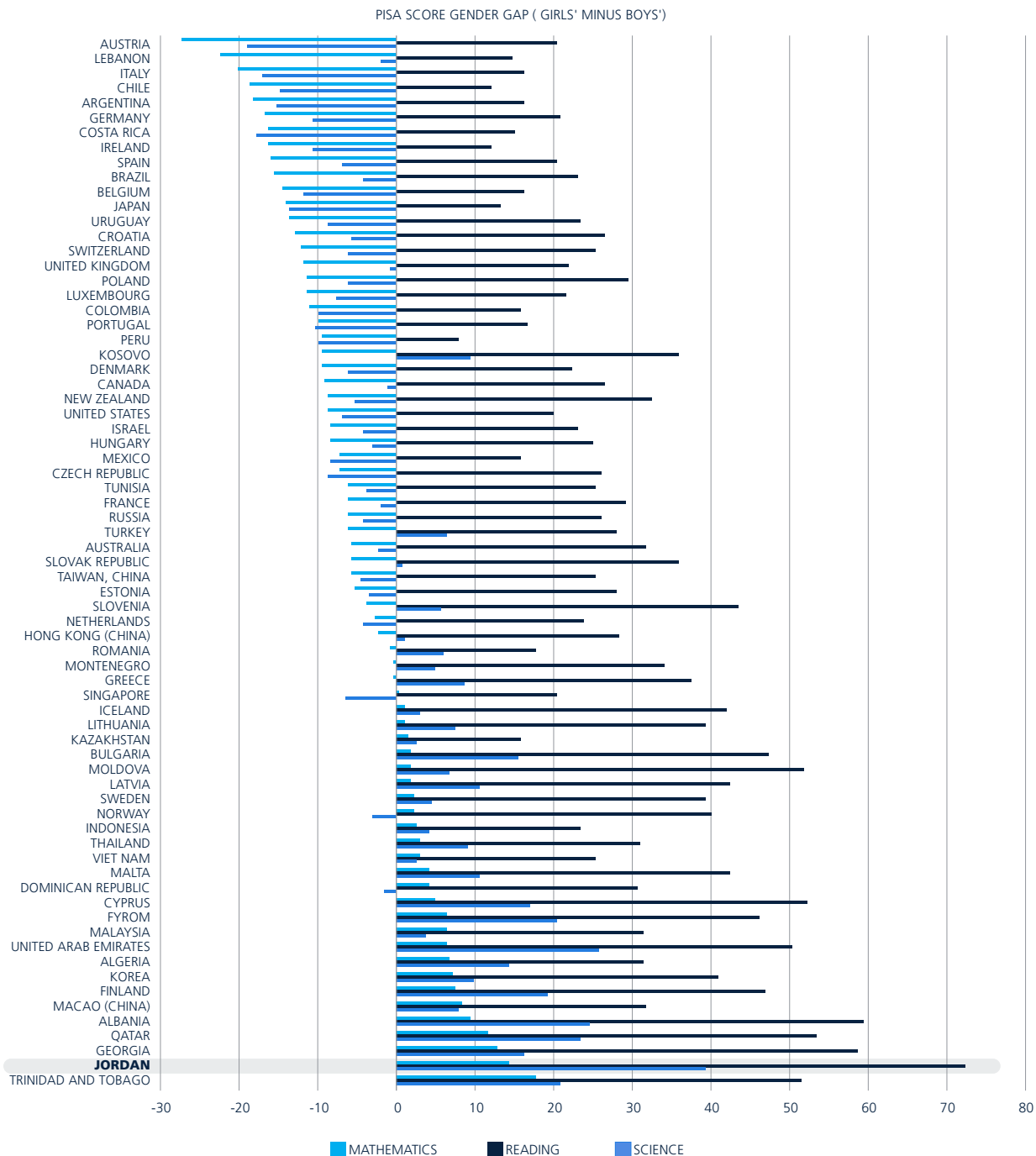


Source: Based on the World Values Survey 2010–2014 (2014 for Jordan), Barro-Lee, and the World Development Indicators.

³³ World Bank, 2018.

Assessment (PISA), which evaluates the quality of education systems around the world by testing the skills and knowledge of 15-year-old students, show a more egalitarian picture across genders. In fact, girls in Jordan achieve significantly higher test scores than boys (Figure 40). In only one other country (Trinidad and Tobago) is the performance of girls higher than in Jordan. Girls in Jordan achieve higher scores than boys not only in reading but also in mathematics and sciences, two fields where boys outperform girls in most of the countries in the sample, even developed ones.

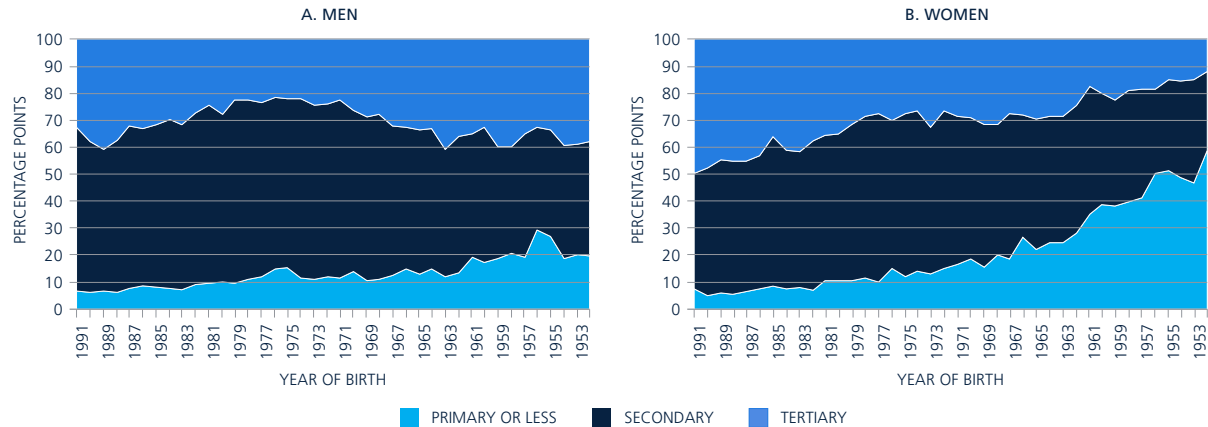
Figure 40
Gender gaps in PISA scores



Source: Based on data from PISA (2015).

Note: The sample includes 15-year-olds. A positive number indicates that girls have higher scores than boys in the corresponding test.

Figure 41
Educational attainment by gender and year of birth, 2016



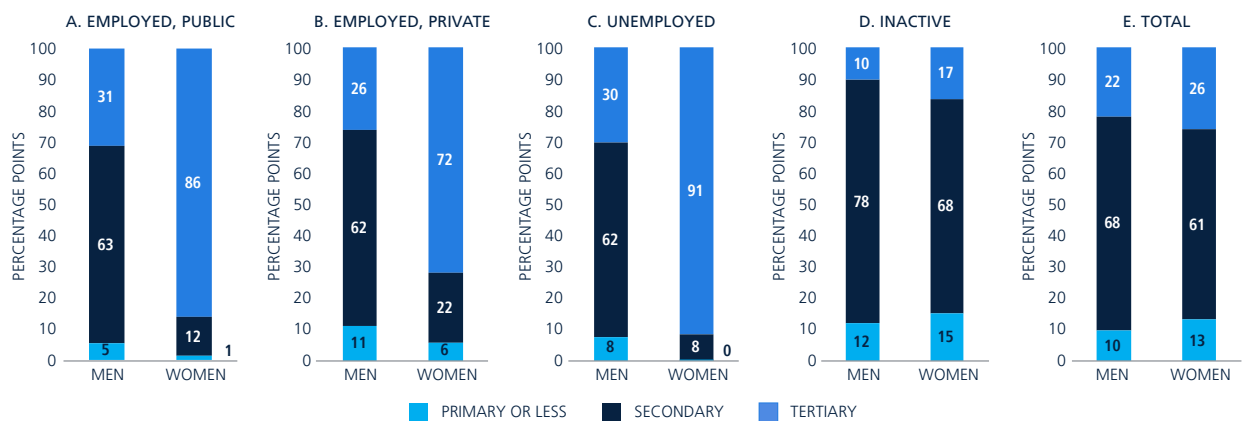
Source: Based on the EUS, 2016.

Note: The sample is representative of Jordanian citizens only.

Accordingly, the educational upgrading witnessed over the past decades was led almost exclusively by women. Whereas 12 percent of women born in 1952 have a tertiary degree, more than 50 percent of women born in 1991 have one. This percentage increased continuously across generations for women (Figure 41b). In contrast, the cohorts of men born between 1952 and 1976 experienced a decline in educational attainment, and the educational upgrading experienced by cohorts born since 1976 has been small (Figure 41b). In fact, the share of men with tertiary education is very similar for cohorts born in the 1950s and cohorts born in the 1990s.

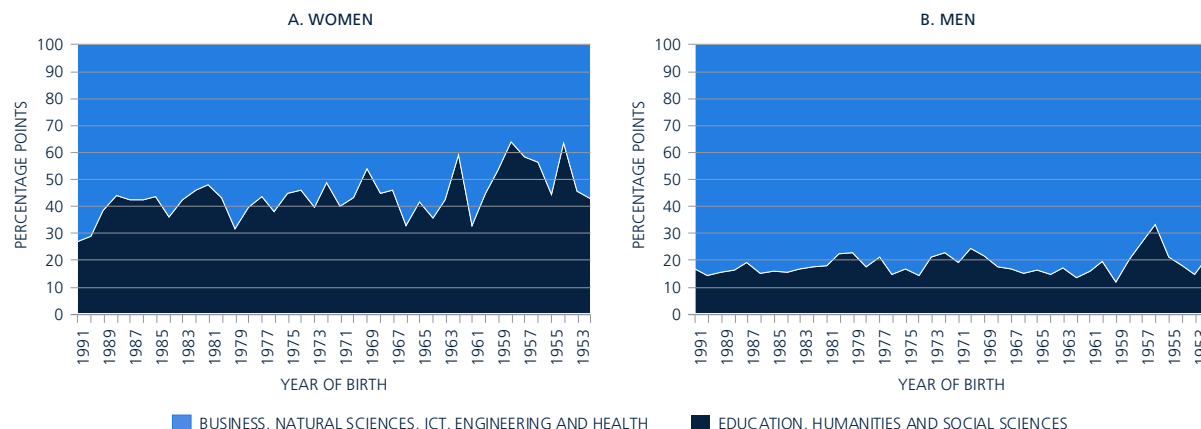
Despite these improvements in educational attainment, highly educated women struggle to find a job. Out of every 10 unemployed women, nine are university graduates (Figure 42b). In contrast, only 30 percent of unemployed men finished college. Among women employed in the public sector, 86 percent have a university degree, while the corresponding figure for men is 31 percent. Women with secondary education or less are largely absent in the public sector, representing only 13 percent of total employment. That percentage is larger in the private sector, with about 28 percent of women having a secondary education or less. In summary, having a college degree seems to be a necessary—but far from sufficient—condition for women to find a job.

Figure 42
Educational structure by gender and labor market status, 2016



Source: Based on the EUS, 2016.

Figure 43
Fields of specialization of postsecondary graduates, 2016



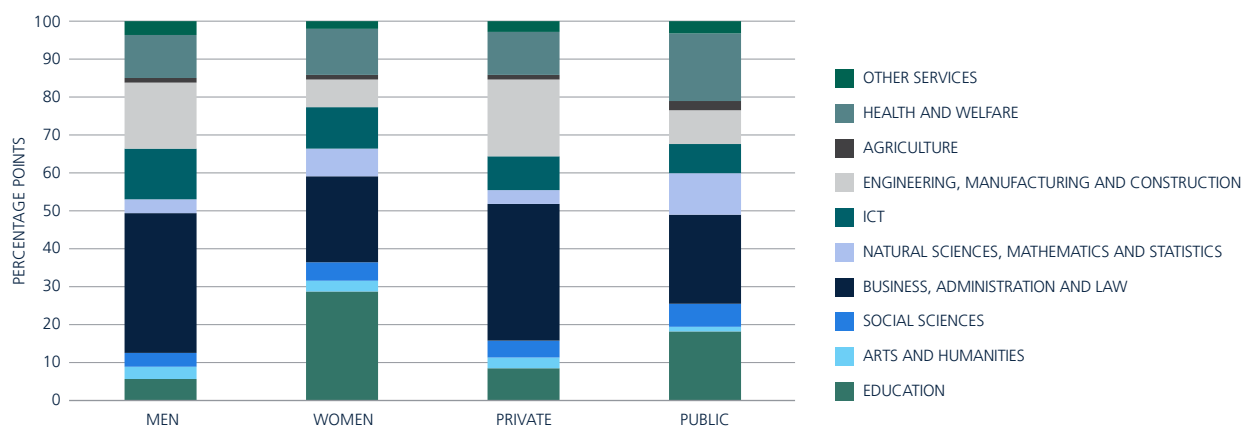
Source: Based on the EUS, 2016.

Note: The sample is representative of Jordanian citizens only.

The high incidence of unemployment among women with a college degree may partly reflect a mismatch between the type of skills acquired and those demanded by employers. In fact, despite the disproportionate improvements in the educational attainment of women with respect to men, important differences remain with respect to the fields of specialization across genders. Women with postsecondary education are more likely to pursue degrees in education, the humanities, and the social sciences than men. The differences are large, with less than 20 percent of men in such fields, while the corresponding figure for women hovers around 40 percent. These gender gaps decline only slightly across generations (Figure 43).

The educational profile of highly educated women to a large extent reflects that of the public sector. While the distribution of women with postsecondary education across fields of specialization mimics that of workers in the public sector, the distribution of men mimics that of workers in the private sector (Figure 44). Women disproportionately pursue degrees that are more in line with jobs in the public sector, such as in education, and are less likely to have degrees in business, administration, and engineering, which are more

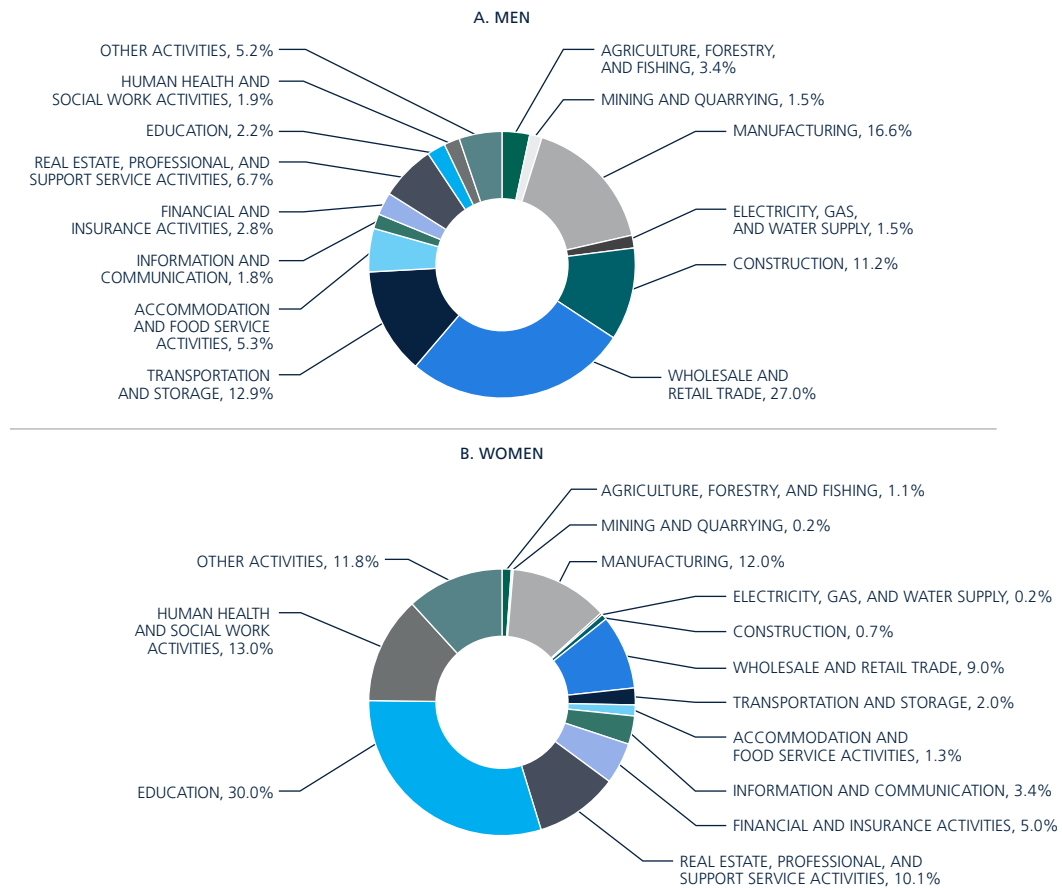
Figure 44
Fields of specialization of postsecondary graduates, by gender and sector



Source: Based on the EUS, 2016.

Note: The sample for men and women includes all individuals aged 25 to 64 years. The sample for private and public sectors includes employed individuals aged 25 to 64 years. The sample is representative of Jordanian citizens only.

Figure 45
Sectoral structure of private sector employment, 2016



Source: Based on the EUS, 2016.

Note: The sample for men and women includes all individuals employed in the private sector, aged 15 to 64 years. It is representative of Jordanian citizens only.

demanding in the private sector. These educational choices may reflect the strong preferences of women for a job in the public sector.

Even among women employed in the private sector, employment patterns mimic very closely the types of jobs of the public sector. For example, almost a third of women in the private sector work in education (Figure 45b). Women in the private sector are more likely than men to work in health services. Unskilled women in the private sector are disproportionately concentrated in domestic services (“other activities”) and manufacturing.

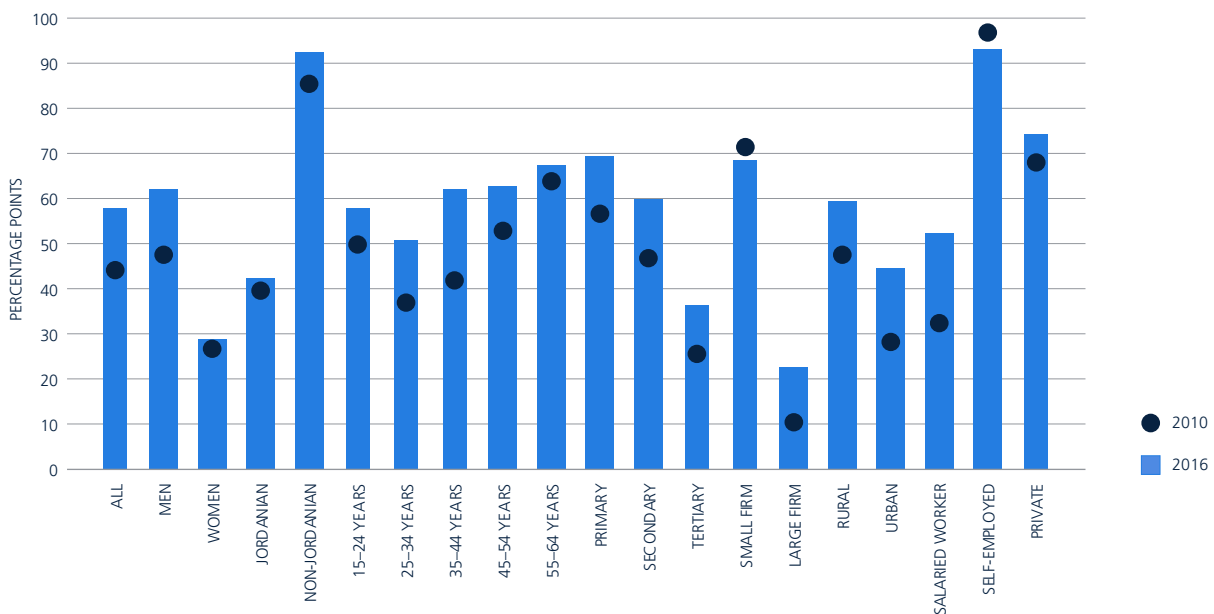
INFORMALITY

Almost 60 percent of workers are informal according to the legal definition. They are not covered by social insurance and thus are not protected against risks such as unemployment, disability, illness, and old-age poverty. Informality rates increased between 2010 and 2016 (Figure 46). Accordingly, informality is nearly universal among non-Jordanian workers and the self-employed, and it is also high among those working in small firms. Women and college graduates, as well as salaried workers living in urban areas, experience the lowest levels of job informality. This situation is largely driven by the levels of social security coverage among public employees, which are the highest. In fact, under the assumption that all state employees have social insurance coverage, Alhawarin and Sewaness (2018) found that informality among Jordanians slightly fell during this period. Nonetheless, informality among Jordanian workers is still significant: more than 40 percent have no coverage against important risks.

Informal workers face not only greater exposure to risks but also lower earnings. On average, an informal worker earns about 15 percent less than a formal worker with the same gender, skills, age, location, and sector of economic activity (table A.1). Their lower earnings often reflect the fact that their jobs have low labor productivity but may also reflect their lower bargaining power. Between 2010 and 2016, however, the informal wage gap shrank as formal workers experienced lower wage growth than their informal counterparts (table A.2).

Gender, age, nationality, and skill are key determinants of informality status, even when comparing workers with otherwise similar characteristics (table A.3). The lower informality rates of women are partly driven by their concentration in the public sector, as the gender gap decreases by half when comparing workers in the same sector. Workers in manufacturing, utilities, and other services have lower rates of informality than the rest, while rates are higher in wholesale and retail trade, as well as in transport, hotels, and restaurants. Finally, there is some geographic dispersion in informality, with most regions exhibiting lower rates of informality than Amman, when comparing workers with the same characteristics. However, geographic variables add very little explanatory power to the model.

Figure 46
Incidence of informality, 2010–2016



Source: Based on the JLMPS, 2010–2016.

Note: Informality is defined as working without social insurance coverage.

BOX 2: SOCIAL SECURITY REFORMS OF 2010–2014

Between 2010 and 2014, the Jordanian government introduced several reforms to the social security system, aiming to increase coverage of micro and small firms, delaying the retirement age, improving the financial sustainability of the system, and providing maternity leave for female workers.

Alhawarin and Sewaness (2018) analyzed the evolution of social security coverage among Jordanian workers [that is, excluding non-Jordanians] during this period to shed light on the impacts of the reforms. Although the JLMPS shows a decline in social security coverage, the authors claim that coverage increases once all workers in state-run activities are classified as covered. New labor market entrants, however, are increasingly more likely to work in informal jobs.

Although it is difficult to disentangle the impacts of the reforms due to the lack of an appropriate research design, it is important to mention that some aspects of the reform, such as extending coverage to small firms, increasing contributions, and offering maternity leave may have some unintended consequences and hurt certain groups the policy aims to benefit. In particular, some of these reforms could be particularly burdensome for small firms with low productivity levels, which typically provide employment opportunities to more vulnerable workers. In fact, empirical evidence for other countries shows that this could be the case. For example, Colombia dramatically increased payroll tax rates over the 1980s and 1990s [from 35.5 percent to 51.5 percent]. The evidence suggests that a 10 percent increase in payroll taxes lowered formal employment by between four and five percent.^a In contrast, Sweden implemented a large and long-lasting employer payroll tax rate cut from 31 percent down to 15 percent for young workers. Effects on the employment rate of the treated young workers were positive, about two to three percentage points. These effects were stronger in credit-constrained firms.^b

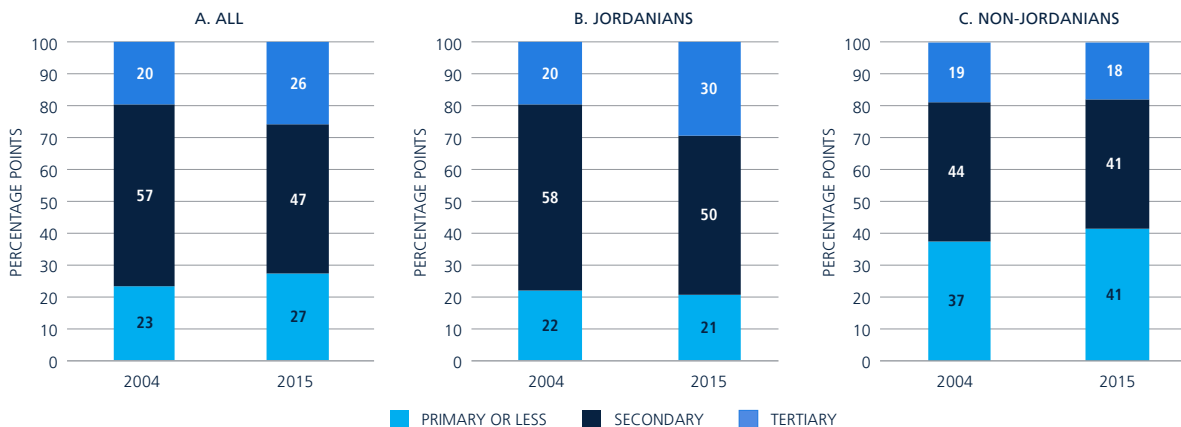
a. Kugler and Kugler (2009).

b. Saez, Schoefer, and Seim (2017).

SKILLS AND WAGES

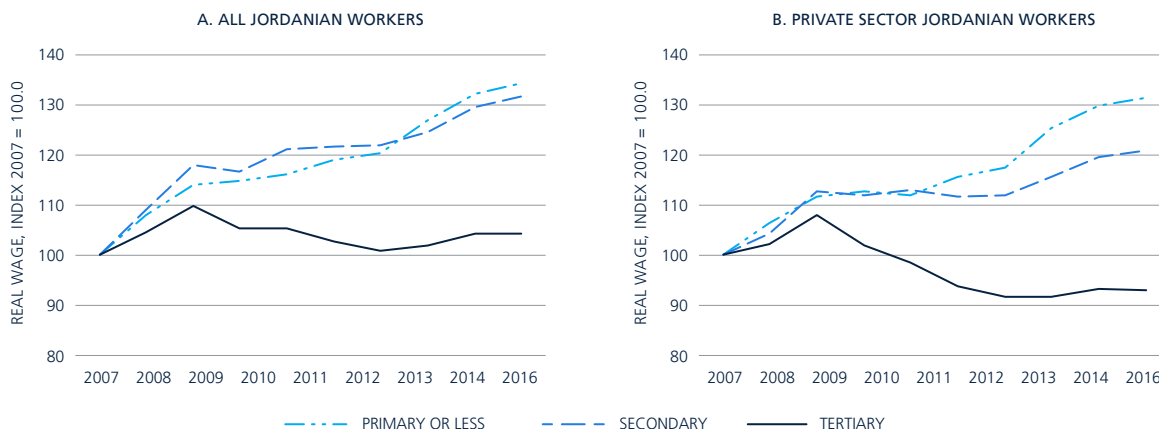
Despite dramatic improvements in the educational attainment of Jordanians over recent decades, large inflows of non-Jordanians have helped expand the stock of unskilled labor. From 2004 to 2015, the share of Jordanians older than 15 with postsecondary education increased by about 10 percentage points, reaching 30 percent of the population (Figure 47). Although the educational structure of non-Jordanians remained stable during the period, the fact that their share of the population increased by about 20 percentage

Figure 47
Educational structure by nationality, 2004 and 2015



Source: Based on data from the Population and Housing Census, 2004, 2015, Jordanian Department of Statistics.

Figure 48
Real wage index, by educational attainment



Source: Based on the EUS, 2007–2016.

Note: The sample includes individuals aged 15–64 years. It is representative of Jordanian citizens only. Real wages for 2015 are interpolated using data for 2014 and 2016.

points implies that the overall skills supply became more polarized. In other words, from 2004 to 2015 the working-age population became more concentrated in both high- and low-skilled workers, with the share of middle-skilled people declining by about 10 percentage points.

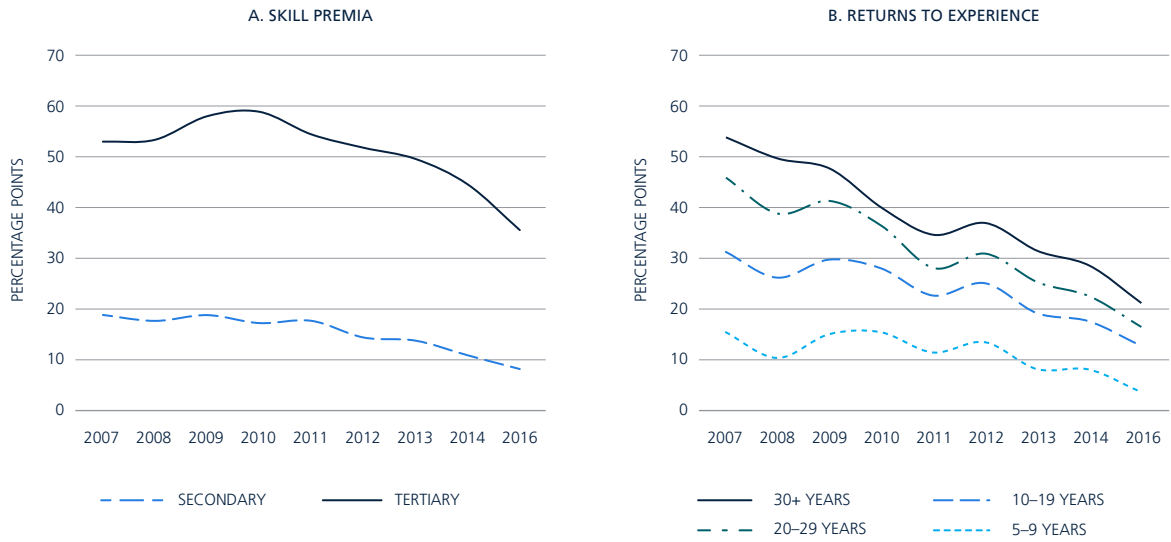
Real wage data suggest that the demand for skilled workers did not keep up with the increasing supply. In fact, average real wages for workers with postsecondary education declined since 2009, particularly in the private sector (Figure 48). In 2016, a skilled private sector worker earned an average wage that was 14 percent lower in real terms than in 2009. In contrast, real wages increased substantially for less skilled workers, particularly for those in the private sector with primary education or less. Despite the large increase in the supply of non-Jordanian unskilled workers during this period, the demand for low-skilled workers seemed to have increased even more.

The wage skill premium in the private sector declined even after controlling for other socioeconomic factors. Whereas in 2009 a private sector worker with tertiary education earned wages 50 percent higher than those of workers with primary education or less, by 2016 that figure had declined to 27 percent (Figure 49a). The wage skill premium associated with secondary education in the private sector also fell by half during this period. The wage compression experienced by Jordanian workers also manifested itself through an across-the-board decline in the returns to experience. For example, in 2007 private sector workers with 30 years of experience or more earned wages 54 percent higher than those with less than five years of experience; by 2016 they made only 23.8 percent more.

The worsening labor market conditions faced by skilled workers are also evident when looking at employment outcomes. Even though employment rates declined for all education groups since 2000, the drop was larger for those with tertiary education (Figure 50). Skilled workers witnessed a decline in their employment rate of 7.5 percentage points, compared with declines of 4.8 and 2.8 percentage points experienced by those with primary and secondary education, respectively. Skilled workers also experienced a disproportionate increase in unemployment and inactivity during the period.

Beyond diplomas, jobs in the private sector require specific skills that may or may not be taught in the formal educational system. An analysis of the skill content of jobs in Jordan shows that whereas women’s jobs focus more intensely on non-routine analytical and interpersonal tasks, men’s jobs focus more intensely on routine and non-routine manual tasks (Figure 51). To a large extent, these differences also reflect different educational levels. While those with at least a college degree have jobs that are intense in non-routine analytical

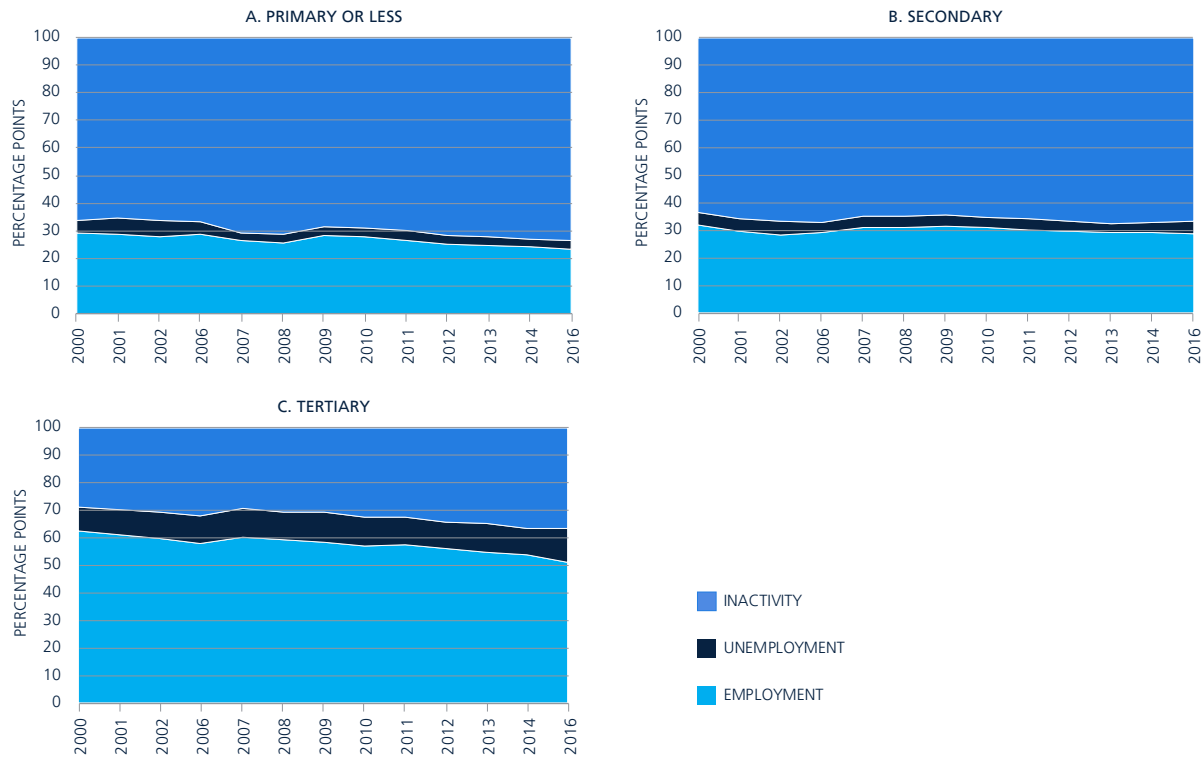
Figure 49
Wage premia by education and experience in the private sector



Source: Based on the EUS, 2007–2016.

Note: The sample includes individuals aged 15–64 years working in the private sector. It is representative of Jordanian citizens only. Each line shows the coefficients associated with the education and experience dummy variables. The dependent variable is log wage. All coefficients are statistically significant at the one percent level. Other control variables include the task content of occupations, gender, industry, and location. Experience is equal to age minus years of education minus 6.

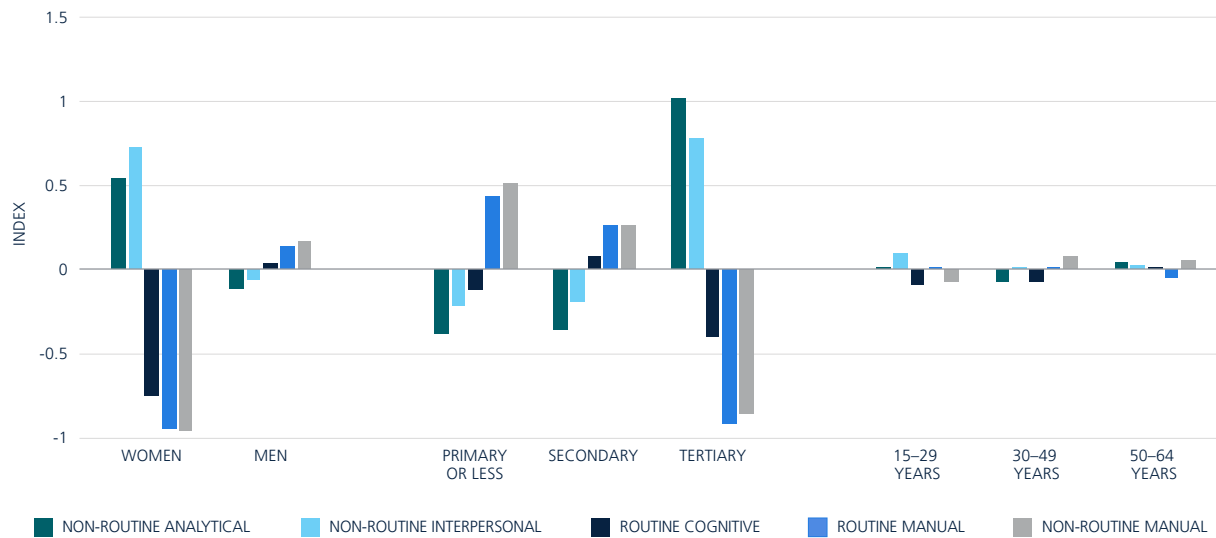
Figure 50
Labor market status, by education



Source: Based on the EUS, 2000–2016.

Note: The sample includes individuals aged 15–64 years. It is representative of Jordanian citizens only.

Figure 51
The task content of private sector jobs, 2016



Source: Based on the EUS, 2016.

Note: The sample includes individuals aged 15–64 years. It is representative only of Jordanian citizens working in the private sector. Because of a change in the occupational classification from 2009 to 2010 (from ISCO88 to ISCO08), the series are joined by assuming that the rate of growth in the index from 2009 to 2011 is equal to the rate of growth from 2010 to 2011. The methodology is based on Autor and Dorn (2013), Acemoglu and Autor (2011), and Hardy et al. (2015). The indexes are standardized to have a mean of zero and a standard deviation of 1. They show the task intensity of an occupation relative to the mean.

and interpersonal tasks, those with lower levels of education are more specialized in manual tasks. Workers with secondary education have jobs with a higher content of routine cognitive tasks. In contrast, there are no large differences in the task content of jobs across age groups. Table 1 displays examples of occupations with a high content of each task.

Table 1
Examples of occupations with high levels of task intensity

Non-routine cognitive	Non-routine interpersonal	Routine cognitive	Routine manual	Non-routine manual
Mathematicians, actuaries, and statisticians	Business services and administration managers	Tellers, money collectors, and related clerks	Mining and mineral processing plant operators	Mobile plant operators
Physical and earth science professionals	Managing directors and chief executives	Client information workers	Assemblers	Car, van and motorcycle drivers
University and higher education teachers	Medicine associate professionals	Secretaries	Metal processing and finishing plant operators	Mining and construction laborers
Business services and administration managers	Primary school and early childhood teachers	General office clerks	Chemical and photographic products plant and machine operators	Heavy truck and bus drivers
Administration professionals	Production managers in agriculture, forestry and fisheries	Keyboard operators	Building frame and related trades workers	Machinery mechanics and repairers

Source: Based on ISCO 08 classification.

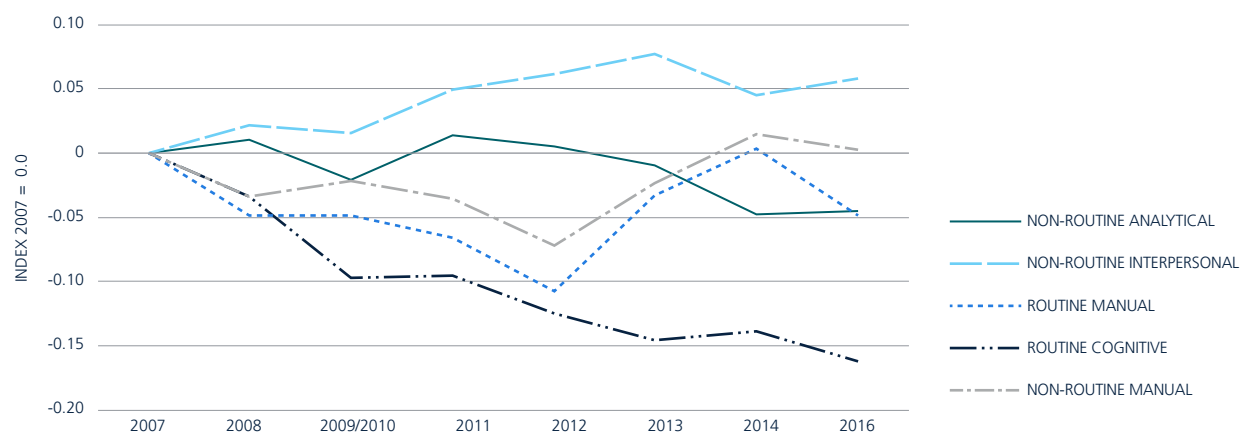
Many developed and developing economies have experienced labor market polarization, as the share of middle-wage jobs declined while those of low- and high-wage jobs increased.³⁴ Since middle-wage jobs are typically intensive in routine tasks, this phenomenon has been linked to skill-biased technological change. Routine tasks are more easily substituted by new technologies, whereas non-routine jobs tend to complement such technologies. At the same time, displaced routine workers are more likely to compete for low-skill manual jobs than for higher-skill occupations.³⁵

Evidence of polarization in the labor market in Jordan is mixed. On the one hand, jobs became more concentrated on non-routine interpersonal tasks and less concentrated on routine cognitive tasks, which tends to be polarizing. On the other hand, the non-routine cognitive task intensity index has been stable over the past 10 years, and although manual task intensity declined from 2007 to 2012, it has increased since then (Figure 52).

The increase in the intensity of jobs in non-routine interpersonal tasks is driven by women, workers aged 29 or younger, and those with tertiary education. Trends in the task intensity of jobs are very clear for skilled new entrants to the labor market, as people in the 15 to 29 year age group and those with at least tertiary education are increasingly more likely to have jobs that are intensive in interpersonal tasks and less intensive in routine cognitive tasks (Figure 53 and Figure 54). Among older groups, the only clear pattern is a decline in the intensity of routine cognitive tasks. The main drivers of these changes, however, seem to be women, since the changes in the task content of jobs have been negligible for men (Figure 55).

The decline in the wage returns to high-order skills in the private sector reflects a weak demand for such skills. When comparing workers with the same education, age, economic activity, and location, women in occupations with a high content of non-routine interpersonal and routine cognitive tasks earn higher wages than their counterparts (Figure 56a). The situation is the opposite for male workers, as those who do non-routine cognitive tasks earn higher wages. Changes in the returns to the task content of jobs in the private sector reflect relative changes in demand and supply. The results suggest that the returns to manual tasks for both men and women increased more than the returns to non-routine cognitive and interpersonal tasks (Figure 56). The decline in the returns to non-routine cognitive and interpersonal tasks may reflect the large increase in the supply of

Figure 52
The task content of private sector jobs, 2007–2016



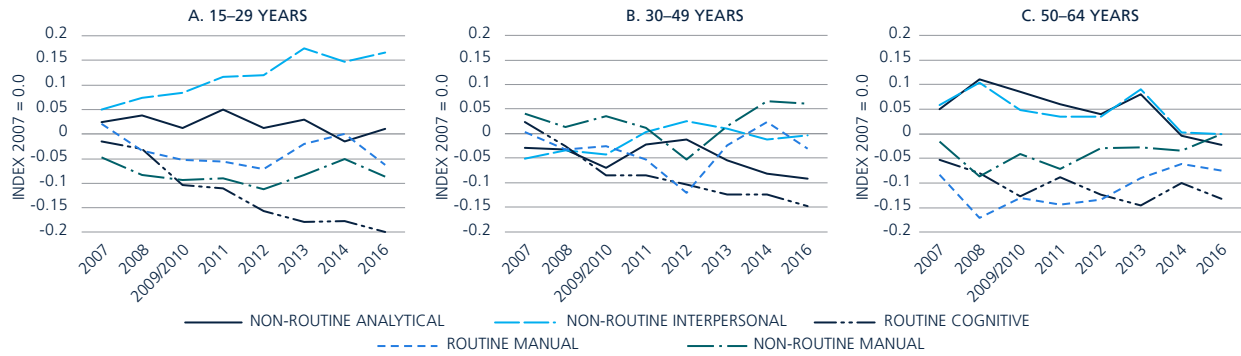
Source: Based on the EUS, 2007–2016.

Note: The sample includes individuals aged 15–64 years. It is representative only of Jordanian citizens working in the private sector. Because of a change in the occupational classification from 2009 to 2010 (from ISCO88 to ISCO08), the series are joined by assuming that the rate of growth in the index from 2009 to 2011 is equal to the rate of growth from 2010 to 2011. The methodology is based on Autor and Dorn (2013), Acemoglu and Autor (2011), and Hardy et al. (2015).

³⁴ World Bank Group, 2016.

³⁵ Autor, 2014.

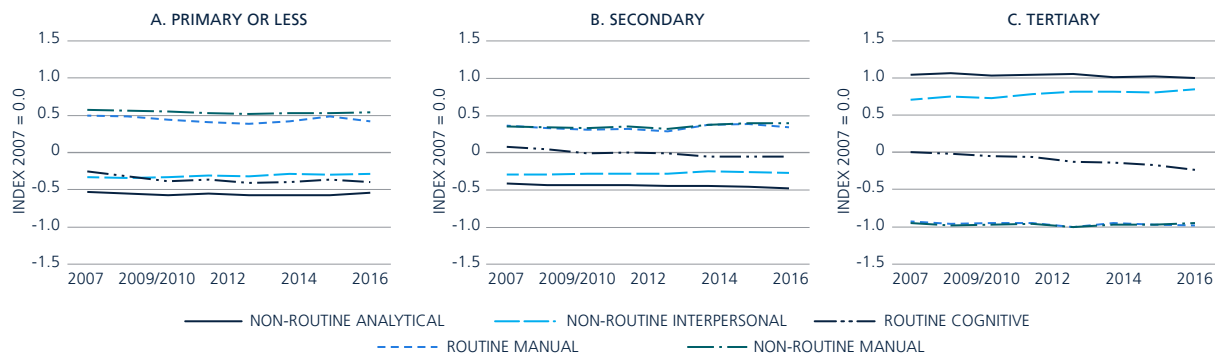
Figure 53
The task content of private sector jobs, by age group



Source: Based on the EUS, 2007–2016.

Note: The sample includes individuals aged 15–64 years. It is representative only of Jordanian citizens working in the private sector. Because of a change in the occupational classification from 2009 to 2010 (from ISCO88 to ISCO08), the series are joined by assuming that the rate of growth in the index from 2009 to 2011 is equal to the rate of growth from 2010 to 2011. The methodology is based on Autor and Dorn (2013), Acemoglu and Autor (2011), and Hardy et al. (2015).

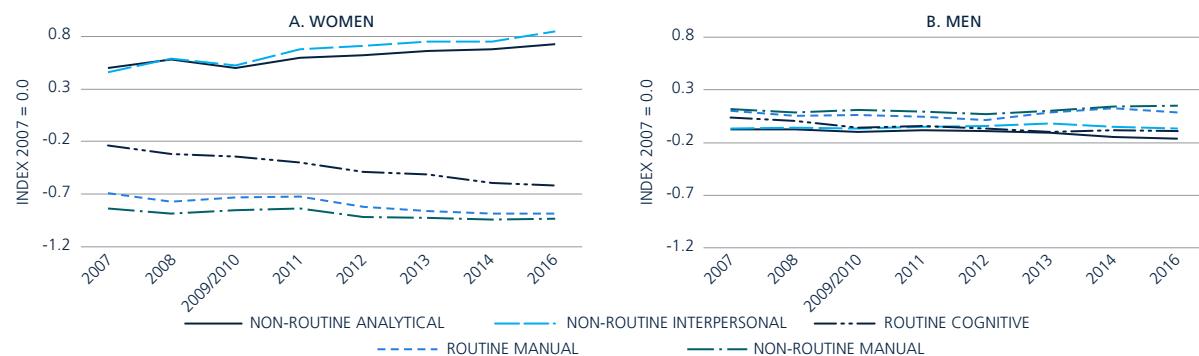
Figure 54
The task content of private sector jobs by educational attainment



Source: Based on the EUS, 2007–2016.

Note: The sample includes individuals aged 15–64 years. It is representative only of Jordanian citizens working in the private sector. Because of a change in the occupational classification from 2009 to 2010 (from ISCO88 to ISCO08), the series are joined by assuming that the rate of growth in the index from 2009 to 2011 is equal to the growth from 2010 to 2011. The methodology is based on Autor and Dorn (2013), Acemoglu and Autor (2011), and Hardy et al. (2015).

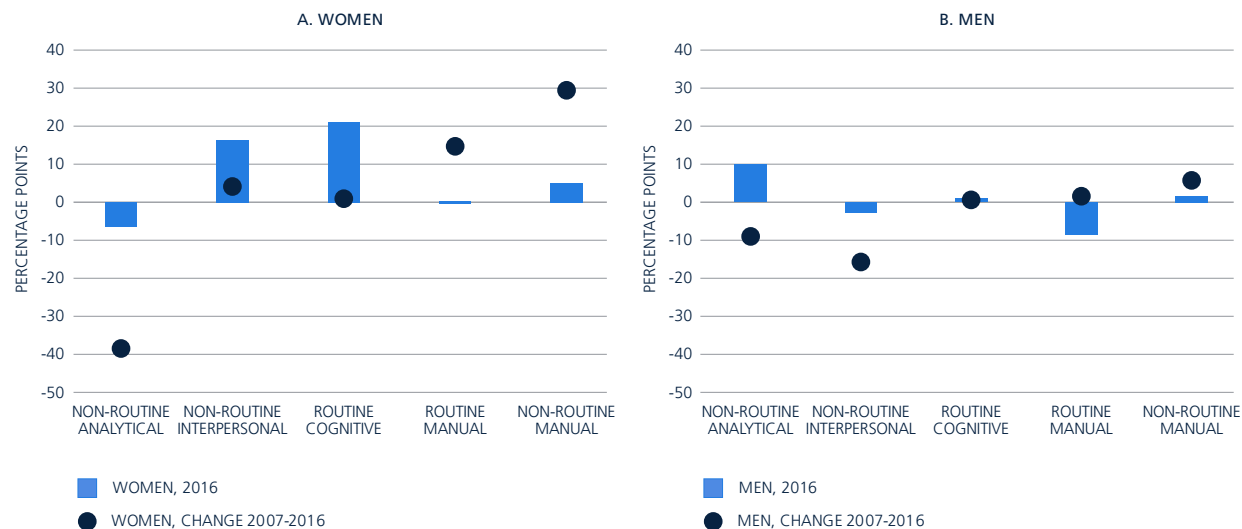
Figure 55
The task content of private sector jobs, by gender



Source: Based on the EUS, 2007–2016.

Note: The sample includes individuals aged 15–64 years. It is representative only of Jordanian citizens working in the private sector. Because of a change in the occupational classification from 2009 to 2010 (from ISCO88 to ISCO08), the series are joined by assuming that the rate of growth in the index from 2009 to 2011 is equal to the rate of growth from 2010 to 2011. The methodology is based on Autor and Dorn (2013), Acemoglu and Autor (2011), and Hardy et al. (2015).

Figure 56
Wage returns to tasks in the private sector, 2016 and 2007–2016 change



Source: Based on the EUS, 2007 and 2016.

Note: The sample includes individuals aged 15–64 years. It is representative only of Jordanian citizens working in the private sector. Returns are estimated using a Mincer equation with log wage as a dependent variable. Each bar is the coefficient associated with a dummy variable equal to one if the task content of the occupation is in the top tercile. Control variables include age, education, industry, and area.

female workers with these skills during this period. The relative stability of the wage returns to routine cognitive tasks for men and women suggests that both the demand for and the supply of these skills are declining at roughly similar rates. Finally, the increasing returns to manual tasks, particularly among women, may reflect that workers willing to take on these jobs are becoming relatively scarce.

JORDANIAN WORKERS ABROAD

Jordan has the unique characteristic of being both a migrant-receiving and a migrant-sending country.

According to some estimates, more than 400,000 Jordanians live in the GCC countries, the main destination of Jordanian emigrants.³⁶ Most of these workers have middle- to high-skilled occupations.³⁷ Although data on Jordanian workers in GCC countries are not available, data on Jordanians living in a sample of 87 countries suggest that almost half of them have postsecondary education and that 55 percent of them are employed (Figure 57). In contrast, only 30 percent of Jordanians living in Jordan have postsecondary education and only 33 percent are employed.³⁸

Migration inflows and outflows in part reflect the dynamics of the underlying supply and demand for skills. The increasing supply of Jordanian skilled workers has been accompanied by a decline in both the returns to skills and the employment rates of skilled workers. The increasing supply of non-Jordanian unskilled workers was accompanied by a relative increase in their wages, which suggests a disproportionate increase in demand for unskilled workers. The increase in skilled Jordanian emigrant flows is in part a result of the low demand for skilled labor.

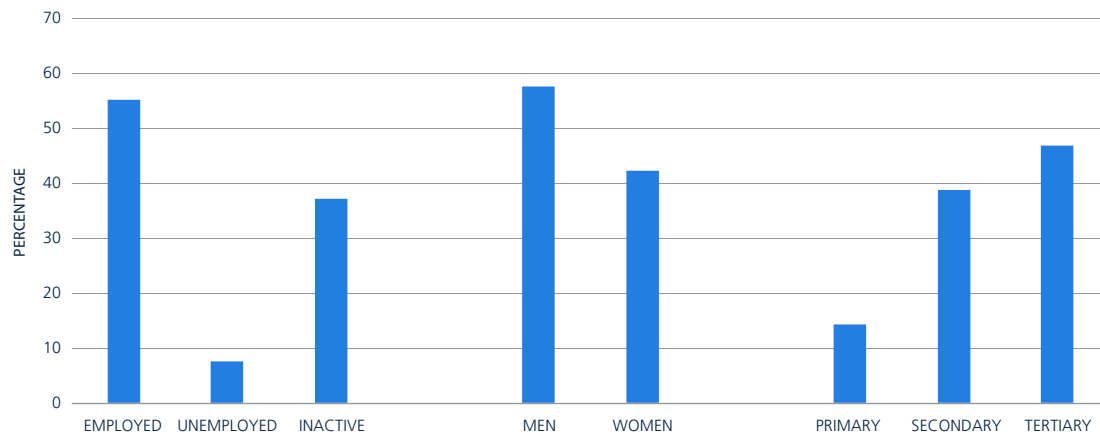
The large size of the Jordanian diaspora may affect the supply of workers indirectly through remittances. If individuals with family members abroad receive an increasingly high share of income through this channel, their reservation wage and their likelihood to drop out of the labor force may increase. There is

³⁶ Migration Policy Institute, 2013.

³⁷ Olwan, 2010.

³⁸ Census of Population, 2015.

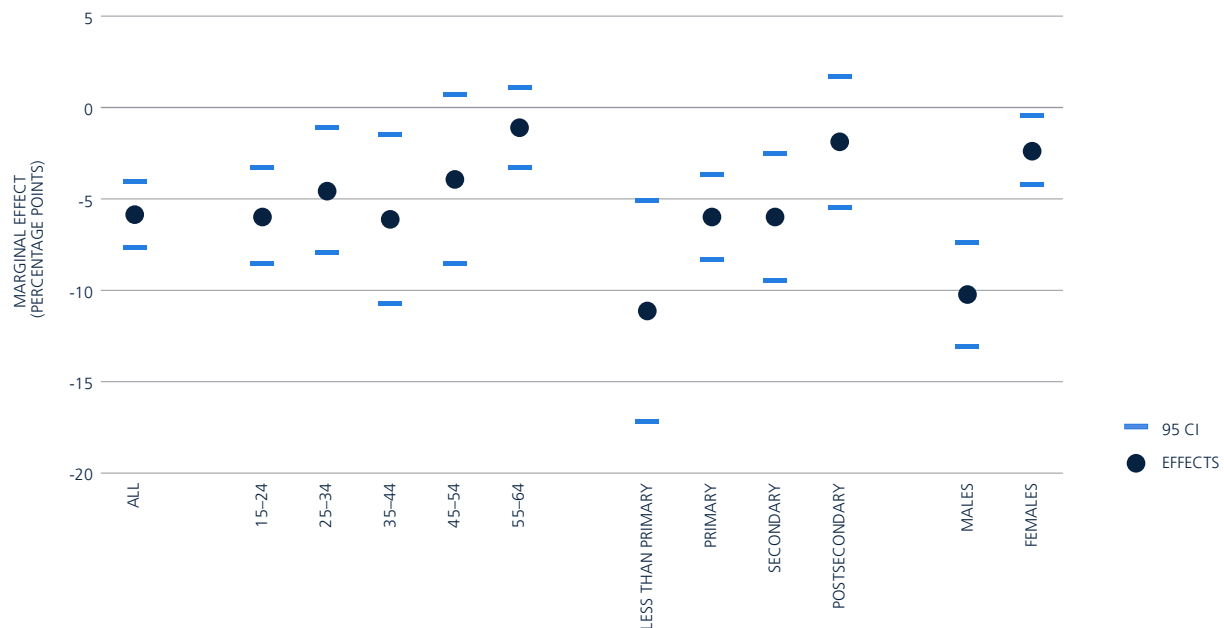
Figure 57
 Characteristics of Jordanians living abroad, 2010



Source: Based on DIOC-E, 2010, which contains population census data for 87 countries (it does not contain data on GCC countries as receiving countries).

some empirical evidence supporting this claim.³⁹ In particular, individuals who receive remittances are almost six percentage points less likely to participate in the labor force than their peers who do not receive remittances (Figure 58). The negative impacts are stronger for younger, less educated, and male workers. This decline in the supply of unskilled Jordanian workers further contributes to their scarcity. It is important to mention the caveat that these results may be affected by omitted variables bias if, for example, people with low labor market opportunities are more likely to send relatives abroad.

Figure 58
 Labor force participation and remittances



Source: Based on HEIS (2010).

Note: Estimated using OLS. The dependent variable is the probability of being employed or unemployed (in percentage points). Each red dot represents the differential probability in labor force participation between individuals who receive and do not receive remittances. Controls include age, gender, education, and marital status.

³⁹ Emilsson, 2011.

EMPLOYMENT DYNAMICS

The aggregate stagnant employment rates reflect the inability of the economy to generate jobs not only for new labor market entrants, but also for workers who lose their jobs. Longitudinal data for 2010–2016 show that only half of people who were unemployed in 2010 found a job in 2016, while the other half either remained unemployed or became inactive (Figure 59). Both employment and inactivity are largely absorbing states, since most workers with either status in 2010 retained that status in 2016. A conditional analysis shows that the flows from employment and unemployment to inactivity are mostly driven by female, older, and unskilled workers (see table A.1). In contrast, those who move from inactivity to employment are more likely to be male college graduates aged 34 or younger.

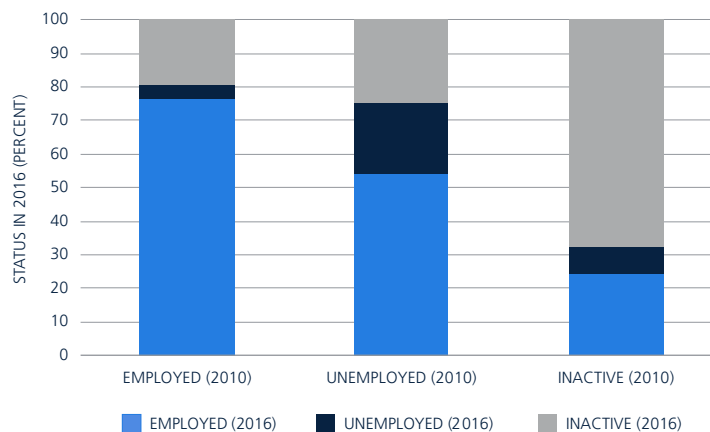
Labor market transitions also confirm the severity of the public-private labor market segmentation.

Most public sector workers, regardless of age or gender, remain in the public sector and only a minority of them move to the private sector (Figure 60). This is especially true among women aged 35 years or more and men aged 34 years or less. This may reflect strong preferences for the stability and benefits of jobs in the public sector. In addition to the existence of a large and increasing public sector wage premium (see Figure 33), jobs in the public sector tend to provide more protection against unemployment. This is reflected in the transitions to joblessness for workers in the public and private sectors. Public sector jobs seem to provide a more stable option for male workers in their late 20s, since the probability of becoming jobless is much lower than that faced by their peers in the private sector (Figure 61). In contrast, the probability of becoming jobless is rather similar for older men in either private or public sector jobs. The situation is markedly different for women, since regardless of their age, the probability of becoming unemployed or inactive is significantly lower for those holding a job in the public sector. Whereas 60 percent of women in the private sector aged 35 to 44 years do not have a job six years later, only 20 percent of their peers in the public sector face the same situation. A conditional analysis shows that the flows from the private to the public sector are driven by Jordanian workers aged 54 years or younger, and rather proportionately across genders (see table A.2, column 2). In contrast, women and those with tertiary education in the public sector are more likely to remain in the public sector than their peers.

Transition patterns across formal-informal jobs reflect not only that barriers exist but also that the informal sector is an employer of last resort.

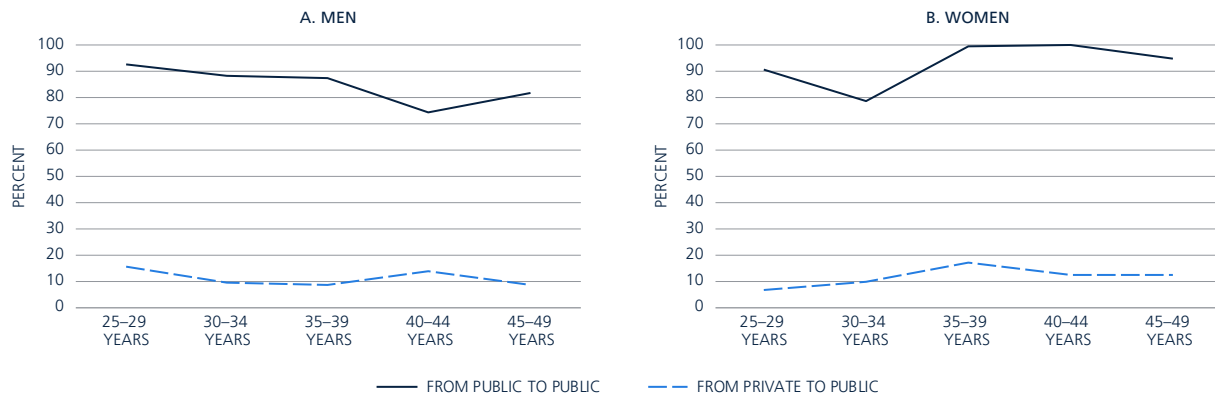
Almost 60 percent of informal workers in 2010 remained in the sector in 2016 (Figure 62). In addition, of those who changed status, less than half found a job in the private sector and the majority became unemployed or inactive. Formal workers are also likely to be formal workers six years later. In contrast, workers who were either inactive or unemployed in 2010 were slightly more likely to get a job in the formal sector than to remain jobless in 2016. Only one out of four workers without a job in 2010 found a job in the informal sector in 2016. Flows from joblessness to informality are mostly driven by unskilled

Figure 59
Labor market status, transitions, 2010–2016



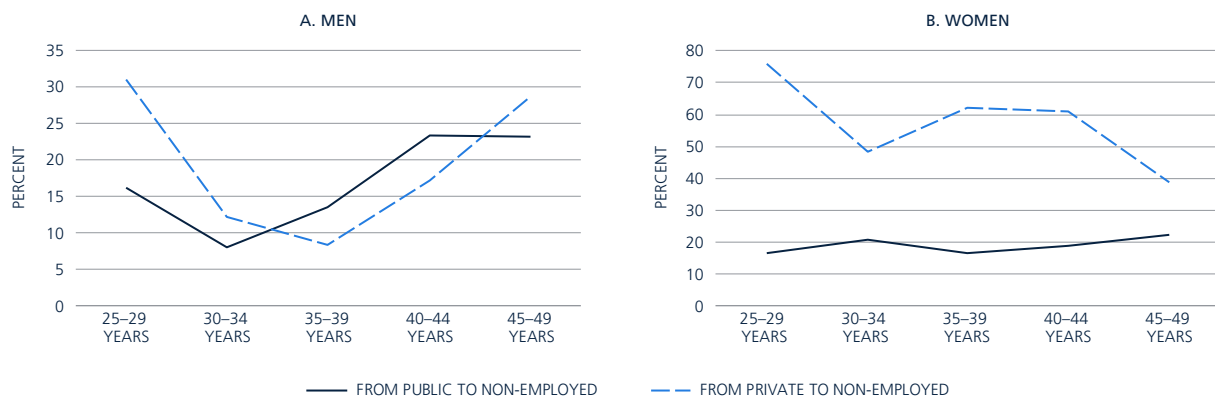
Source: Based on the JMLPS, 2010–2016.

Figure 60
Public-private employment transitions



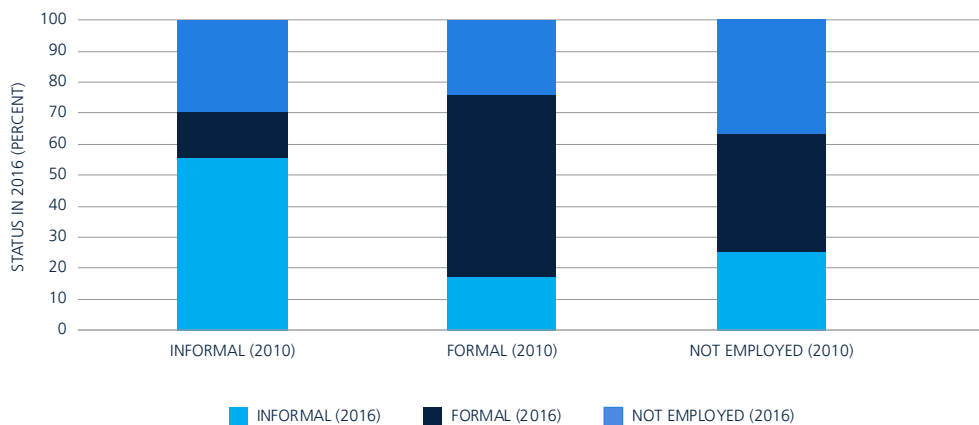
Source: Based on the JMLPS, 2010–2016.

Figure 61
Transitions to joblessness by public-private employment



Source: Based on the JMLPS, 2010–2016.

Figure 61
Informal-formal labor market transitions



Source: Based on the JMLPS, 2010–2016.

young men (see table A.6). Young men are also more likely to transition from joblessness or informality to the formal sector than are women and older workers. Those with tertiary education are more likely than their peers to move from joblessness to formality and to stay in the formal sector. Individuals with secondary education are less likely to stay in the informal sector than those with tertiary or primary education. However, they are more likely to move to joblessness than to the formal sector.

Finally, longitudinal data confirm the finding that the wage structure has compressed significantly since 2010. An analysis of individual wage growth determinants show that wages increased at a lower rate among men, those with tertiary education and formal workers (see table A.2). These factors contributed to reduce wage inequality, as these groups have relatively higher wages than the rest. These data also confirm the increase in the public sector wage premium. In particular, wages increased 18 percent more in the public sector than in the private sector from 2010 to 2016, when comparing individuals with the same observable characteristics. Individual and job characteristics account for most of the wage growth explained by the model; regional disparities account for a negligible fraction.

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ANNEX

Table A.1
Public-private employment transitions

	(1)	(2) ln(wage)	(3)
Informal	-0.170*** (0.0166)	-0.149*** (0.0169)	-0.150*** (0.0170)
Women	-0.242*** (0.0202)	-0.259*** (0.0204)	-0.260*** (0.0204)
Non-Jordanian	-0.237*** (0.0183)	-0.209*** (0.0192)	-0.217*** (0.0194)
35–44 years	0.119*** (0.0161)	0.121*** (0.0161)	0.119*** (0.0161)
45–54 years	0.0939*** (0.0197)	0.112*** (0.0203)	0.120*** (0.0203)
55–64 years	0.171*** (0.0430)	0.181*** (0.0436)	0.182*** (0.0434)
Secondary	0.140*** (0.0190)	0.145*** (0.0191)	0.138*** (0.0192)
Tertiary	0.276*** (0.0168)	0.277*** (0.0171)	0.283*** (0.0171)
Manufacturing	0 0	0.172*** (0.0331)	0.142*** (0.0342)
Utilities	0 0	0.221** (0.0924)	0.201** (0.0920)
Construction	0 0	0.165*** (0.0463)	0.141*** (0.0465)
Wholesale and retail	0 0	0.0497 (0.0328)	0.0107 (0.0335)
Transport, hotel, and restaurants	0 0	0.102** (0.0408)	0.0584 (0.0416)
Other services	0 0	0.163*** (0.0287)	0.122*** (0.0294)

	(1)	(2) ln(wage)	(3)
Rural	0	0	0.0136
	0	0	(0.0229)
Balqa	0	0	-0.131***
	0	0	(0.0272)
Zarqa	0	0	-0.0886***
	0	0	(0.0227)
Madaba	0	0	-0.209***
	0	0	(0.0473)
Irbid	0	0	0.00742
	0	0	(0.0196)
Ma'raq	0	0	-0.00642
	0	0	(0.0336)
Jarash	0	0	0.0680
	0	0	(0.0459)
Ajloun	0	0	0.00700
	0	0	(0.0499)
Karak	0	0	-0.0648*
	0	0	(0.0382)
Tafleeh	0	0	0.0399
	0	0	(0.0669)
Ma'an	0	0	-0.0289
	0	0	(0.0576)
Aqaba	0	0	0.137***
	0	0	(0.0463)
Constant	6.923***	6.772***	6.819***
	(0.0144)	(0.0312)	(0.0398)
Observations	4,850	4,798	4,798
R-squared	0.188	0.193	0.205

Standard errors in parentheses.

*** p < 0.01, ** p < 0.05, * p < 0.1

Source: Based on the JLMPS, 2010–2016.

Table A.2
Determinants of labor market transitions

	(1)	(2)	(3)
	Wage growth (log)		
Female	0.168*** (0.0532)	0.104* (0.0576)	0.0994* (0.0578)
Non-Jordanian	0.134 (0.0983)	0.0154 (0.117)	0.0431 (0.117)
35–44 years	0.0566 (0.0430)	0.0270 (0.0432)	0.0296 (0.0433)
45–54 years	0.153*** (0.0518)	0.0794 (0.0531)	0.0917* (0.0540)
55–64 years	-0.0246 (0.0932)	-0.0592 (0.0942)	-0.0237 (0.0947)
Secondary	0.0198 (0.0541)	0.0418 (0.0542)	0.0580 (0.0545)
Tertiary	-0.184*** (0.0439)	-0.238*** (0.0476)	-0.225*** (0.0482)
Formal	-0.192*** (0.0580)	-0.170*** (0.0630)	-0.187*** (0.0633)
Public sector	0.179*** (0.0441)	0.214*** (0.0725)	0.171** (0.0748)
Sector fixed effects	NO	YES	YES
Governorate fixed effects	NO	NO	YES
Observations	1,514	1,514	1,514
R-squared	0.042	0.083	0.095

Standard errors in parentheses.
*** p < 0.01, ** p < 0.05, * p < 0.1

Source: Based on the JLMPS, 2010–2016.

Table A.3
Public-private employment transitions

	(1)	(2) Pr(Informal=1)	(3)
Female	-0.124*** (0.0172)	-0.0624*** (0.0168)	-0.0560*** (0.0167)
Non-Jordanian	0.449*** (0.0120)	0.419*** (0.0125)	0.405*** (0.0126)
35–44 years	0.0385*** (0.0126)	0.0301** (0.0122)	0.0284** (0.0120)
45–54 years	0.0671*** (0.0151)	0.0549*** (0.0149)	0.0526*** (0.0148)
55–64 years	0.178*** (0.0273)	0.0994*** (0.0267)	0.0836*** (0.0264)
Secondary	-0.0468*** (0.0152)	-0.0255* (0.0147)	-0.0380*** (0.0146)
Tertiary	-0.208*** (0.0130)	-0.165*** (0.0129)	-0.179*** (0.0129)
Manufacturing	0 0	-0.130*** (0.0249)	-0.162*** (0.0255)
Utilities	0 0	-0.198*** (0.0740)	-0.206*** (0.0731)
Construction	0 0	0.0207 (0.0257)	-0.00799 (0.0259)
Wholesale and retail	0 0	0.0586** (0.0237)	0.0296 (0.0241)
Transport, hotel, and restaurants	0 0	0.0986*** (0.0286)	0.0609** (0.0290)
Other services	0 0	-0.221*** (0.0216)	-0.243*** (0.0219)
Rural	0 0	0 0	0.0638*** (0.0181)
Balqa	0	0	-0.0994***

	(1)	(2)	(3)
		Pr(Informal=1)	
	0	0	(0.0208)
Zarqa	0	0	-0.0977***
	0	0	(0.0162)
Madaba	0	0	-0.151***
	0	0	(0.0382)
Irbid	0	0	-0.0892***
	0	0	(0.0147)
Ma'raq	0	0	-0.0839***
	0	0	(0.0251)
Jarash	0	0	-0.0576*
	0	0	(0.0335)
Ajloun	0	0	-0.110***
	0	0	(0.0398)
Karak	0	0	-0.0877***
	0	0	(0.0309)
Tafleeh	0	0	-0.0433
	0	0	(0.0556)
Ma'an	0	0	-0.126***
	0	0	(0.0463)
Aqaba	0	0	-0.338***
	0	0	(0.0361)
Constant	0.497***	0.594***	0.632***
	(0.0102)	(0.0222)	(0.0289)
Observations	6,112	6,051	6,051
R-squared	0.279	0.334	0.353

Standard errors in parentheses.

*** p < 0.01, ** p < 0.05, * p < 0.1

Source: Based on the JLMPS, 2010–2016.

Table A.4
Informality wage premium, 2016

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Employed (2010) to employed (2016)	Employed (2010) to unemployed (2016)	Employed (2010) to inactive (2016)	Unemployed (2010) to employed (2016)	Unemployed (2010) to unemployed (2016)	Unemployed (2010) to inactive (2016)	Inactive (2010) to employed (2016)	Inactive (2010) to unemployed (2016)	Inactive (2010) to inactive (2016)
Female	-0.310***	-0.00885	0.319***	-0.444***	0.0743	0.370***	-0.486***	0.0143	0.471***
	(0.0209)	(0.00953)	(0.0196)	(0.0547)	(0.0471)	(0.0485)	(0.0147)	(0.0113)	(0.0156)
Non-Jordanian	-0.0408	-0.0126	0.0534	-0.462***	0.532***	-0.0699	-0.0767**	-0.0396	0.116***
	(0.0384)	(0.0175)	(0.0360)	(0.132)	(0.114)	(0.117)	(0.0318)	(0.0244)	(0.0337)
35–44 years	0.0332*	-0.0242***	-0.00893	-0.0354	-0.0259	0.0612	-0.0727***	-0.0917***	0.164***
	(0.0193)	(0.00882)	(0.0181)	(0.0554)	(0.0478)	(0.0492)	(0.0160)	(0.0123)	(0.0169)
45–54 years	-0.100***	-0.0276***	0.128***	-0.180**	-0.0562	0.237***	-0.0615***	-0.105***	0.167***
	(0.0208)	(0.00948)	(0.0195)	(0.0703)	(0.0606)	(0.0624)	(0.0148)	(0.0114)	(0.0158)
55–64 years	-0.354***	-0.0360***	0.390***	-0.661***	-0.137	0.797***	-0.172***	-0.117***	0.289***
	(0.0274)	(0.0125)	(0.0257)	(0.108)	(0.0931)	(0.0959)	(0.0176)	(0.0135)	(0.0186)
Secondary	-0.0114	-0.0210**	0.0325	-0.0910	-0.00337	0.0944	-0.00421	-0.0173	0.0215
	(0.0219)	(0.0100)	(0.0206)	(0.0658)	(0.0567)	(0.0584)	(0.0165)	(0.0127)	(0.0175)
Tertiary	0.149***	-0.00759	-0.142***	0.0297	0.0852*	-0.115**	0.181***	0.0672***	-0.248***
	(0.0178)	(0.00811)	(0.0167)	(0.0559)	(0.0482)	(0.0496)	(0.0133)	(0.0102)	(0.0141)
Constant	0.791***	0.0644***	0.145***	0.747***	0.141***	0.112***	0.591***	0.103***	0.306***
	(0.0162)	(0.00740)	(0.0152)	(0.0397)	(0.0342)	(0.0352)	(0.0169)	(0.0130)	(0.0180)
Observations	2,914	2,914	2,914	436	436	436	3,196	3,196	3,196
R-squared	0.133	0.007	0.160	0.205	0.080	0.225	0.386	0.069	0.429

Standard errors in parentheses.

*** p < 0.01, ** p < 0.05, * p < 0.1

Source: Based on the JLMPS, 2010–2016.

Table A.5
Wage growth, OLS estimates

	(1)	(2)
	Public (2010) to public (2016)	Private (2010) to public (2016)
Female	0.0714**	0.0216
	(0.0286)	(0.0357)
Non-Jordanian	0.0662	-0.0887**
	(0.140)	(0.0398)
35–44 years	-0.0398*	0.00320
	(0.0240)	(0.0243)
45–54 years	-0.0373	-0.0300
	(0.0285)	(0.0260)
55–64 years	-0.0968*	-0.0867**
	(0.0552)	(0.0380)
Secondary	0.0516*	0.0128
	(0.0305)	(0.0280)
Tertiary	0.0615**	0.0241
	(0.0239)	(0.0232)
Constant	0.847***	0.110***
	(0.0207)	(0.0199)
Observations	1,094	947
R-squared	0.021	0.015

Standard errors in parentheses.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Source: Based on the JLMPS, 2010–2016.

Table A.6
Informality determinants, OLS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Informal (2010) to informal (2016)	Informal (2010) to formal (2016)	Informal (2010) to unemployed (2016)	Formal (2010) to informal (2016)	Formal (2010) to formal (2016)	Formal (2010) to unemployed (2016)	Unemployed (2010) to informal (2016)	Unemployed (2010) to formal (2016)	Unemployed (2010) to unemployed (2016)
Female	-0.377***	-0.113***	0.491***	-0.109***	-0.0985***	0.208***	-0.226***	-0.269***	0.495***
	(0.0493)	(0.0358)	(0.0437)	(0.0226)	(0.0290)	(0.0243)	(0.0101)	(0.0121)	(0.0133)
Non-Jordanian	0.135**	-0.186***	0.0516	0.201**	-0.122	-0.0723	0.0219	-0.113***	0.103***
	(0.0547)	(0.0398)	(0.0485)	(0.0894)	(0.115)	(0.0961)	(0.0238)	(0.0285)	(0.0316)
35–44 years	0.135***	-0.0559*	-0.0793**	0.00444	-0.00144	-0.00219	-0.0545***	-0.0309**	0.0752***
	(0.0403)	(0.0293)	(0.0357)	(0.0209)	(0.0268)	(0.0225)	(0.0117)	(0.0141)	(0.0156)
45–54 years	0.0894**	-0.138***	0.0463	-0.0287	-0.106***	0.135***	-0.0932***	0.00389	0.0757***
	(0.0419)	(0.0304)	(0.0371)	(0.0232)	(0.0297)	(0.0249)	(0.0111)	(0.0133)	(0.0147)
55–64 years	-0.0954*	-0.162***	0.255***	-0.0834**	-0.334***	0.416***	-0.0871***	-0.119***	0.197***
	(0.0521)	(0.0379)	(0.0461)	(0.0334)	(0.0428)	(0.0359)	(0.0133)	(0.0159)	(0.0176)
Secondary	-0.163***	0.0193	0.145***	0.0420*	0.0507	-0.0909***	-0.00548	0.0127	0.0112
	(0.0430)	(0.0312)	(0.0381)	(0.0251)	(0.0322)	(0.0270)	(0.0123)	(0.0148)	(0.0164)
Tertiary	-0.0216	0.0425	-0.0191	-0.000279	0.199***	-0.195***	-0.0375***	0.220***	-0.169***
	(0.0407)	(0.0296)	(0.0360)	(0.0198)	(0.0254)	(0.0213)	(0.00968)	(0.0116)	(0.0128)
Constant	0.563***	0.241***	0.195***	0.196***	0.567***	0.230***	0.312***	0.294***	0.383***
	(0.0327)	(0.0237)	(0.0289)	(0.0182)	(0.0234)	(0.0196)	(0.0114)	(0.0136)	(0.0151)
Observations	946	946	946	1,898	1,898	1,898	3,632	3,632	3,632
R-squared	0.100	0.054	0.165	0.023	0.062	0.121	0.154	0.265	0.380

Standard errors in parentheses.

*** p < 0.01, ** p < 0.05, * p < 0.1

Source: Based on the JLMPS, 2010–2016.



3. FIRMS

SUMMARY

A snapshot of the private sector in Jordan is a static one. Low rates of entry and exit suggest that the Schumpeterian process of creative destruction is limited or non-existent. Most private sector firms are either very small—and tend to stay small—or large and old. The presence of small firms is disproportionately large in services, in particular in hotels and restaurants. Although the share of small firms in total employment has declined, this was mostly driven by them becoming smaller on average.

Several forces seem to have produced this scenario. First, the unfriendly business environment does not generate the right incentives for new firms to enter the market, grow, and create jobs. This environment is colored by a mix of factors, some of them external and some internal. The geopolitical situation of the region and associated disruptions to trade, transport, and investor confidence is a major limiting factor. However, internal issues matter as well. Poor access to finance may contribute to capital misallocation, with credit decisions being based on firm age and size rather than on growth prospects. Consistent with this hypothesis are the facts that the private sector is disproportionately concentrated in sectors with low capital intensity and that access to credit is consistently identified as one of the main barriers in business surveys. Second, the large presence of state-owned enterprises (SOEs) may crowd out private sector companies in key sectors such as manufacturing, construction, and personal services. SOEs account for 0.15 percent of firms but about 30 percent of employment outside the public administration. By limiting the role of competition in efficiency, they may add distortions not only to the labor market, but also to the market of products and services.

FIRM DEMOGRAPHY

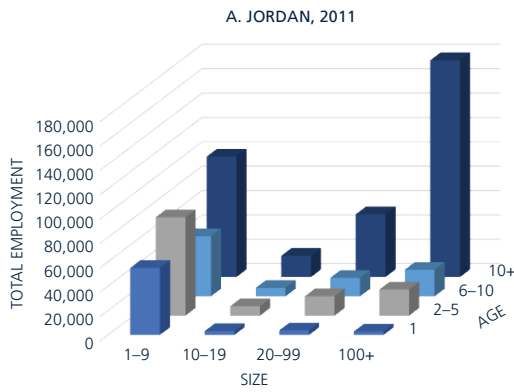
The distribution of employment in the private sector is concentrated among old and large, and very small firms (Figure 63). Micro firms constitute the majority of firms in Jordan and provide half of private sector employment.⁴⁰ The prevalence of small firms is also large when compared with other developing countries such as Georgia or Vietnam, where small firms represent a much smaller share of total employment, but it is smaller than that of Bangladesh. The role of medium and large firms that are young—which tend to be the largest contributors to job creation in other developing countries, among firms that survive⁴¹—is also small when compared with other economies. This may suggest that small and young firms face higher barriers to growth than in other countries. Bottlenecks that may prevent firms from growing may be related to regulations and to lack of access to economic resources, among other factors. Eliminating these bottlenecks would help spur firm growth and thereby growth in the share of medium and large firms.

Services account for more than 80 percent of formal firms with fewer than 20 employees (Figure 64a). This is consistent with empirical evidence mentioned in previous chapters showing that the sector's large size and low labor productivity contribute to explaining the productivity gap between Jordan and comparator countries. Although manufacturing firms represent less than 20 percent of small firms, they represent about 40 percent of firms with 50 employees or more. Firms in the non-manufacturing industry sector (that is mining, construction, and utilities) represent a negligible fraction of all firms, regardless of size. Within services, hotels and restaurants represent almost 80 percent of formal firms that have 19 employees or fewer, and about a third of formal firms

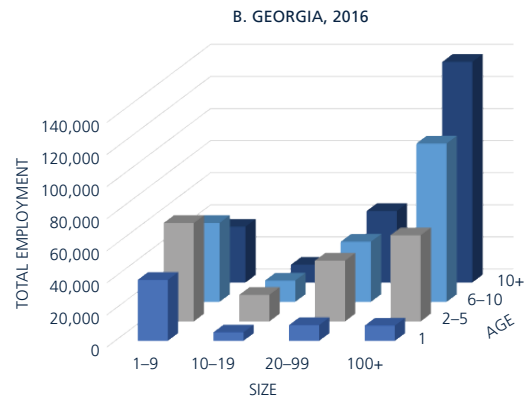
⁴⁰ World Bank, 2016.

⁴¹ Rijkers et al., 2014.

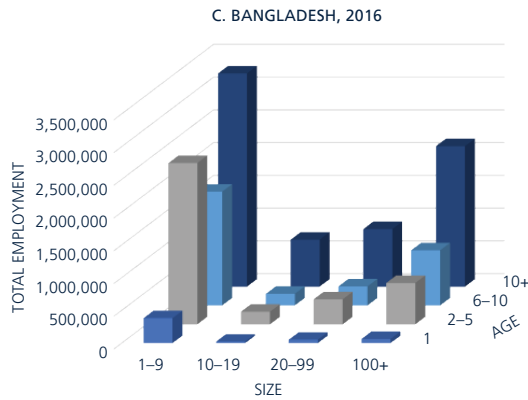
Figure 63
Distribution of employment by age and size



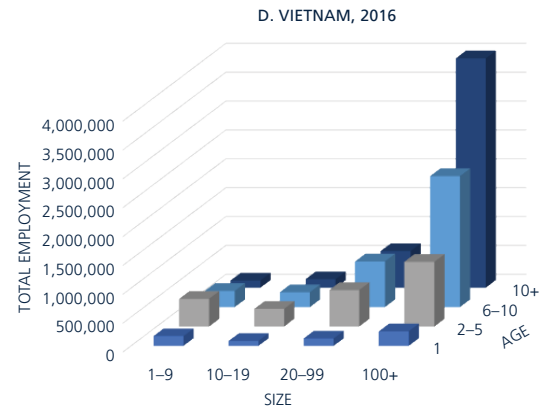
Source: Jobs and Privileges.



Source: Georgia JD.

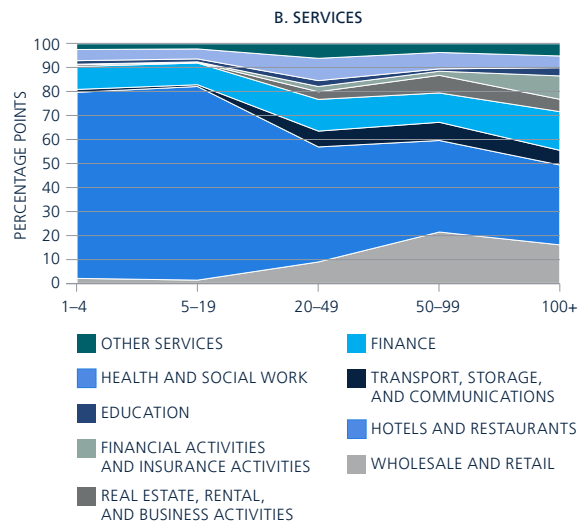
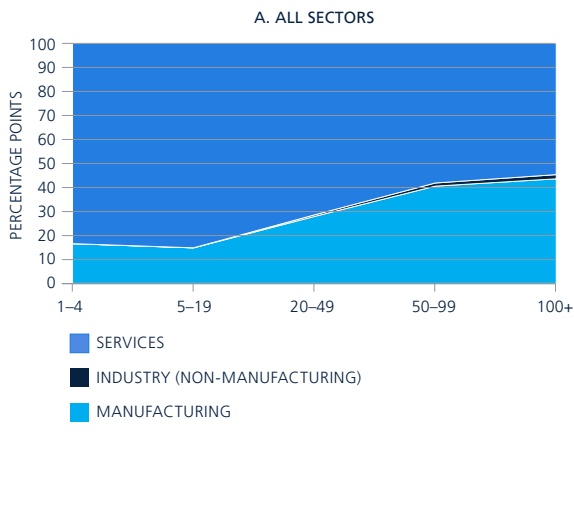


Source: Bangladesh JD.



Source: Vietnam JD.

Figure 64
Firm size shares by sector (private sector formal firms), 2016



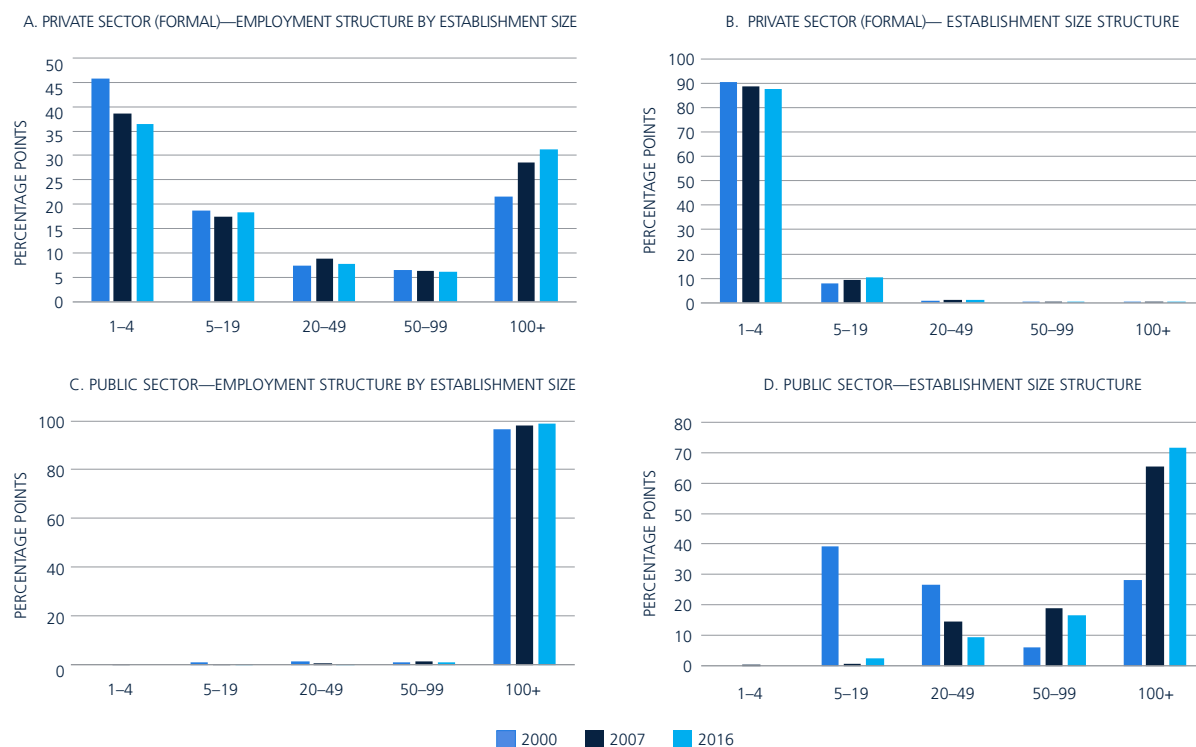
Source: Based on data from Employment and Compensation of Employees Survey, Department of Statistics 2016, <http://dosweb.dos.gov.jo/labour-force/employment-in-establishment/>.

with 100 employees or more. Formal firms in retail and wholesale represent the second largest group, accounting for 21 percent of formal firms with 50 to 99 employees and 16 percent of formal firms with more than 100 employees. These sectors tend to be the least capital intensive. According to data from the establishment survey, retail trade and restaurants have some of the lowest ratios of capital to value added in the services sector.⁴²

Between 2000 and 2016, the share of private sector firms with four employees or fewer declined slightly, from about 90.6 to about 87.4 percent of all firms (Figure 65). The decline in their share of employment was larger, from 45.8 to 36.5 percent, which is explained by the fact that firms in that category became smaller, from an average of two employees per firm in 2000 to less than 1.8 employees per firm in 2016. In other words, two counteracting forces were in place, as micro firms with fewer than four employees became less prevalent, but also became smaller on average. Although large firms represent a negligible share of the total number of firms, they account for one of every three jobs in the private sector. In contrast, SOEs tend to be larger, with about 70 percent of them having 100 employees or more.

The proliferation of small firms in the private sector is in part a response to their failure to grow. According to data from establishment censuses, 65 percent of one-person establishments in 2006 were the same size in 2011. Among the one-person establishments that managed to grow, almost none had grown to more than nine employees. Firms' growth prospects are even low when compared with other countries in the region. Less than 10 percent of Jordanian firms with 20 to 49 employees in 2006 had managed to grow to 50 employees or more in 2011. That figure is 12 percent in Egypt and Morocco, and more than 13 percent in Turkey.⁴³ Even though firms tend to stay small in Jordan, their entry accounts for a high portion of job creation

Figure 65
Firm and employment structure by public and private sector, 2000–2016

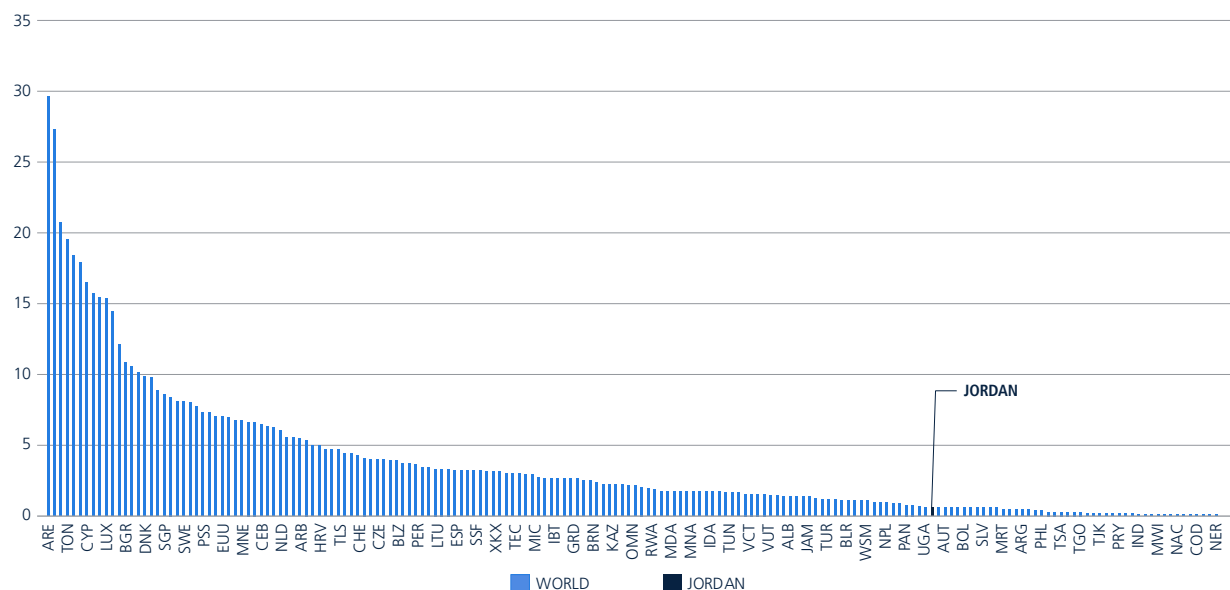


Source: Based on data from Employment and Compensation of Employees Survey, 2016, Jordanian Department of Statistics, <http://dosweb.dos.gov.jo/labour-force/employment-in-establishment>.

⁴² <http://dosweb.dos.gov.jo/industry>.

⁴³ Schiffbauer et al., 2014.

Figure 66
New business density, 2016



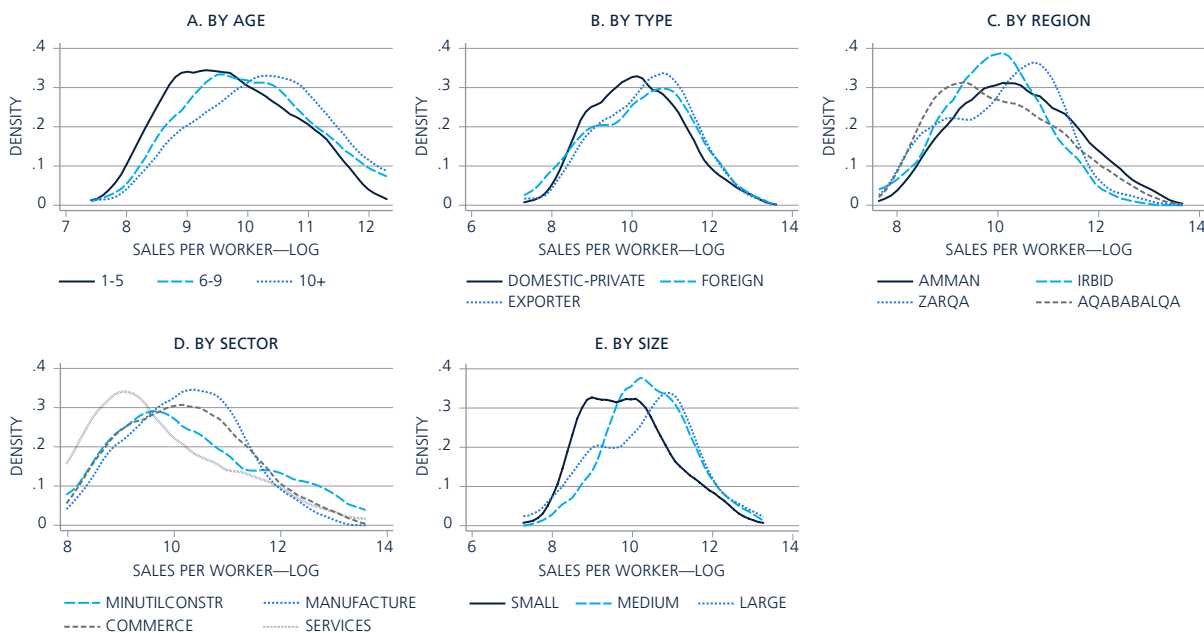
Source: Based on data from the World Bank's Entrepreneurship Survey and database (<http://www.doingbusiness.org/data/exploretopics/entrepreneurship>).

Note: New business density (new registrations per 1,000 people ages 15–64) in 2016 or latest year available.

Young establishments are key contributors to the creation of formal jobs in other countries, but their presence is very small. According to data on new business density (new registered businesses per 1,000 people aged 15 to 64 years), Jordan has one of the lowest rates of entry in the world (Figure 66). Although this measure experienced continuous improvements between 2007 and 2014, when the rate of entry almost doubled, it has declined steeply since 2014, returning to the 2007 levels. Exit rates are also low even when compared with countries in the region, which already have low exit rates when compared with countries in other regions. Low exit rates often indicate a lack of dynamism in the economy since, to a large extent, low exit rates reflect low entry rates. At the same time, they may reflect the absence of a process of creative destruction, as new and more productive firms fail to enter the market, while older and inefficient firms manage to survive.

The distribution of firm-level productivity shows that the performance of firms is very heterogeneous (Figure 67). First, the distribution of productivity for older firms is shifted to the right and it is less dispersed than that of young firms, which suggests that older firms are getting more productive—or gaining more market power (the data do not allow the disentanglement of prices and quantities)—and less productive firms to a certain extent are exiting. Second, foreign-owned firms and exporters are more productive than the average firm. Finally, larger firms seem to be more productive than smaller firms. However, a conditional analysis reveals that when holding everything else constant, firms in the second, third, and fourth quartiles of the distribution of labor productivity have on average the same size as the least productive firms (table A.7, column 5). The different levels of productivity across firms seem driven by other factors. High levels of dispersion in productivity levels may be indicative of allocative inefficiencies, whereby economic resources cannot be easily shifted from low- to high-productivity sectors. With the caveat that measuring productivity is challenging in the absence of detailed product and price data, firm-level data confirm the findings of previous sections suggesting that rigidities and inefficiencies are more prevalent in the services sector than in the rest of the economy (Figure 67d), since output per worker is more dispersed in services and commerce than in manufacturing.

Figure 67
Productivity dispersion, by firm characteristics

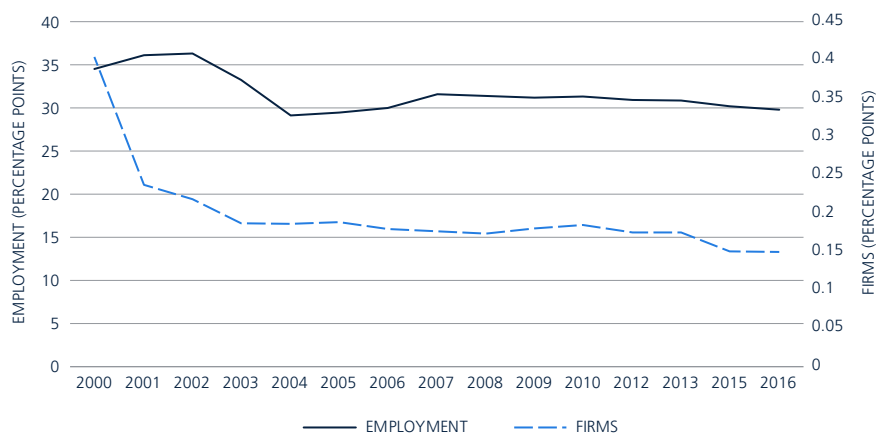


Source: Based on data from the World Bank Enterprise Surveys.

STATE-OWNED ENTERPRISES

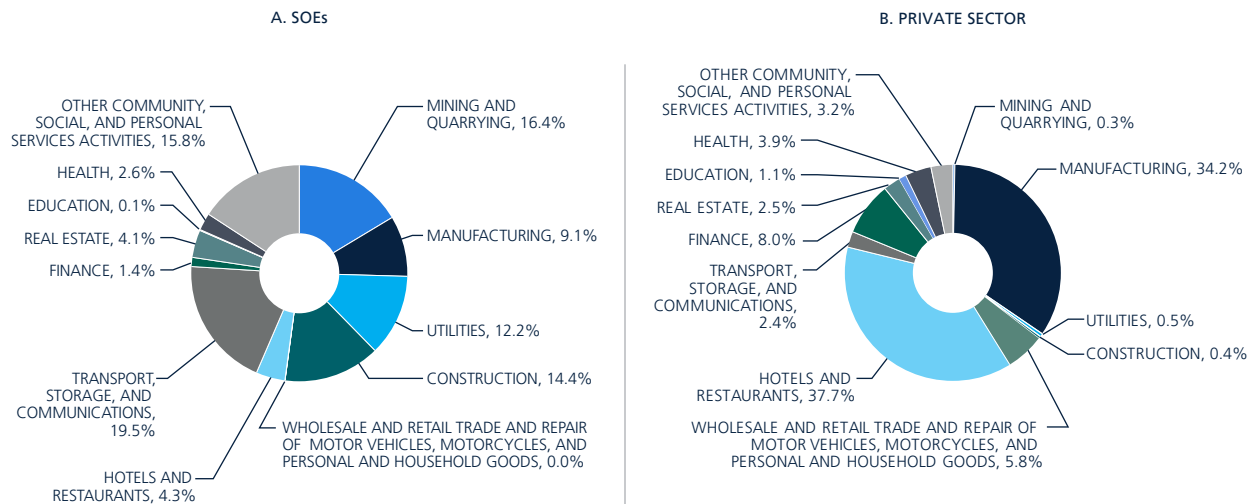
The labor market is dominated by a few SOEs. Excluding employment in the public administration, almost one of every three employed individuals works at an SOE. This fraction declined between 2004 and 2006, but only because employment in the private sector grew at a faster pace than that in SOEs (Figure 68). In fact, employment growth in SOEs was positive in every year between 2000 and 2016, except 2004. The number of SOEs represents about 0.15 percent of the total number of firms. This fraction has declined since 2000, but surviving SOEs became larger. Whereas in 2000 the typical SOE had an average of roughly 500 employees, in 2016 that figure had increased to 1,200.

Figure 68
Share of SOEs in total employment and number of firms



Source: Based on data from the Employment and Employee Compensation Survey.

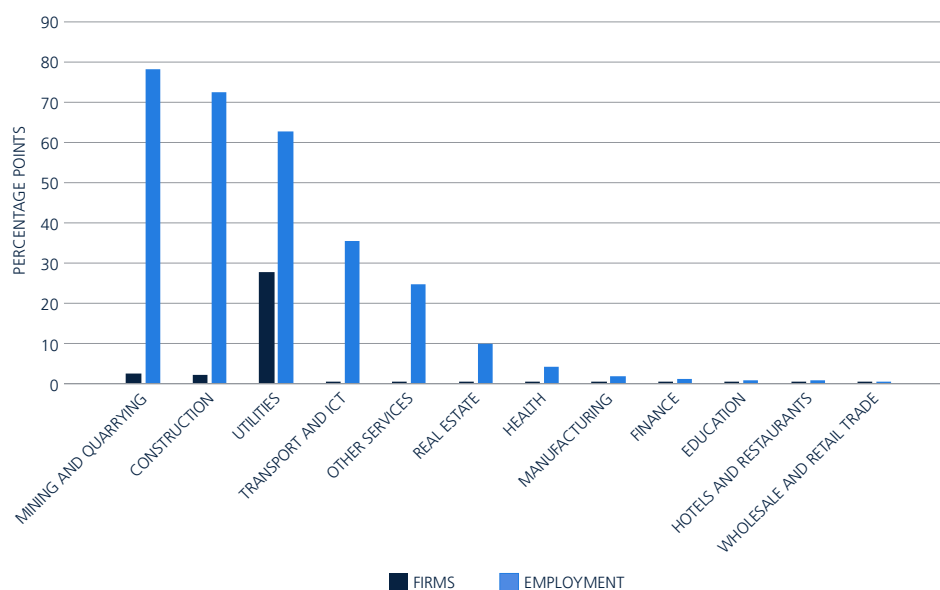
Figure 69
Distribution of employment in SOEs and private sector firms



Source: Based on data from the Employment and Employee Compensation Survey.

SOEs are not limited to sectors with large economies of scale and greater propensity for market failures, such as utilities and telecommunication. In fact, more than half of SOE employment is in mining, manufacturing, construction, and other services (Figure 69). More than 70 percent of employment in mining and construction is concentrated in SOEs (Figure 70). SOEs also account for almost 25 and 10 percent of employment in other services and real estate, respectively. The pervasive presence of SOEs in the private sector may add distortions not only to the labor market, especially if the hiring and firing practices are out of sync with the private sector, but also to the market of products and services if SOEs limit the positive effects of competition on efficiency and technology adoption.

Figure 70
Share of SOEs in total number of firms and employment by sector



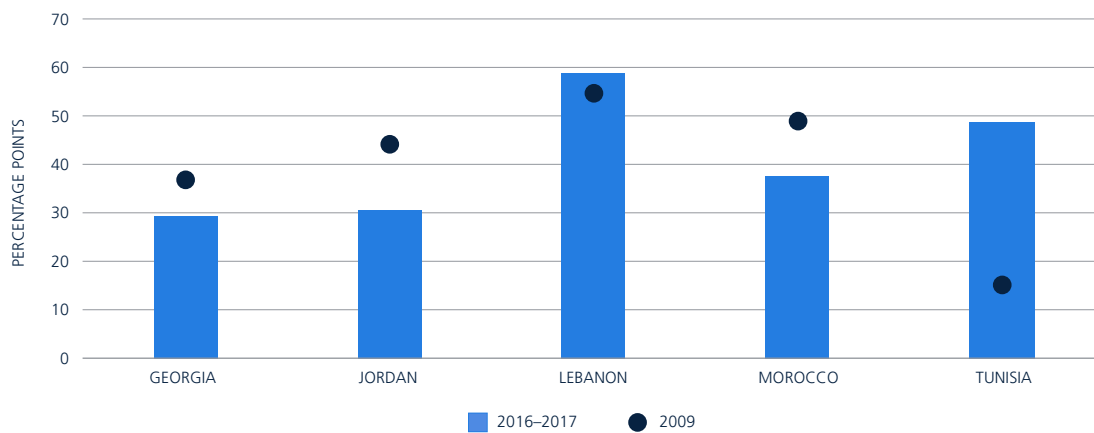
Source: Based on data from the Employment and Employee Compensation Survey.

ENTREPRENEURSHIP

Low rates of firm entry could be driven by many factors, including the presence of constraints and the lack of opportunities and entrepreneurial spirit. In Jordan, a mix of these factors seems responsible for the low level of entrepreneurship. The share of the working-age population reporting that there are good opportunities to start a business is lower in Jordan than in Lebanon, Morocco, and Tunisia (Figure 71). Moreover, this perception has worsened over time, declining from about 45 percent of the working-age population in 2009 to less than 30 percent by 2017.

In fact, rates of entrepreneurship—in terms of both the share of entrepreneurs and the number who expect to create jobs soon—are relatively low (Figure 72). A high share of respondents to the Global

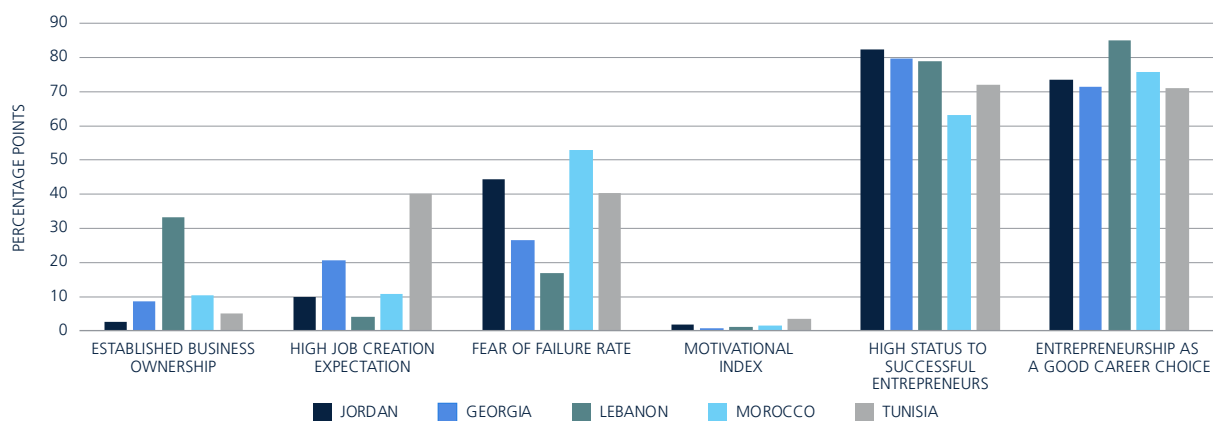
Figure 71
Perceived opportunities to start a firm



Source: Based on data from Global Entrepreneurship Monitor (GEM).

Note: *percentage* of population age 18–64 who see good opportunities to start a firm in the area where they live.

Figure 72
Perceived opportunities to start a firm



Source: Based on data from GEM, 2014–2016.

Note: **Fear of failure rate:** percentage of population age 18–64 perceiving good opportunities to start a business who indicate that fear of failure would prevent them from setting up a business. **Established Business Ownership:** percentage of population age 18–64 who are currently an owner-manager of an established business; that is, owning and managing a running business that has paid salaries, wages, or any other payments to the owners for more than 42 months. **Motivational Index:** percentage of those involved in early-stage entrepreneurial activity who are opportunity-motivated, divided by the percentage who are necessity-motivated. **High Job Creation Expectation:** percentage of those involved in early-stage entrepreneurial activity who expect to create six or more jobs in five years. **High Status to Successful Entrepreneurs:** percentage of population age 18–64 who agree with the statement that in their country, successful entrepreneurs receive high status. **Entrepreneurship as a Good Career Choice:** percentage of population age 18–64 who agree with the statement that in their country, most people consider starting a business as a desirable career choice

Entrepreneurship Monitor (GEM) survey claim that fear of failure prevents them from starting a business. Risk aversion and low levels of entrepreneurial spirit may explain this phenomenon; however, Jordan has relatively more incentive-driven—rather than necessity-driven—entrepreneurs than other countries (except Tunisia), which may suggest the opposite.⁴⁴ Another hypothesis for the lack of entrepreneurship is that salaried jobs, particularly in the public sector, confer a higher status than business ownership (World Bank, 2004). Nevertheless, although there is evidence of public sector queuing, Jordanians also place a high status on being an entrepreneur (Figure 72).

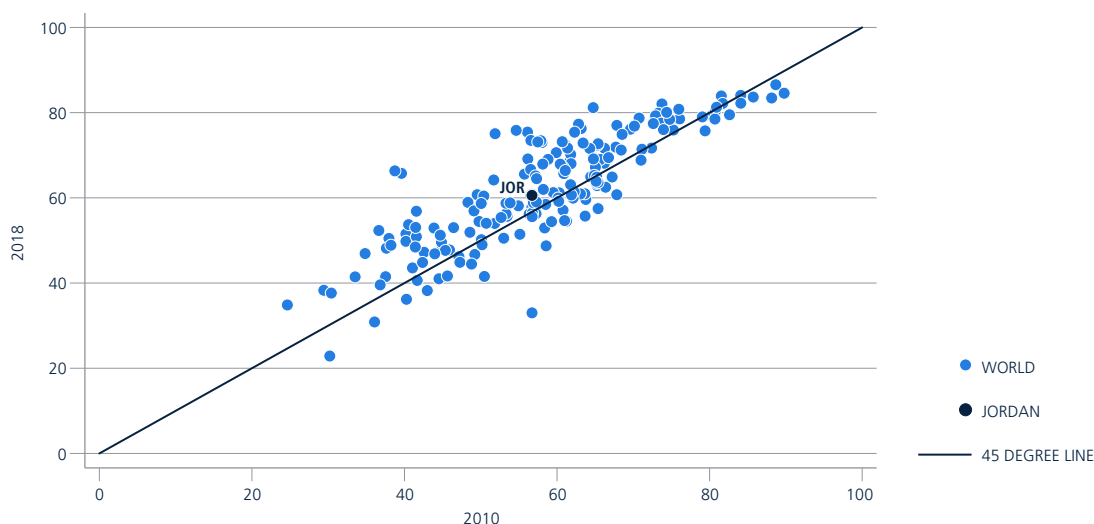
BUSINESS BARRIERS

The business environment in Jordan lags that in other countries. In terms of ease of doing business, Jordan ranks 103rd among 212 economies. In terms of distance to the frontier, Jordan stands at 60.6 (0 being the worst and 100 being the best), which resembles the scores of Albania, India, Lesotho, and Zambia. Between 2010 and 2018, Jordan's distance to the frontier stagnated (Figure 73).

One of the main factors driving down the ease of doing business seems to be the lack of access to finance. This finding emerges from both the 2018 Doing Business data (Figure 74) and the 2013 World Bank Enterprise Survey (Figure 75). Other important factors seem to be the lack of protection for minority investors and difficulties resolving insolvency. Firms also mentioned the level of tax rates, political instability, and labor regulations as important obstacles.

Lack of access to finance is particularly important for new and small firms, as the probability of having access to a line of credit correlates highly with a firm's age and size. Firms born before 2000 are almost seven percent more likely than their younger counterparts to have a line of credit. Similarly, firms with 50 employees or more are almost 30 percent more likely to have such access than those with nine employees or fewer. These correlations hold even when comparing firms with the same levels of labor productivity, in the same sector of economic activity, and in the same region.

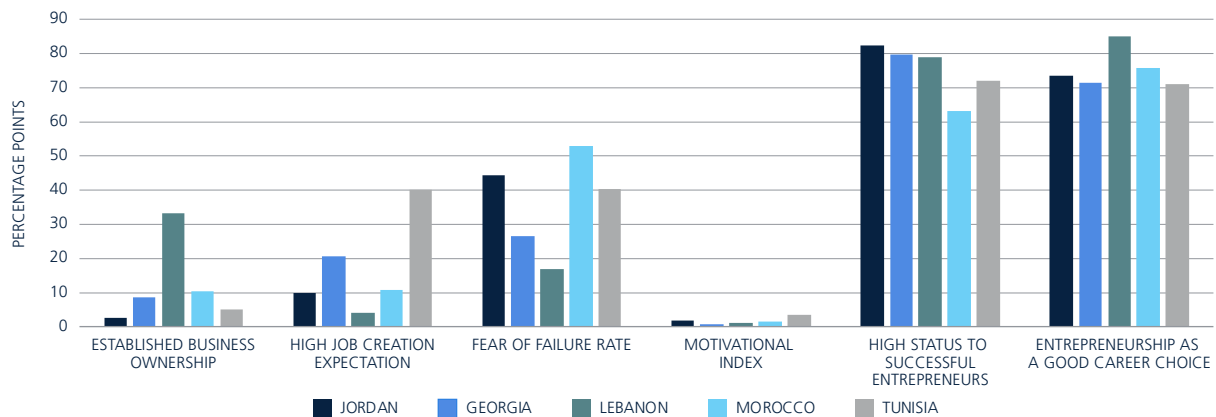
Figure 73
Ease of doing business (distance to frontier), 2010–2018



Source: Based on data from the Doing Business Indicators.

⁴⁴ According to the Motivation Index, which measures the percentage of those involved in total early-stage entrepreneurial activity who are opportunity-motivated divided by the percentage who are necessity-motivated.

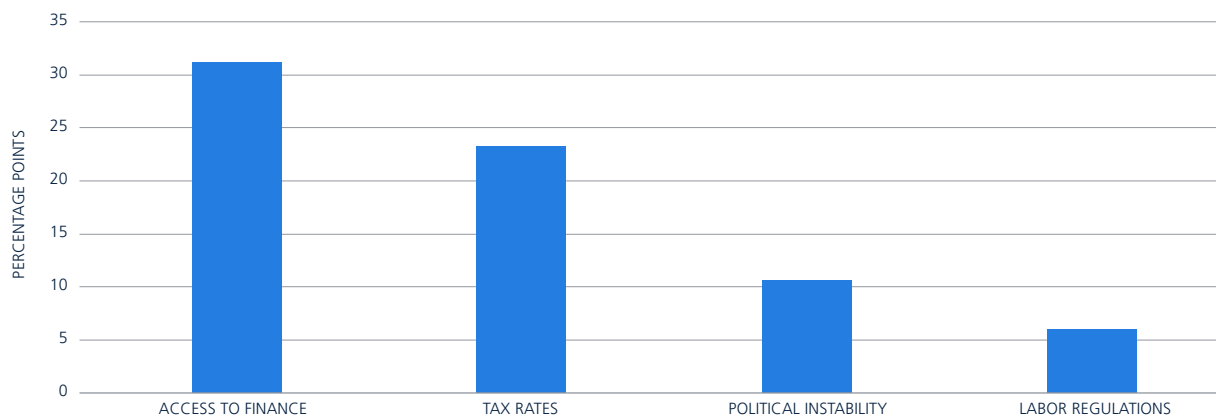
Figure 74
Ease of doing business components, 2018



Source: Based on data from the Doing Business Indicators.

Note: A higher number means it is closer to the frontier.

Figure 75
Biggest obstacles for doing business, 2013



Source: Based on data from the Jordan World Bank Enterprise Survey, 2013.

Note: Each bar shows the percentage of firms claiming that the obstacle is the biggest for doing business.

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ANNEX

Table A.7
Determinants of firm size

Variables	(1) Age-no dummies	(2) Age-year and industry dummies	(3) Age-year and location dummies	(4) Age-xvars	(5) Age-Productivity Quart
age_6to9	0.265*	0.239	0.278*	0.245	0.179
	(0.151)	(0.148)	(0.165)	(0.197)	(0.170)
age_10to19	0.212	0.173	0.230	0.216	0.176
	(0.130)	(0.138)	(0.148)	(0.179)	(0.168)
age_20to29	0.664**	0.593**	0.681**	0.643**	0.696***
	(0.286)	(0.253)	(0.276)	(0.254)	(0.235)
age_30plus	1.152***	1.041***	1.157***	1.075***	1.074***
	(0.247)	(0.276)	(0.254)	(0.291)	(0.279)
M_TextilesApparel		1.030*		0.934*	1.293**
		(0.604)		(0.546)	(0.501)
M_Metals		-0.00977		-0.115	0.00999
		(0.459)		(0.403)	(0.341)
M_Other		0.413		0.324	0.438
		(0.436)		(0.433)	(0.444)
S_WholesaleTradeHotels		0.0192		-0.209	-0.121
		(0.526)		(0.586)	(0.589)
Irbid			0.179	0.110	0.153
			(0.440)	(0.381)	(0.354)
Zarqa			0.106	0.0450	0.176
			(0.493)	(0.491)	(0.461)
AqabaBalqa			-0.140	-0.0601	0.00841
			(0.343)	(0.299)	(0.259)
Foreign				1.048***	0.953**

Variables	(1) Age-no dummies	(2) Age-year and industry dummies	(3) Age-year and location dummies	(4) Age-xvars	(5) Age-Productivity Quart
				(0.381)	(0.415)
Value-Added per Worker quartile 2					-0.0295 (0.215)
Value-Added per Worker quartile 3					0.218 (0.235)
Value-Added per Worker quartile 4					0.284 (0.208)
Constant	2.201*** (0.190)	2.101*** (0.164)	2.168*** (0.291)	2.050*** (0.271)	1.854*** (0.266)
Observations	512	512	512	512	469
R-squared	0.097	0.147	0.100	0.188	0.246
Sector dummies	NO	YES	NO	YES	YES
Location dummies	NO	NO	YES	YES	YES
Year Dummies	NO	NO	NO	NO	NO

Standard errors in parentheses.
*** p < 0.01, ** p < 0.05, * p < 0.1

Source: Based on the World Bank Enterprise Surveys, 2013.



4. POLICY RECOMMENDATIONS

SUMMARY

This diagnostic highlighted how labor market outcomes have been worsening over the past decades.

Jordan has one of the lowest levels of labor force participation in the world. Informality is high and growing. Relatedly, small firms—which tend to be less productive—are becoming even smaller. This all translates to overall levels of labor productivity that are falling. In sum, this diagnostic suggests that important distortions affect the allocation of resources in the economy. Most prominently, the problem with job creation and high unemployment is not on the supply side of the labor market; Jordan has more and more well-skilled workers. The issue is on the demand side. Firms and the private sector are not creating enough jobs to offer to those better-educated laborers entering the market.

By all measures, the labor market is characterized by a multiplicity of segmented labor markets, hindering the efficient allocation of human capital. Labor market segmentation across genders, nationalities, and statuses—formal and informal as well as public and private sectors—has become even more acute over the past years. For these reasons, the policy recommendations are centered on removing legal and regulatory impediments to more integrated labor markets; improving labor force participation, especially for women and youth; creating jobs; and reforming the worker permit system to reduce informality and improve the chances of young workers getting entry-level jobs.

STRENGTHENING HORIZONTAL POLICIES

Labor is becoming more concentrated in the least productive sectors of the economy, and segmentations have deepened. These changes suggest the existence of economy-wide distortions affecting the efficient allocation of human resources. On the one hand, policies to address specific labor market segmentations are crucial. For example, containing the growth of the public sector wage premium would help to level the playing field with the private sector, by reducing labor costs. As described below, policies to level the playing field across genders, informal status, and nationalities are also key. On the other hand, horizontal policies to foster productivity and demand for labor could contribute to boosting the process of job creation in labor-intensive sectors. For instance, Jordan lags in very important areas of the Doing Business ranking such as starting a business, enforcing contracts, resolving insolvency, and protecting minority investors. Promoting FDI, opening up to international markets, promoting competition in transport, and promoting a banking system that provides prudent credit to entrepreneurs and viable small firms will also help to stimulate demand for labor.

Labor demand-side policies would be more effective than fragmented programs targeted at affecting the labor supply of specific groups. In fact, rigorous impact evaluations of some of these programs raise serious doubts about their potential to improve the labor market outcomes of Jordanians. An impact evaluation of a wage subsidy voucher for female college graduates found positive employment impacts only in the short term, which disappeared after the program expired.⁴⁵ In other words, the subsidy did not provide a stepping-stone into new jobs. Accordingly, a randomized soft-skills training program for young women did not have any impacts on their employment status.

⁴⁵ Groh et al., 2016.

IMPROVING LABOR MARKET INTEGRATION

Jordan has designed a complex legal framework to regulate an equally complex labor force. From work permits for foreign workers that exempt some of them—Syrian refugees—to occupations and sectors open only to others—Jordanian citizens—to the existence of a different minimum wage for Jordanians and non-Jordanians, the labor market regulatory system is hard to keep up with, interpret, abide by, and manage. As a result, the legal framework is ineffective, and it is cumbersome. Most importantly, the implementation of laws and regulations and their enforcement is weakened by this complexity.

Jordan imposes strict ratios of Jordanian nationals to foreign employees. Hiring more refugees in formal positions requires adding more Jordanians to the payroll to maintain the ratio. Quotas are counter to economic growth and employment expansion. They hinder businesses from hiring the workers they need to meet market demand and add costs to their wage bill. Unless the quota happens to match exactly a firm's labor demand, the firm is likely to not produce at full capacity. Underproducing is a hedge against labor adjustments that must be made in case of downturns. On the flip side, the firm is likely not to hire as many workers in case of upturns. In sum, labor becomes lumpier, and it would be difficult to release either a foreign or Jordanian worker and comply with the quota. The elimination of quotas will improve the integration of the labor market and improve efficiency.

Jordan has two minimum wages, resulting in inefficient labor segmentation. The minimum wage for non-Jordanians is lower (JD 150) than for Jordanians (JD 220), a divergence that dates back to an increase in minimum wage that was implemented in February 2012. This difference in minimum wages puts entry-level, low-skilled Jordanians at a disadvantage in getting their first job. So, Jordanians with a high school degree or less, who are most likely to apply for low-skill jobs, and who also account for almost two-thirds of the population, are squeezed from below by competition from a large pool of foreign workers willing to enter the workforce at lower wages. The headline wage disadvantage likely suppresses rates of labor force participation for young Jordanians, since it signals that sectors with low prevailing wages are de facto intended for non-Jordanians. For those young Jordanians, too poor to remain idle, this competition from the bottom effectively pushes them to the informal sector. Consolidating the minimum wage to one single rate reduces formal segmentation and strengthens the signaling value of wages, promoting integration of the labor market.

The establishment of one minimum wage is the first step to integrating the labor market for low-skill, entry-level workers. It will put all similarly qualified workers on equal footing. This is important since not delaying entry into the formal wage sector affects the trajectory of lifetime earnings and savings of young workers. The minimum wage is important for who gets chosen for entry-level jobs that require upfront training. Alternatively, if this reform is not made, it is more likely that some young workers will withdraw from the labor force indefinitely, if they can afford to, or enter the informal sector. In the long term, large-scale withdrawal from formal wage employment may have substantial economic effects from lost and reduced earnings.

IMPROVING LABOR FORCE PARTICIPATION

To address low rates of labor force participation (especially among women and youth), the government may want to remove barriers to demand for part-time and temporary employment. Making part-time work possible is one institutional change that can increase labor force participation by women and youth. Regulations do not prohibit part-time employment but, until very recent reforms, they did make the transaction costs of negotiating a part-time job more difficult. Women and young workers, who are most likely to seek part-time employment, disproportionately bore the burden of these difficulties. Because women tend to be disproportionately responsible for housework and thus have less time for other activities, the limited availability or lack of availability of reduced-hour employment diminishes their ability to participate in the formal sector and increases the probability that they work in the informal sector. Removing barriers to part-time work can have positive impacts on female labor outcomes. In Argentina, for example, both female labor force participation and employment in the formal sector increased with part-time contracts, and female formal employment grew more in sectors with more part-timers. Married women with children increased their participation in formal

employment by nine percent and reduced their self-employment by seven percent, compared with married women without children. That is equivalent to a fall in female informality of about four to five percent.

Addressing gender segmentation can also improve labor force participation rates for women. Women in Jordan are concentrated in specific segments of the market, and their participation is further shaped by education attainment and marital status.⁴⁶ For example, 59 percent of women have a bachelor degree or higher and 28 percent have an intermediate diploma (or associate degree), indicating that women completing secondary education or less represent less than 10 percent of the female labor force and are more than likely concentrated in the informal economy. A 2018 quantitative study across Amman by Mafraq and Zarqa showed that married women were much less likely to be working than unmarried women (63 percent versus 84 percent).⁴⁷ The existence of gender-based differences in laws governing women’s and men’s abilities to access jobs further exacerbates gender segmentation. Restrictions on types of jobs and hours when women can work are referenced in the Labor Code (Article 69), with the specifics detailed in a separate Ministerial Decision linked to Article 69. Although such restrictions were originally put in place to protect women in industries deemed too dangerous for them, these restrictions ultimately stand in the way of women’s ability to choose when and where to work. Instead, there needs to be strong enforcement of the Occupational Safety and Health Standards to protect all work.

To address this, the government could amend the 2010 Decision for Article 69 of the Labor Code by eliminating Articles 1 and 2, which introduce restrictions and list types of jobs in which women are not allowed to work; Article 4, which lists night hours during which women are restricted from working; and Article 5, which describes the duration of rest periods. According to *Women, Business and the Law 2018*, restricting types of jobs and hours for women prevents them from getting the jobs they want and stands in the way of maximizing their earning potential. For example, enabling women to work at night in the garment factory could increase productivity and provide flexibility to enable women to balance household responsibilities.⁴⁸

ADDRESSING INFORMALITY

To address the high levels of youth unemployment, the government could begin by addressing informality. The growth of the informal sector most affects the entry-level jobs that serve as the access point for most young workers into the labor market. So, while many factors explain why the informal sector exists and grows, the government may want to address the factors that stand out the most.

Informality is the result of regulatory arbitrage—hiring a worker to get around a rule or leverage a regulatory dictate that lowers compensation. Hand in hand with that work-around is the cost of the informality that this segmentation creates.

Reforms made to the work permit would address informality. The proposal is to eliminate the individual sponsorship system used to allocate work permits for low-skilled workers. Instead, the sponsorship system would be replaced by a market-based permit allocation regime run by a party other than the individual employer. Eliminating the employer sponsorship system would provide more bargaining and options for foreign workers; it would also address the contractual abuse and eliminate the corruption that the existing work permit system promotes. Most importantly, both managing the number of permits and eliminating the sponsorship system would stem the flow of foreign workers who enter the informal sector. In Jordan, the number of these permits is large, and the employer sponsorship system incentivizes bringing in low-skilled laborers, working them hard, and expecting them to abandon their jobs when the permit expires and not ask for renewal. However, although foreign workers are contractually obligated to leave Jordan, few do, instead entering the informal sector.

Informality attenuates incentives for the economy to produce better-quality low-skilled jobs. In addition to the sizable governance challenges that informality presents, informality reduces the quality of work

⁴⁶ Assaad et al., 2012.

⁴⁷ World Bank 2018; Assaad 2012.

⁴⁸ Anecdotal evidence from discussions during the September 2018 mission points to demand from employers to employ women at night.

offered in the market since informal employees have little bargaining power. In addition, informal workers have no legal recourse once employers violate contracts and labor standards: such workers feel that they cannot report abuse because they risk certain deportation and have no legal standing in the country.

The most pernicious effect of informality is that it lowers the prospects for young Jordanians entering the labor market for the first time. Given their relatively lean experience and comparatively lower skills, young workers compete for work that is most likely to be the type informal workers may do. Because of their informal status, these workers are likely less expensive and more flexible than young workers who are protected by the law and expect that the worker-employer relationship will not be abusive.

In addition to head-to-head competition with informal sector workers, young workers suffer from relatively high social security contributions. High labor taxes will have the strongest effect on employment of worker groups for whom labor demand is most elastic. These include low-skilled, young, older, and female workers. The negative employment effect will be amplified if the elasticity of labor supply of those groups is high. Payroll tax reductions targeted at low-skilled and young workers, who are most hit by unemployment, might improve their employment chances by lowering their cost to employers. Such targeted reductions may also be efficient in terms of how much fiscal “cost” is required to achieve a desired increase in employment. Because both the elasticity of labor demand⁴⁹ and the elasticity of labor supply⁵⁰ are higher for less skilled, young workers than for more skilled workers, a change in the after-tax wage will elicit a stronger demand or supply response (depending on whether the employer or the employee benefits from the tax rate reduction). Evidence suggests that low-skilled workers are less likely to capture the tax cut through higher wages,⁵¹ implying that the primary impact is likely to be through greater labor demand.

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⁴⁹ Hamermesh, 1995.

⁵⁰ Davis and Henrekson, 2004.

⁵¹ Betcherman and Pagés, 2007.



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