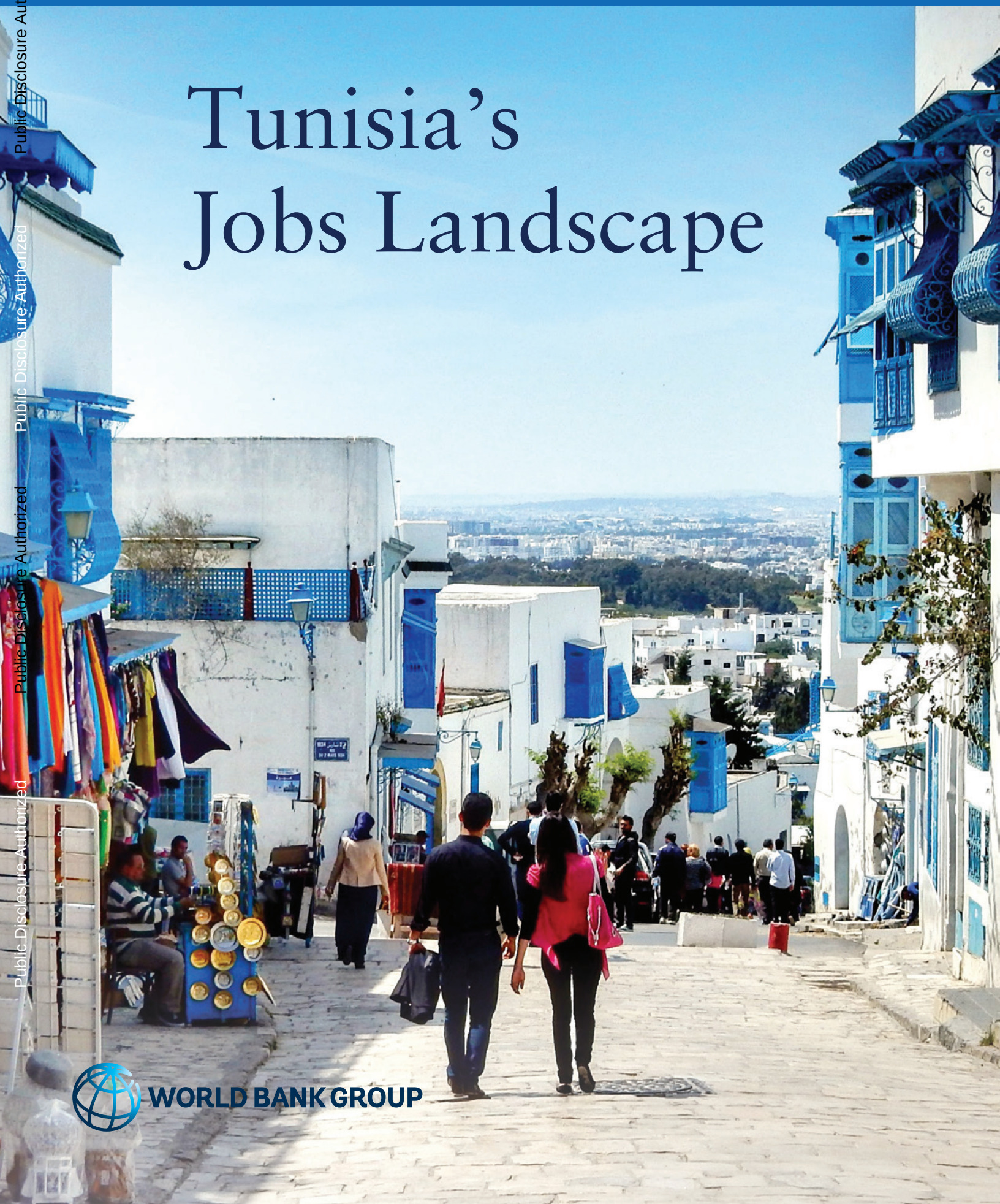
Tunisia's Jobs Landscape



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Acknowledgments

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EXECUTIVE SUMMARY

In the aftermath of the revolution, Tunisia embarked on a complex political transition that has been marked by setbacks and is yet to be completed, but has also allowed the country to be celebrated as the only democratic success story of the 2011 Arab Spring. These events brought about a change in economic policy as well. To accommodate social demands, which, together with the desire for political freedom, had sparked the uprising, economic policies became more inclusive and consensus driven. Public sector recruitment was expanded, and public wages were raised, while public transfers, including the Programme National d'Aide aux Familles Nécessiteuses (National Program of Assistance to Needy Families) and access to health insurance at reduced prices, were rapidly scaled up. Yet, the engine of economic growth started to lose steam and has, ever since, been slow compared with income peers, not least because of increased uncertainty, partly a consequence of security incidents that took a toll on tourist arrivals. The export-oriented model based on low-technology manufacturing and tourism-related activities that had been the main driver of the economy before the revolution faced headwinds. The lack of progress along the path of structural reforms contributed to deterioration in the business environment, which became less conducive to investments. The geographical inequalities between rural and urban areas as well as between inland and coastal regions have persisted. Labor market outcomes have sometimes been sluggish. Thus, labor force participation rates are strikingly low, particularly among women. Employment creation is meager; university graduates continue to face high unemployment rates; and a large share of workers are employed informally. In parallel, increasing public expenditures, driven primarily by a rising wage bill, pushed up the fiscal deficit, which, combined with an expanding current account deficit, has highlighted the unsustainability of the economic development model. Then came the COVID-19 pandemic, which has worsened the economic outlook and exacerbated existing imbalances.

Today, Tunisia is faced by limited economic growth, fiscal and current account deficits, and labor market outcomes that are unsatisfactory for the majority of the population and that are nurturing a sense of frustration. It is therefore important to identify the culprits of the subpar performance of the labor market to be able to single out the key policy levers that need to be pulled.

This report argues that the main driver of the sluggish employment performance is low-grade economic growth, which has been a constant feature of the decade following the 2011 revolution. The high employment-to-growth elasticity observed in the postrevolution period, well above the average in middle-income countries, indicates that a slightly higher economic growth rate would have generated an equally higher rate of employment creation. It is worth noting though that about 20 percent of the net employment added over the period 2011–17 is ascribable to the expansion of employment in the public sector as well as in health care and education services, and therefore it might not be a sustainable path in the medium term.

The study pinpoints several important stylized facts, which are briefly summarized below and developed in the rest of the overview. A full analysis may be found in the main report. First, fewer than 1 working-age individual in 2 actively participates in the labor market, that is, is either employed or looking for a job. Tunisia's human capital is thus largely underutilized, and the public investments in education that have led to considerable improvements in education in past decades are not carrying over into employment opportunities. Two groups in particular stand out because of their low participation and employment rates: women and youth.

In the case of women, despite some improvements spearheaded by youngsters with tertiary education, participation remains, on average, extremely low. Weak labor demand, assigned gender roles, and the limited availability of affordable childcare services are plausible drivers of the persistently low labor force participation among women. In addition, a sizable gender wage gap in the private sector that effectively translates among women into the equivalent of almost three months of free labor per year contributes to the low participation rates among women. Indeed, a large wage difference per hour worked between men and women might provide an economic incentive, in the context of household bargaining between spouses, for wives to bear most of the household burden in housework

and family care while their husbands work, thus reinforcing assigned gender roles. In the case of youth, over the past decade, unemployment has been a steady and serious issue among university graduates. The sluggish creation of high-end jobs is one of the main reasons for the high unemployment rate among youth with tertiary educational attainment, together with a skills mismatch as the curricula selected by many youth are not in line with private sector demand, but are rather more suitable to the profile of civil servants. More importantly, the large wage gap between university graduates employed in the public sector and those employed in the private sector is almost entirely attributable to youth's characteristics. A young Tunisian who holds a university degree and is employed in the public sector does not earn, on average, a higher salary relative to a youth with the same characteristics working in the private sector. Yet, public sector jobs are associated with additional benefits, such as job security, guaranteed salary increases, allowances, a wide range of annual leave options, long maternity leave, and flexible working hours, that can make them more attractive, particularly among women. In addition, many unemployed university graduates can afford to wait while living with their parents. Moreover, active labor market policies consist of wage subsidies that provide temporary employment opportunities to beneficiaries at the cost of significant deadweight loss and substitution effects, but do not lead to more job opportunities in the long term.

Second, a sizable share of workers are employed informally, that is, they do not have access to social insurance or they operate unincorporated businesses that are not registered with the tax authorities or other formal public accounting procedures. Among wage workers, informality is more widespread among men, youth, and workers with little education in rural areas and inland regions. However, while workers with such profiles face difficulties in accessing public sector jobs or formal jobs in the private sector and are not protected against the risks covered by social insurance (such as health events, old age, unemployment, and disability), they do not suffer wage penalties. Most of the wage differential between formal and informal wage workers in the private sector derives from differences in workers' and jobs' characteristics.

Third, returns to education are sizable in Tunisia relative to middle- and high-income countries. In 2019, workers with primary education enjoyed a premium of about 12.6 percent per hour worked relative to workers with no schooling. Secondary education yielded an additional premium of about 9.1 percent relative to primary education, and tertiary education a premium of 26.1 percent relative to secondary education. In addition, returns to tertiary education are considerably higher in the public sector and have increased over time, while they have declined in the private sector. This raises a question about the sustainability of wage growth in the public sector.

Except for the low participation rates and gender gaps, the evidence identifies limited distortions in the labor market and high employment-to-growth elasticity. The key issue to address in seeking to foster job creation is therefore why economic growth has been so low over the past decade. The answer is not trivial, and multiple factors may be in play. Most of the recent economic growth has arisen because of increases in employment; little has been associated with labor productivity growth. The modest gains in labor productivity have been largely attributable to the movement of labor from lower than average to higher than average productivity sectors, as opposed to growth in labor productivity within sectors. The study advances two complementary hypotheses linked to fiscal and regulatory policies. First, the high and rising fiscal and current account deficit generated by the expansionary fiscal policy in the aftermath of the revolution and by the decline in exports and continued increase in imports, respectively, has increased the cost of capital and contributed to a reduction in investments, together with a deterioration in the business environment. Second, despite high entry and exit rates, particularly among small firms, firms are not growing in size after entry. The lack of private sector dynamism can be blamed on several factors. A key element is the limited market contestability. Politically connected private firms and state-owned enterprises (SOEs) do not respond to any logic of efficiency because they are shielded from competition thanks to direct support and financing guaranteed by the state, the imposition of tariffs, limits on foreign direct investment, and price controls. Such effects are not restricted to the markets in which advantaged firms operate; they extend to upstream and downstream markets, further dampening productivity growth and employment creation.

The analysis presented in the report takes advantage of several data sources produced by the Tunisia National Institute of Statistics (INS) that include public use data files, restricted use data files, and reports published by the INS based on microenterprise surveys and the national business register. The analysis would not have been possible without the data collection effort and the excellent support and collaboration of INS. The analysis of wages stands out as an example of collaboration and of how

important data production, analysis, and dissemination are to the understanding of trends and patterns of labor market outcomes and, ultimately, of changes in living standards. The study is a testament to the tireless work of the INS in collecting high-frequency survey data and represents a plea to continue on the virtuous path of strengthening the production and dissemination of data and statistics. More and more high-quality data, together with wide data access, are key to informing evidence-based public debate and policy making.

The report identifies some areas that merit further research. An in-depth analysis of the link between the degree of product market contestability and the lack of firm-level dynamism that appears to be a key driver of the meager economic growth in the country can shed light on the policy levers required to promote the growth of firms and job creation. This may also foster greater participation and employment among women and youth. This will require access to microdata from the national business register and firm-level surveys. Assessing the importance of specific factors that make transitions from school to work difficult, including the skills mismatch, the quality of education and training, labor regulations, and active labor market policies, can support policy makers in prioritizing and tailoring actions aimed at reducing the number of individuals not in education, employment, or training (NEET) and facilitating labor market entry and retention among university graduates. Labor force survey data, administrative data from technical and vocational education and training and academic institutions, and from institutions and line ministries in charge of active labor market policies will be required to conduct such in-depth analyses. Modest improvements in the labor market participation of women and the persistent large gaps in educational attainment call for attention to factors that might help raise women's engagement in the labor market, such as childcare services, assigned gender roles and cultural barriers, and preferences for certain types of work. Labor force survey data, administrative data on childcare facilities, and the collection of ad hoc microdata on roles, preferences and cultural barriers would inform this research agenda.

INTRODUCTION

Understanding the link between economic transformation, growth and jobs is the key to economic development, particularly in middle-income countries. First, economic growth is necessary to job creation as well as to raise labor income and ultimately living standards. In middle-income countries at more advanced state of economic transformation, shifts of labor across sectors are less relevant to economic growth, whereas within-sector productivity gains are of paramount importance. More individuals are typically working for a wage as opposed to be employed on their own-account or in the family business as contributing family workers. And workers are on average better educated and might have high reservation wages, so low labor force participation and high unemployment rates are typically more important challenges in such context. While a thriving private sector is key to generating more and better jobs, economic growth alone is not sufficient unless the demand for the type of labor a country's workforce can supply does not increase. Moreover, for economic growth to translate into more inclusive jobs, barriers to economic participation as well as distortions in the labor, credit, and product market that favor a group of insiders, often politically connected, over others shall be removed.

The objective of this report is to provide a comprehensive jobs diagnostic that can inform policies to generate more, better, and inclusive jobs. The report illustrates characteristics, constraints, and dynamics of the Tunisian labor market over the past 15 years and offers a description of demand and supply side dynamics that determine labor market outcomes with attention to changes observed before and after the 2011 Jasmine revolution, geographical disparities between coastal and inland regions, and labor market developments following the outbreak of the COVID-19 pandemic.

The analysis would not have been possible without the data collection effort as well as the excellent support and collaboration of INS. The analysis presented in the report takes advantage of several data sources produced by the INS that include public use data files, restricted use data files, as well as reports published by Tunisia National Institute of Statistics (INS) based on microenterprise surveys and the national business register. The study is a praise to the tireless work done by the INS with the collection of high-frequency survey data and a plea to continue on the virtuous path of strengthening production and dissemination of data and statistics. More and high-quality data together with wide data access are key to inform evidence-based public debate and policy-making.

The report is organized in four chapters. Chapter 1 describes trends in growth, productivity, demography, employment, and living standards to inform the analysis of labor supply and labor demand carried out in the chapters that follow. The chapter starts by depicting aggregate trends in economic growth and living standards of the Tunisian population, the drivers of growth (e.g. remittances and migration, FDI, exchange rate, productivity, etc.), and broad structural changes in terms of job creation and labor productivity growth. Chapter 2 provides an overview of the composition of the labor market and how it has changed over time, including demographics and labor force participation, employment and employment composition in terms of type of job, industrial sector, occupation both at the aggregate level and for different population groups based on gender, age, educational level, and georgraphical location. It turns the spotlight on two groups that face particular difficulties in accessing the labor market, namely women and youth, and advances hypotheses regarding key barriers to their engagement in the labor market. Chapter 3 shifts the focus to one of the most relevant dimensions that characterize the Tunisian labor market, namely the distinction between public sector, formal and informal employment. The chapter investigates how individual characteristics are correlated with the probability of working in different types of employment; it provides an overview of recent trends in wages and of conditional wage gaps along a number of dimensions (men/women, public/private, formal/informal employment); and it illustrates how wage workers with different characteristics, in particular different educational endowments, benefit from the labor market. Finally, building on the findings of Chapter 1, Chapter 4 examines recent trends in the patterns of structural and spatial transformation along the employment and firm dimension. It provides an overview of the firm landscape in terms of size, industrial sector, geographical area as well as recent trends in firms' performance, dynamics, labor decisions and capital investments, as well as constraints and opportunities firms face.

CHAPTER 1

Economic Growth, Structural Transformation, and Employment

HIGHLIGHTS

- Recent economic growth has been subpar as Tunisia's economic development has recently shifted to a less sustainable model that has substituted investments and exports with domestic demand
- Poverty reduction has continued largely thanks to an expansion of public transfers
- Economic growth was driven primarily by gains in labor productivity before the revolution and by employment creation thereafter
- In the years leading up to the revolution, gains in labor productivity occurred in monopolistic or non-contestable markets dominated by SOEs and in public administration thanks to rapidly rising public expenditures, i.e. wages
- In the aftermath of the revolution, although employment creation became the main driver of economic growth, it was insufficient to keep up with a growing labor force, particularly of university graduates
- Although structural transformation contributed to labor productivity growth between 2011 and 2017, it will not be able to support economic growth going forward unless capital and efficiency increase in the sectors with higher than average labor productivity that have attracted more workers

Growth, Poverty Reduction, and Job Creation

Tunisia's growth has been historically on par with regional and income group peers. During 1981–2000, economic growth averaged 4.2 percent a year in Tunisia, 3.8 percent in the Middle East and North Africa region (excluding high-income countries), and 4.1 percent in both lower- and upper-middle-income countries. After accounting for differences in population growth, Tunisia's historical performance, estimated at 2.4 percent per year on average between 1981 and 2000, is superior to regional (1.4 percent) and income group comparators (2.1 percent and 2.8 percent among lower- and upper-middle-income countries, respectively) (Table 1.1).

Since the Jasmine revolution of January 2011, economic growth has weakened. Economic growth, measured by average annual growth in per capita gross domestic product (GDP), has lost steam in comparison with the historical trend of the country and with income group and regional comparators (see Table 1.1). The subpar growth that followed Tunisia's graduation to the upper-middle-income group in 2010 pushed the country back to the lower-middle-income group five years later. In 2019, GDP per capita is estimated at $10,756 (measured in 2017 purchasing power parity [PPP]) compared with a regional (excluding high-income countries) average of $10,172 (Figure 1.1).

The COVID-19 pandemic and economic downturn have further worsened the economic outlook. Tunisia's GDP declined by 8.8 percent in 2020, with the largest reduction observed in the services sector, particularly in accommodation and food service activities and in transport (Figure 1.2). Quarterly data of the National Institute of Statistics (Institut National de la Statistique; INS) indicate that GDP took a hit in the second quarter of 2020, following the enforcement of a national lockdown (–21.3 percent). The economy continued to suffer from the effects of the global downturn in the third and fourth quarters (–5.7 percent and –6.1 percent, respectively, compared with the same quarters in 2019). In 2020, GDP per capita is estimated at $9,728 (measured in 2017 PPP). Estimates for the second quarter of 2021 indicate an increase of 16.2 relative to the same quarter of 2020, driven by accommodation and food service activities, textiles, oil refining, and construction. In Q3 2021, the economy posted a small increase (0.3 percent) relative to the same quarter in 2020, as growth in most sectors faded.

Modest economic growth has been insufficient to keep up with the increase in the size of the labor force, particularly university graduates. In 2006–17, the economy created employment at an annualized rate of 1.4 percent on average (Figure 1.3). Over the same period, the labor force increased at a rate of 1.7 percent per year, and the number of individuals of working age rose by 1.2 percent per year. Thus, Tunisia had an average net employment deficit of about 18,000 jobs a year. Aggregate numbers hide important differences by educational level. Employment creation for Tunisians with no schooling or a primary school certificate was faster than their entry into the labor force, thereby contributing to a decrease in unemployment among individuals with low educational attainment (Figure 1.4). By contrast, employment among Tunisians with secondary and, particularly, tertiary education was not sufficient to keep up with their growing number in the labor force; this affected university graduates disproportionately.

The employment to growth elasticity has picked up since the revolution, largely thanks to manufacturing, tourism, and other services. Estimated at 0.9 percent before the revolution, the annualized growth rate of employment accelerated to 1.6 percent in 2011–17. The employment to growth elasticity, which measures the increase in employment for every 1 percentage point increase in GDP growth, rose from 0.28 percentage points in 2006–11 to 0.89 in 2011–17

TABLE 1.1. Average Annual GDP per Capita Growth Rates by Period, 1981–2019

	1981–90	1991–2000	2001–05	2006–10	1981–2010	2011–19
Tunisia	1.0	3.1	3.1	3.5	2.4	0.7
Lower-middle-income	1.0	1.0	4.1	4.2	2.1	3.7
Upper-middle-income	1.4	2.0	4.6	5.6	2.8	3.8
Middle East and North Africa (excluding high income)	0.4	1.3	2.4	2.8	1.4	0.7

Source: Based on data from the World Development Indicators, World Bank.

FIGURE 1.1. Trends in GDP per Capita, Tunisia and Middle East and North Africa, 1990–2020

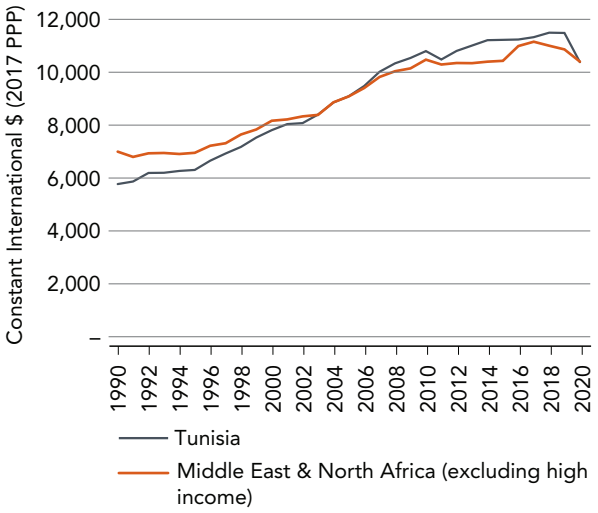
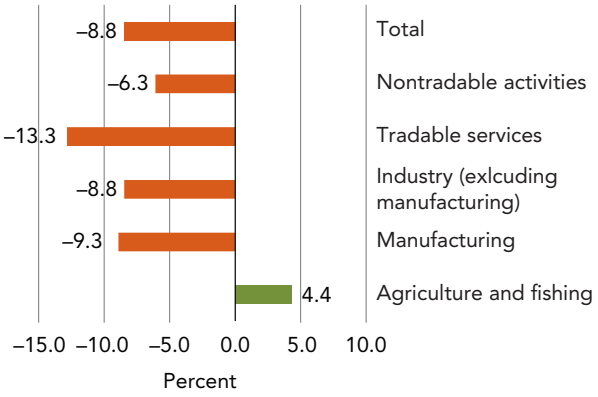


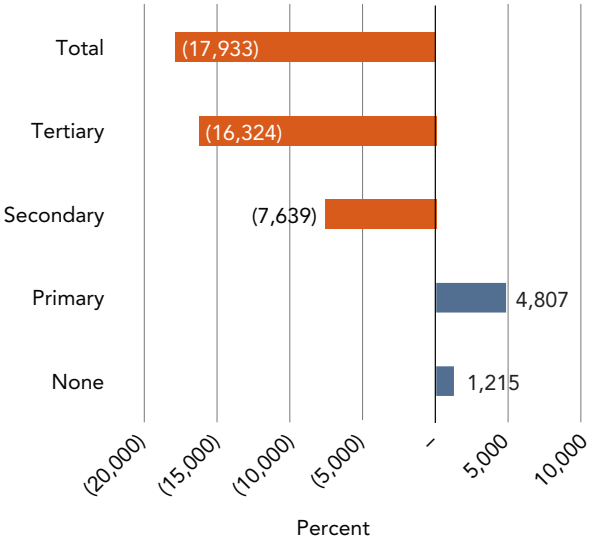
FIGURE 1.2. Impact of COVID-19 on Annual GDP Growth, Overall and by Broad Sector, 2019–20



Source: Based on data of the World Development Indicators, World Bank and INS.

FIGURE 1.3. Annualized Change in Employment, Labor Force, and Working-Age Population, by Education, 2006–17

FIGURE 1.4. Employment Deficit, by Education, 2006–17



Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 1.5. Employment to Growth Elasticity, by Sector and Subperiod, 2006–17

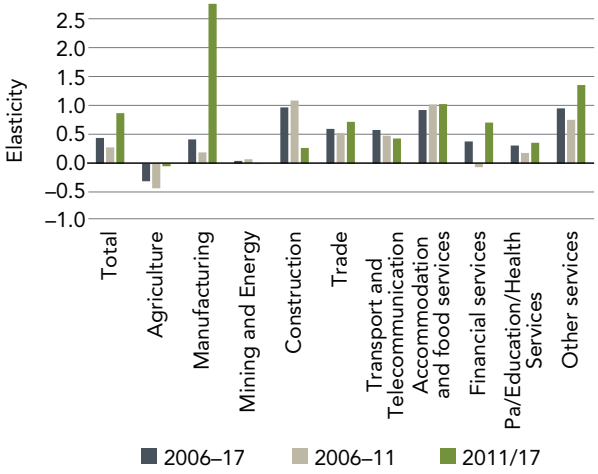
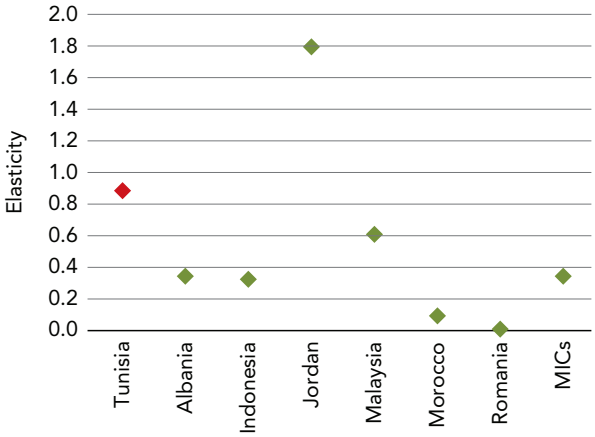


FIGURE 1.6. Employment to Growth Elasticity, Tunisia and Comparator Countries, and Average Among Middle-Income Countries, 2011–17



Source: Based on data from the Labor Force Survey (ENPE), INS; World Development Indicators, World Bank.

(Figure 1.5). Thus, 1 percentage point of growth was associated with an increase in employment by 0.9 percentage points. This elasticity is higher compared with Tunisia's historical figures (0.61 and 0.57 percentage points in 1980–89 and 1990–99, respectively), with the subregional (North Africa) income group (0.35 percentage points in 2011–17), and with global estimates (0.51 and 0.3 percentage points in 1999–2003, respectively), as well as with estimates for comparator countries (except Jordan) (Figure 1.6).[1] Manufacturing was the sector with the highest employment elasticity since 2011, followed by other services (including real estate, business support services, and social and cultural activities), accommodation and food services, and financial services (Figure 1.5).

Construction before the revolution and trade, public administration, education, and health services thereafter posted the largest increases in employment. The annualized rate of employment creation was considerable in construction (4.5 percent) in 2006–11, whereas banking and insurance services (5.2 percent) and accommodation and food services (3.2 percent) posted the highest growth rates in 2011–17. However, thanks to the initially large size, public administration, health, and education services (+11,700 per year), trade (+11,550 per year), and manufacturing (almost +10,000 per year) contributed over 60 percent of employment creation since the revolution (Figure 1.7).

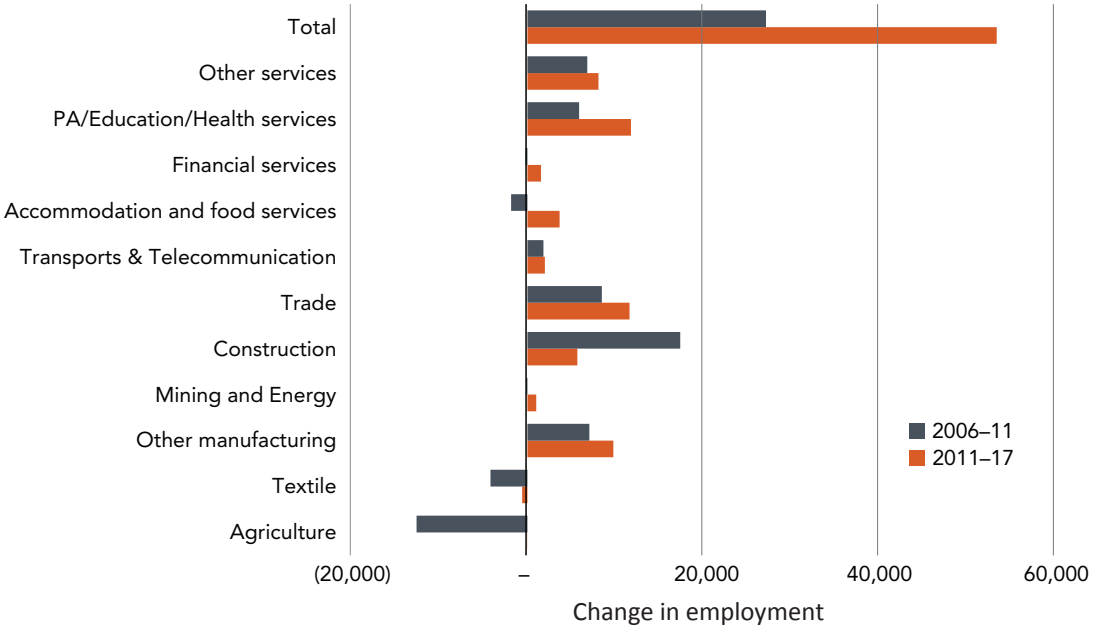
Growth of the working-age population has weakened, and employment and labor force participation rates remain low. Between 2006 and 2017, the working-age population (ages 15 and above) increased on average by 1.3 percent a year, from about 7.5 million to 8.7 million, and the labor force grew by 1.6 percent per year (Table 1.2). Both increased at a lower rate beginning in 2011, and the labor force participation rate declined slightly, from 47.2 percent in 2011 to 47 percent in 2017. The employment ratio hovered around 40 percent over the entire period; only 4 individuals of working age in 10 had a job. In 2017, the employed population was estimated at almost 3.5 million. Unemployment decreased both in level and rate beginning in 2011 among the overall population and among youth. At 35 percent in 2017, the youth unemployment rate was considerable. Most of the employed population was working for a wage. The transition toward wage employment continued, with an annual growth rate of 2.2 percent between 2006 and 2017 and a share as high as 75 percent in 2017.

Job-related international migration increased. According to United Nations data, international migration from Tunisia increased by 75 percent over the past 30 years. As of 2019, over 810,000 Tunisians were living abroad, largely in Western Europe (France, Germany, and Italy).[2] Of the 640,000 Tunisians living in countries of the Organisation

[1] Historical estimates for Tunisia are from Mouelhi and Ghazali (2014), whereas estimates for North Africa are from Kapsos (2005).

[2] Trends in International Migrant Stock (dashboard), Population Division, Department of Economic and Social Affairs, United Nations, New York, http://www.un.org/en/development/desa/population/publications/migration/migrant-stock-2013.shtml.

FIGURE 1.7. Annual Employment Creation, by Sector and Subperiod, 2006–17



Source: Based on data from the Labor Force Survey (ENPE), INS.

TABLE 1.2. Key Labor Market Indicators, 2006–17

	2006	2008	2009	2011	2013	2015	2016	2017	2006–11 annualized change (%)	2011–17 annualized change (%)
Working-age population ('000s)	7,525,883	7,807,036	7,931,938	8,146,651	8,315,665	8,480,590	8,580,953	8,694,333	1.6	1.1
Labor force ('000s)	3,434,562	3,603,788	3,689,246	3,844,646	3,943,658	3,991,403	4,047,211	4,084,204	2.3	1.0
Labor force participation rate (%)	45.6	46.2	46.5	47.2	47.4	47.1	47.2	47.0	0.7	–0.1
Employment ('000s)	3,004,893	3,155,349	3,198,925	3,139,771	3,315,283	3,386,337	3,417,581	3,458,104	0.9	1.6
Employment-to-population ratio (%)	39.9	40.4	40.3	38.5	39.9	39.9	39.8	39.8	–0.7	0.6
Unemployment ('000s)	429,668	448,439	490,321	704,876	628,375	605,066	629,630	626,100	10.4	–2.0
Unemployment rate (%)	12.5	12.4	13.3	18.3	15.9	15.2	15.6	15.3	7.9	–2.9
Youth unemployment ('000s)	177,709	181,578	186,082	266,475	214,907	179,626	195,917	194,076	8.4	–5.1
Youth unemployment rate (%)	27.7	28.4	30.9	42.3	34.7	35.0	34.9	34.9	8.8	–3.2
Wage employment ('000s)	2,048,643	2,186,590	—	2,234,490	2,386,063	2,465,767	2,466,635	2,598,651	1.8	2.5
Wage employment (%)	68.2	69.3	—	71.2	72.0	72.8	72.2	75.2	0.9	0.9

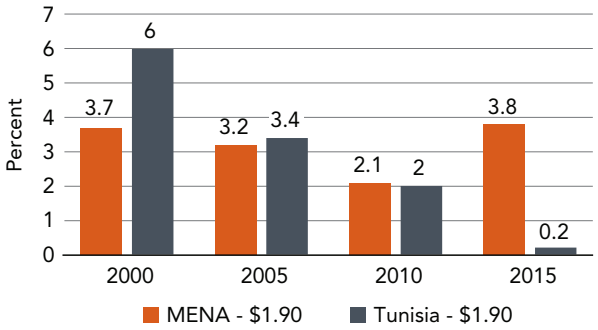
Source: Based on data from the Labor Force Survey (ENPE), INS.

for Economic Co-operation and Development (OECD), 24 percent had postsecondary or higher educational attainment (DIOC database 2015/16).[3] Over 70 percent of Tunisian international migrants in 2009–14 left their country to look for better job opportunities, and most of them were youth ages 25–34.

Population projections indicate the need for more rapid employment creation. Although accurate predictions of the future size of the labor force are challenging, it is nonetheless a useful exercise, particularly to illustrate the need for creating more jobs, especially good jobs that are attractive to the increasingly well-educated labor force. Using population projections of the United Nations and assuming the rate of employment creation is equal to the rate observed between 2011 and 2017, employment-to-population ratios will remain at 40 percent or less until 2030 and increase up to 44 percent by 2040. Given the employment-to-growth elasticity estimated over the same period, the economic growth rate required to achieve such employment creation would be 1.8 percent per year or higher. By contrast, to increase the employment ratio to 60 percent by 2040, GDP per capita would need to grow at an annualized rate of 3 percent, Tunisia's economic performance before the revolution. This is purely a mathematical exercise. Any changes in labor productivity and in employment-to-growth elasticity can alter the magnitude of the economic growth necessary to achieve specific employment levels and ratios.

Considerable progress in living standards was achieved within 15 years. Measured against the $1.90-a-day per capita line, the poverty headcount ratio declined from 6 percent in 2000 to 0.2 percent in 2015, while poverty in the Middle East and North Africa region fell from 3.7 percent to 2.1 percent during the first decade and then bounced back to 3.8 percent in 2015, largely because of conflicts in Syria and Yemen (World Bank 2020) (Figure 1.8). Measured against the national poverty line, the poverty headcount ratio was estimated at 15.2 percent in 2015, down from 25.4 percent 10 years earlier (Figure 1.9). Health and education outcomes improved: the human development index (HDI) increased by 14 percent between 2000 and 2019, and the country ranked 94th (UNDP 2020). Economic growth was pro-poor in 2000–15 thanks to the

FIGURE 1.8. Trends in the Poverty Headcount Ratio, Tunisia and Middle East and North Africa ($1.90 Poverty Line), 2000–15



Source: Based on data from PovcalNet, World Bank.

dynamics of consumption in 2005–15.[4] Average consumption increased by 2.1 percent per year between 2000 and 2015 and by 3.6 percent per year among households in the bottom 40 percent of the consumption distribution (the bottom 40). Between 2010 and 2015, growth was even more pro-poor as the gap in the consumption growth rate at the mean (0.9 percent) and among the bottom 40 (4.4 percent) increased to 3.5 percentage points (Figure 1.11, panels a and b). After a modest increase between 2000 and 2005, inequality, as measured by the Gini index, declined from 40.8 in 2005 to 36.5 in 2015, slightly above the average of 35.4 in the Middle East and North Africa region (Figure 1.10).[5]

National level estimates hide sizable geographical disparities in living standards. Although poverty reduction occurred in both urban and rural areas, the pace of reduction in rural areas picked up only between 2010 and 2015. In 2015, about 26 percent of the population in rural areas was poor, compared with 10 percent in urban areas (see Figure 1.9). Regional gaps are sizable, too. A recently completed poverty map indicates that poverty is high in the Center-West (30.8 percent) and North-West (28.4 percent) regions of Tunisia (World Bank and INS 2020). Although the incidence in the coastal regions—

[3] DIOC (Database on Immigrants in OECD and non-OECD Countries: DIOC) database 2015/16, OECD, https://www.oecd.org/els/mig/dioc.htm.

[4] Between 2000 and 2005, no difference is detected between the growth rate of mean consumption and of consumption among the bottom 40 percent of the consumption distribution (the bottom 40).

[5] The Middle East and North Africa average is based on the latest available data for the following economies: Algeria (2011), Djibouti (2013), the Arab Republic of Egypt (2015), the Islamic Republic of Iran (2015), Iraq (2012), Israel (2014), Jordan (2010), Morocco (2013), Syria (2004), Tunisia (2015), West Bank and Gaza (2011), and Yemen (2014).

FIGURE 1.9. Trends in Poverty Headcount Rate Overall and by Area (National Poverty Line), 2000–15

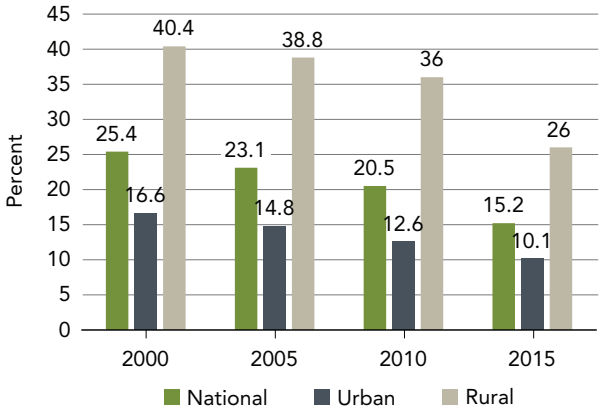
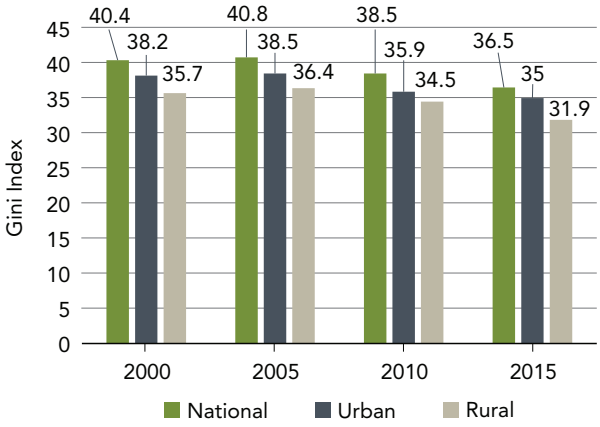
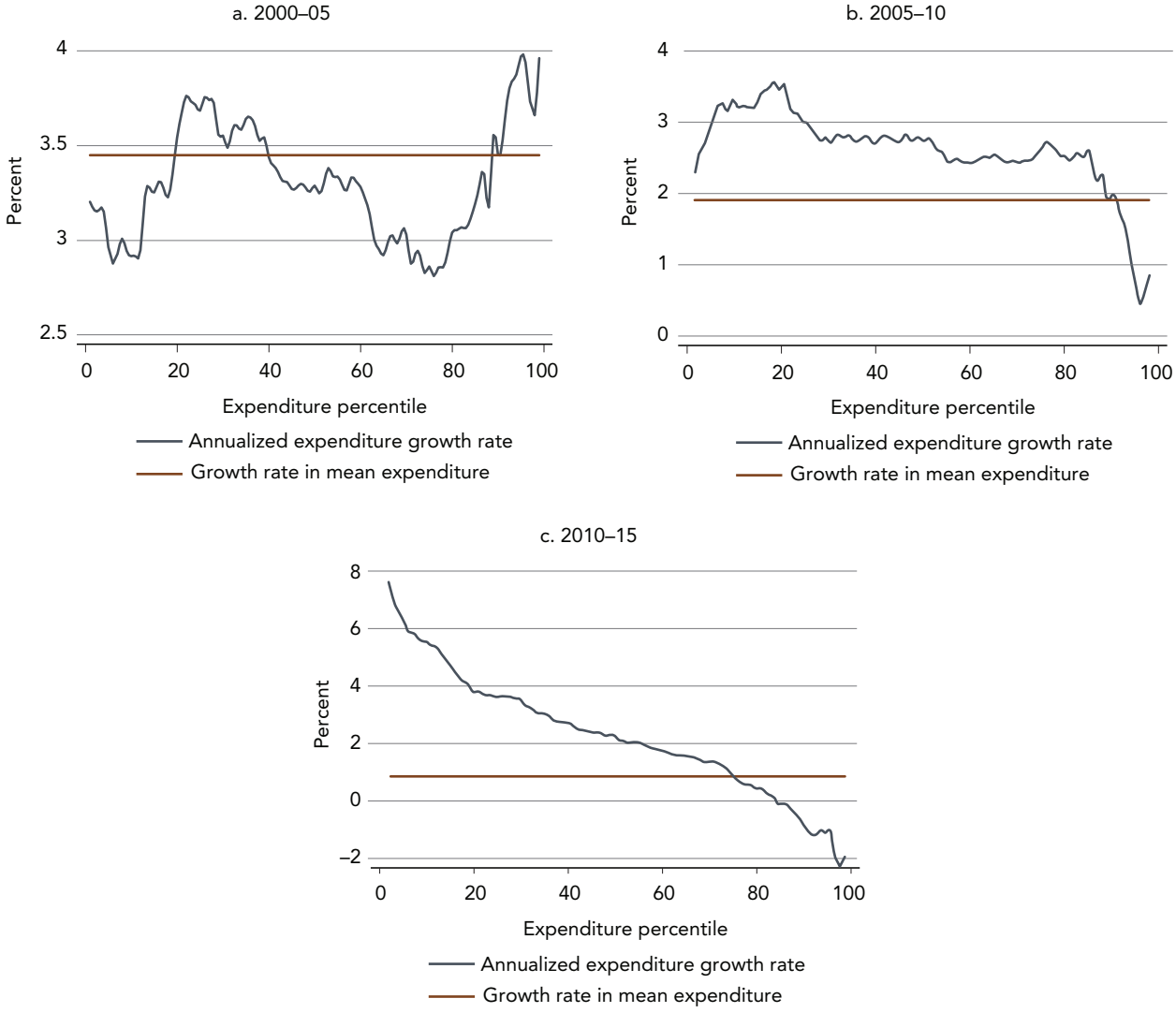


FIGURE 1.10. Trends in Inequality Overall and by Area (Gini Index), 2000–15



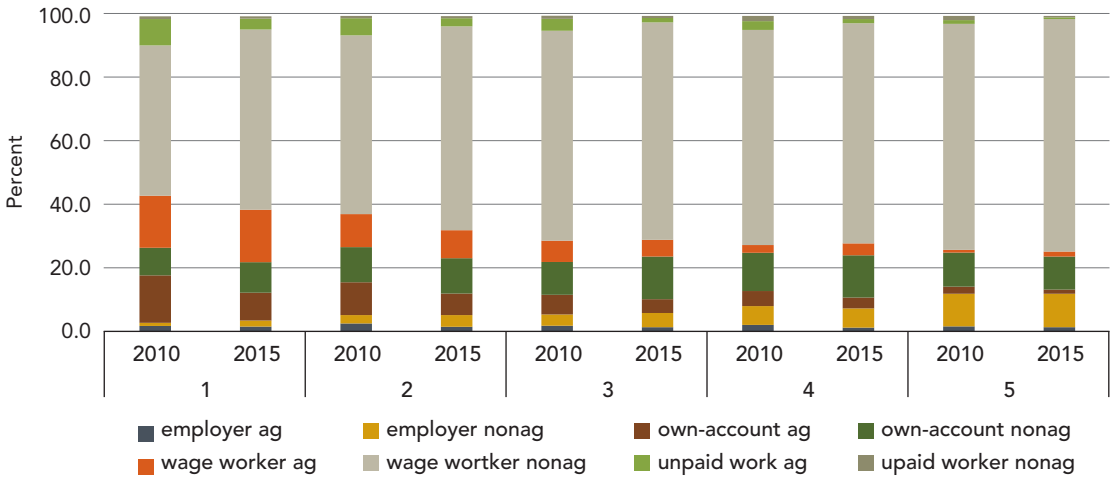
Source: Based on data from the EBCNV 2000, EBCNV 2005, EBCNV 2010, EBCNV 2015, INS.

FIGURE 1.11. Annualized Growth of per Capita Consumption Expenditures by Percentile, 2000–15



Source: Based on data from the EBCNV 2000, EBCNV 2005, EBCNV 2010, EBCNV 2015, INS.

FIGURE 1.12. Employment Type: Distribution of Employed Population, by Quintile of per Capita Household Expenditure, 2010 and 2015



the Greater Tunis Metropolitan Area (5.3 percent), North-East (11.6 percent), and Center-East (11.5 percent)—was low compared with the rest of the country, there were some delegations (districts) with relatively high incidence. Similarly, geographical gaps persist in terms of inequality. A large part of the inequality is driven by disparities within urban and rural areas and between regions. As of 2015, in urban areas, the Gini index is estimated at 35.0, while, in rural areas, it stood at 31.9, and the gap has widened over time.

The acceleration in the pace of poverty reduction between 2010 and 2015 seems to be largely associated with an expansion in public transfers. As low-income households largely rely on public transfers (69 percent of household income in 2014), namely, pensions and social assistance (Krafft and Davis 2021), they have a considerable impact on the welfare of the poor relative to other sources of income. In the aftermath of the revolution, Tunisia scaled up the cash transfer program, the Programme National d'Aide aux Familles Nécessiteuses. The number of beneficiary households increased dramatically, from 176,000 in 2011 to 234,000 in 2015, and the amount of the transfer was raised from TD 72 in 2010 to TD 150 in 2015 (real terms) (CRES, AfDB, and ADF 2017). In addition, health insurance at reduced prices (AMG2) was provided to an increasing number of vulnerable households, and generous consumption subsidies continued to shield purchasing power. A second channel might have contributed to lift some households out of poverty. The employment composition changed considerably with the shift out of agriculture and an increase in the share of wage employment. The largest increase in nonagricultural and wage employment was observed among individuals in the bottom 20 percent of the household consumption distribution (Figure 1.12). For example, in the lowest quintile, there was an increase from 47.6 percent to 57.0 percent in the share of household members employed in salaried jobs outside agriculture, a decline of over 50 percent in the share of unpaid family workers, and an increase in the share of nonagricultural employer and own-account workers.[6] Although no data are available on labor income among nonwage workers, the shift out of agriculture and toward wage employment was likely associated with higher income from labor and, therefore, an improvement in standards of living.

Gaps in living standards are largely explained by differences in household endowments, but differences in returns matter between urban and rural areas as well as across urban areas in different regions. Differences in household consumption can be decomposed into differences in household characteristics and differences in the returns to these characteristics.[7] Results from this decomposition

[6] Sectoral labor productivity differentials are discussed below.

[7] The Oaxaca-Blinder decomposition can be used to estimate differences in welfare across regions or urban and rural areas and understand the main components (Blinder 1973; Oaxaca 1973). The first step consists of estimating log-consumption equations as a function of a set of household characteristics, including head's age, marital status, educational level, labor force status and sector of employment, household size, household demographic structure (share of household members in different age-groups), household educational structure (share of household members with different educational level), the main source of heating of the dwelling, the main source of drinking water, and the distance to the nearest health center and the nearest commercial center. The second step implements the Oaxaca-Blinder decomposition to estimate gaps between areas of interest and obtain the explained (endowments) and unexplained (returns) components.

provide insights about the best approach to reducing welfare gaps. Urban-rural differences within regions are largely explained by gaps in endowments. Gaps between Greater Tunis and other urban areas are also ascribable to different endowments, except for the North East, Center East, and South West regions. where returns play a nonnegligible role. Gaps among rural areas in leading (North-East, Center-East, and Greater Tunis) and lagging regions largely derive from returns. Efforts to improve the productive characteristics of lagging regions as well as of rural populations are therefore key to continuing to raise living standards. This includes expanding access to basic services and to quality health and education services. Gaps across urban/rural areas of different regions can be narrowed through a combination of policies aimed at improving the characteristics of local populations and efforts that improve the connectivity of these areas. Policies aimed at encouraging economic activities and job creation in lagging locations through fiscal and financial incentives have not proven successful in other countries. The Tunisian experience also points to lack of success in the use of incentives to reduce regional disparities (World Bank 2014).

Economic Transformation and Sources of Growth

Economic growth has been increasingly driven by consumption, while the contribution of trade and investments has faded. Over the past two decades, public and private consumption has gained importance in GDP growth (Table 1.3), implying a shift of the economy to a less sustainable path of economic development as opposed to a growth led by sustainable factors, such as investment and trade. The contribution of both investments and net trade to GDP growth began declining in 2011. The contribution of exports to GDP growth dropped to 44.5 percent in 2011–19 from 85 percent in 2000–10, while the contribution of investments declined from 74.3 percent to –6.6 percent.

The external sector, particularly exports, has been weak since the 2008 financial crisis and the 2011 political unrest. Although all the components of aggregate demand have recently declined, the fall in exports has been particularly large. Exports as a share of GDP increased on average by about 2.3 percent per year between 2000 and 2010; they declined between 2011 and 2016, when they reached a low of 40 percent (Figure 1.13). Over the past two decades, export growth (in volume) has been subpar; only Indonesia ranks lower than Tunisia (Figure 1.14). By contrast, remittances have hovered around 4.5 percent of GDP over the last two decades. Receipts from tourism have decreased with the political uncertainty triggered by the 2011 revolution as well as with the impact of security incidents. They were estimated at 4.5 percent of GDP in 2019, compared with 8.4 percent in 2000. Recent trends paint a gloomy picture for Tunisia, which, as a small open economy, needs a strong external sector to thrive. Firms need to sell to foreign markets to grow, benefit from economies of scale, and boost job creation. Exporting firms can also drive productivity growth because they are exposed to international competition.

Exports have become increasingly diverse and complex, but have limited spillover on the rest of the economy. The product space of exports has become more diversified and more complex over time (Figure 1.15). Tunisia ranks 46th in the economic complexity index (ECI), which represents an improvement of 8 positions over the past decade and leaves it behind only its aspirational peers. And yet the economy is not taking full advantage of trade openness. Companies in the offshore sector benefit from tax exemptions and reductions and simplified administrative procedures, but have limited connection with the rest of the economy, with

TABLE 1.3. Annual Growth and Contribution to GDP Growth, by Expenditure Category and Subperiod, 2000–19

	Average annual growth			Contribution to GDP growth	
	2000–10	2011–19	2000–19	2000–10	2011–19
GDP growth	4.2	2.2	3.0		
Exports	3.6	1.0	12.0	84.6	44.5
Imports	4.0	0.0	2.5	94.3	40.2
Consumption	4.5	2.5	3.6	106.1	111.7
Government	0.9	0.6	0.8	22.3	27.3
Private	3.5	1.9	2.8	83.8	84.4
Investment	3.1	–0.1	0.6	74.3	–6.6

FIGURE 1.13. Trends in External Factors as a Share of GDP, 2000–19

Source: Based on data from the World Development Indicators, World Bank.

FIGURE 1.14. Trends in the Export Volume Index, Tunisia and Comparator Countries, 2000–19

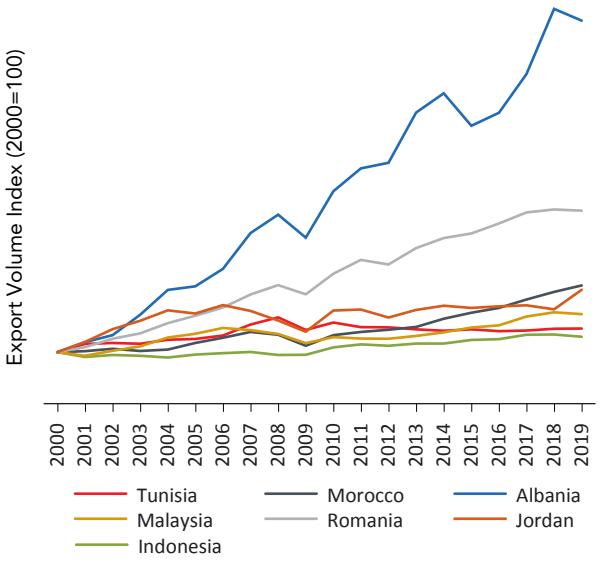
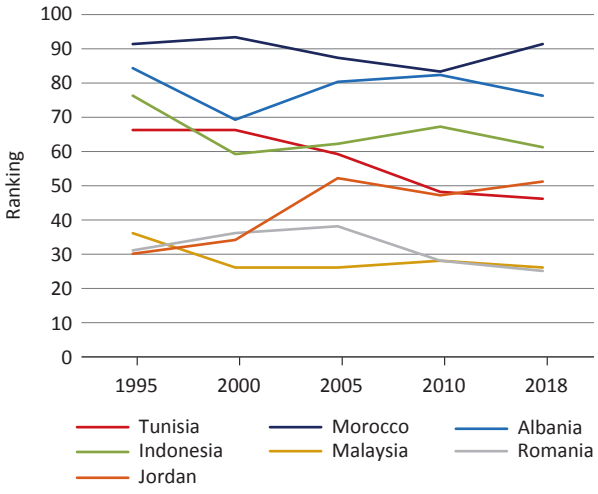


FIGURE 1.15. Economic Complexity Index Ranking, Tunisia and Comparator Countries, 1995–2018



Source: Based on data of World Development Indicators, World Bank; the Atlas of Economic Complexity, Harvard University.

implications in terms of the size of technological transfers and employment creation.

Structurally low investments have declined further over the last decade. Underpinning the recent meager economic performance, Tunisia has low levels of investment. In the 1990s and in the first decade of the 2000s, investments hovered around 24 percent of GDP (Figure 1.16). Since the revolution, both public and private investments have started a steady decline and reached 18 percent of GDP in 2019. This is below the average among income group and regional comparators, which was estimated at 28.6 percent and 21.9 percent, respectively, in 2019 (Figure 1.17). Investments in Tunisia also fall short of the levels observed in structural and aspirational peers, with the exception of Jordan (Figure 1.17). Over two-thirds of investments were concentrated in the services sector, which was protected from international competition (Figure 1.18).

Foreign direct investment (FDI) inflows have lost momentum, but they have gradually shifted toward manufacturing. Relative to both regional and income group comparators, at around 3.8 percent, FDI inflows were a sizable share of GDP before the 2008 crisis. FDI inflows picked up and reached 2.1 percent of GDP in 2019, well below the levels of the first decade of the 2000s (Figure 1.13). While, in the past, FDI inflows were mainly targeted at the energy sector (and, in some years, to telecommunication), they have partially shifted to manufacturing, which is key for growth, jobs, and exports (Figure 1.19). In 2019, 50 percent of FDI inflows were invested in manufacturing. The services sector continues to attract less than 10 percent of all FDI inflows, despite its importance as a key to improving job opportunities among university graduates.

The current account deficit is now above 10 percent of GDP, pushed by the subpar performance of exports. The continued deterioration in net exports, coupled with a decline in tourism receipts and a roughly constant flow of remittances, increased Tunisia's current account deficit above 10 percent of GDP (Figure 1.13 and Figure 1.20). The COVID-19 pandemic and the global economic downturn contributed to narrowing the deficit temporarily to 6.8 percent of GDP because of lower import demand and resilient remittances, despite a strong hit on exports and collapsing tourism receipts (IMF 2021). The current account deficit will remain a concern as current account balances reflect the net saving rate of the economy, and deficits are not sustainable in the long run.

In addition, Tunisia's fiscal stance has deteriorated significantly. The fiscal deficit increased from an average of –2.4 percent of GDP over 2000–10 to –5 percent of GDP on average in 2011–19 because of high recurrent expenditures, including the public wage bill, energy and food subsidies, and transfers to state-owned enterprises (SOEs) (see Figure 1.21). Recurrent expenditures increased from 17.9 percent of GDP in 2010 to 21.4 percent of GDP in 2011 and continued to grow, reaching 25.4 percent of GDP in 2013, before declining slightly, to 24.7 percent of

FIGURE 1.16. Trends in Gross Fixed Capital Formation, by Sector, 2000–19

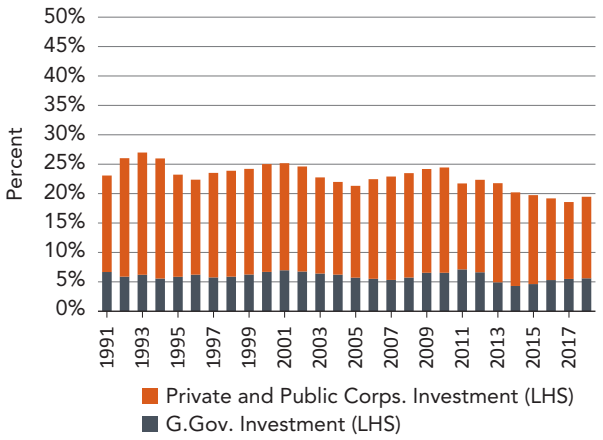
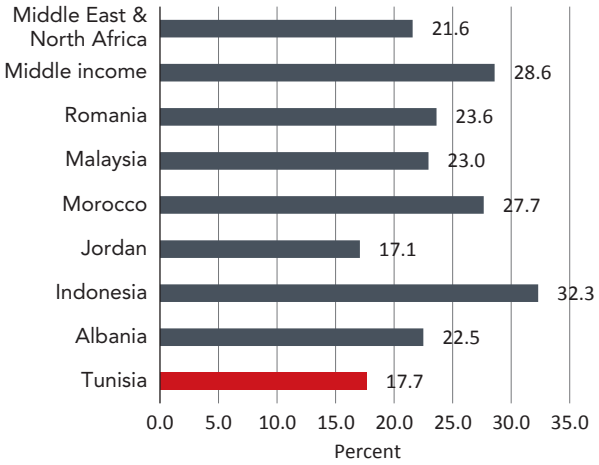


FIGURE 1.17. Gross Fixed Capital Formation in Tunisia and Comparator Countries, 2019



Source: Based on data from the World Development Indicators, World Bank.

FIGURE 1.18. Trends in the Sectoral Distribution of Gross Fixed Capital Formation, 2000–14

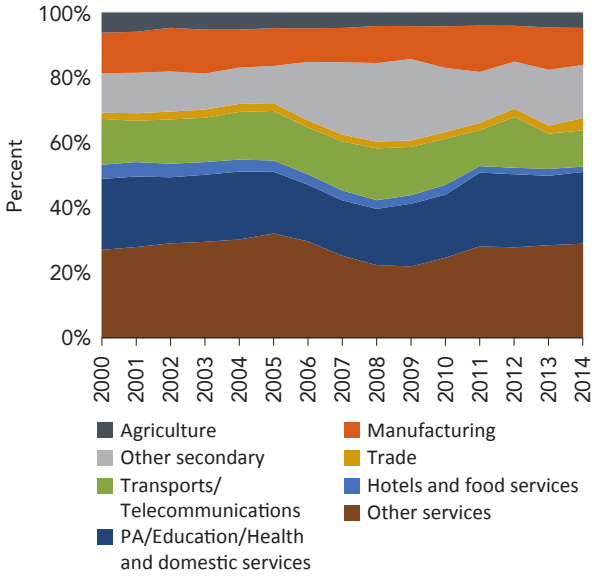
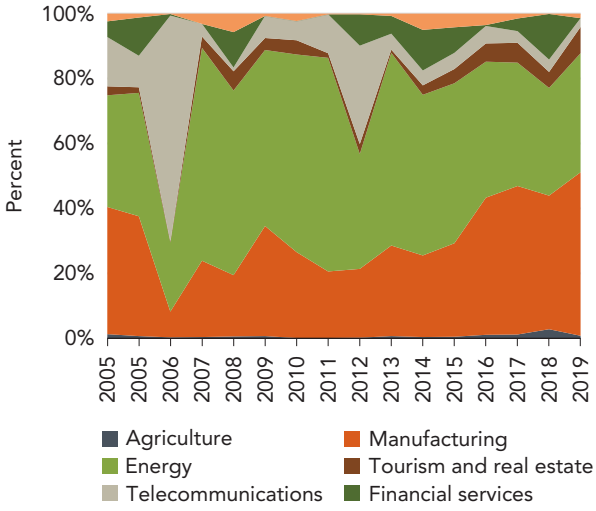


FIGURE 1.19. Trends in the Sectoral Distribution of Foreign Direct Investment, 2005–19



Source: Based on data from the National Accounts, INS; Central Bank of Tunisia.

GDP in 2017 (World Bank and AfDB 2020). The economic downturn triggered by COVID-19 and the fiscal response pushed up both the fiscal deficit and public debt in 2020. According to the International Monetary Fund (IMF), the fiscal deficit (excluding grants) is estimated at 11.5 percent of GDP, and central government debt is estimated to have increased to 87.6 percent of GDP in 2020.

The civil servant wage bill is one of the highest in the world, absorbing almost 50 percent of public expenditures and 15 percent of GDP. Expansion of public spending has helped address the challenge of insecurity and social demands that followed the 2011 revolution. With the 2012 law promoting access to public administration by people wounded in the revolution and those covered by the amnesty of 2011, public sector hiring and the salaries of civil servants rose considerably (Brockmeyer, Khatrouch, and Raballand 2015; INS 2017; OECD 2018). The wage bill rose from 10.5 percent of GDP in 2000 to 14.6 percent of GDP in 2019, and it is estimated to have reached 17.6 percent of

FIGURE 1.20. Trends in the Current Account Balance as a Share of GDP, 2000–19

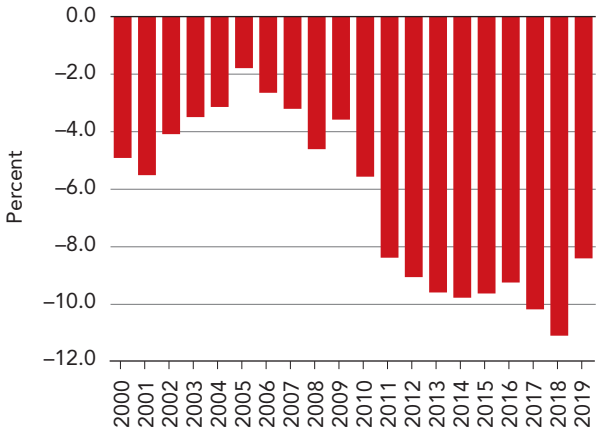
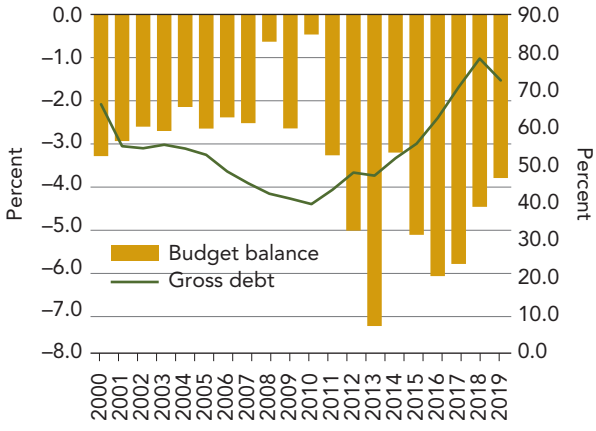


FIGURE 1.21. Trends in General Government Debt and Budget Balance as a Share of GDP, 2000–19



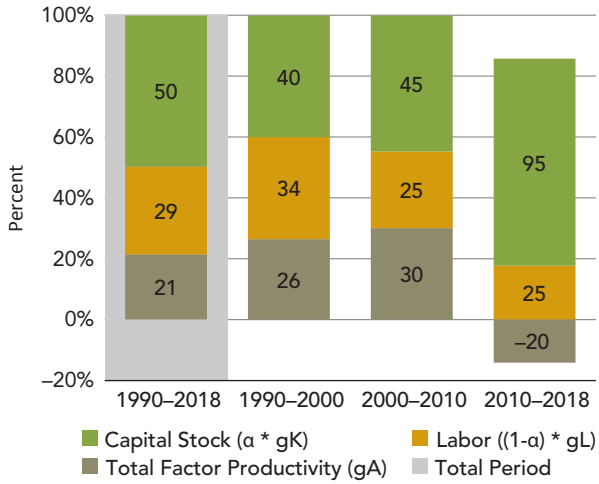
Source: Based on data from the World Economic Outlook, International Monetary Fund.

GDP in 2020, following additional public sector hiring, of which about 4 in 10 in the health sector, and increases in salaries (IMF 2021). In 2020, the level was about twice the median of 8.7 percent of GDP in non–oil-producing developing markets and ranks Tunisia as the highest among non–oil-producing developing markets (IMF 2021). This bloated wage bill crowds out other public expenditures. In 2020, it consumed about 75 percent of tax revenues, and it was also almost three times the size of public investment and almost six times the spending on social programs (IMF 2021).

The twin deficit is not sustainable in the long term. Fiscal balances reflect the net savings rate of the public sector, and current account balances reflect the net savings rate of the whole economy (Arezki et al. 2019). Tunisia's public debt risks becoming unsustainable in the medium term unless a number of reforms aimed at reducing the fiscal deficit are adopted, including lowering the public wage bill, reducing energy subsidies, strengthening the targeting of social protection spending, and making the tax system more efficient and fair. The positive correlation that exists in Tunisia between the current account and the fiscal deficit raises the question of the sustainability of the first, particularly in situations in which the latter is motivated by expenditures that do not have large multiplier effects.

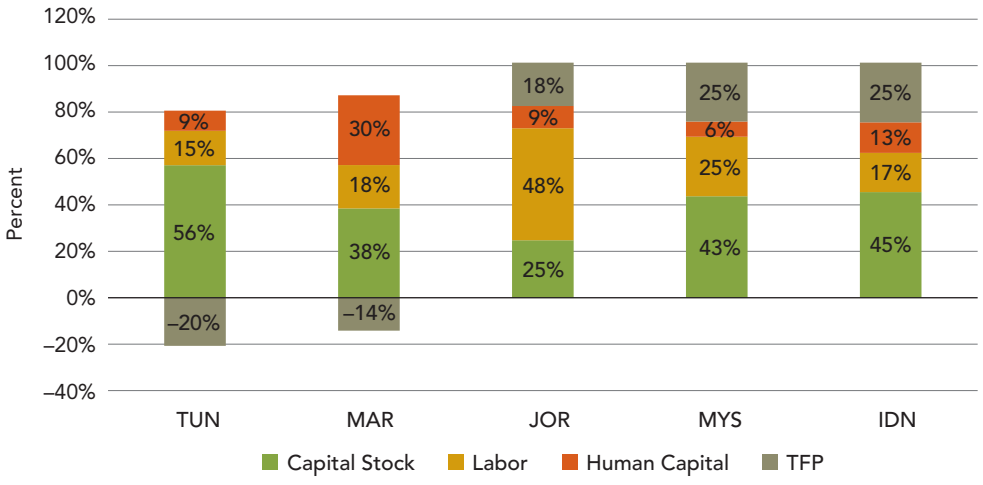
Recent economic growth has been hampered by modest gains in total factor productivity (TFP). Before the revolution, the accumulation of capital and labor contributed on average 45 percent and 25 percent to growth, respectively (Figure 1.22). The remaining 30 percent of growth could be attributed to improvements in TFP. Since 2010, the role of capital accumulation has increased to 95 precent; labor has continued to account for about 25 percent, while TFP has had a negative effect on growth (–20 percent). Although the levels are low, the expansion in investments and employment increasingly account for most of the growth, indicating the existence of flaws in the economy. Controlling for human capital, one finds that the contribution of capital, labor, and human capital is estimated at 56, 15, and 9 percent, respectively. Tunisia has the lowest total labor contribution to economic growth among comparator countries (Figure 1.23). The country's

FIGURE 1.22. Factor Decomposition of GDP Growth, by Subperiod, 1990–2018



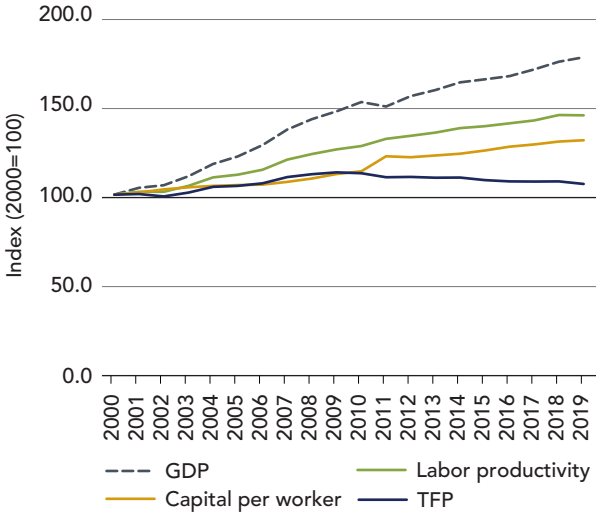
Source: Based on background paper for the 2021 Tunisia SCD Update.

FIGURE 1.23. Factor Decomposition of GDP Growth with Human Capital, Tunisia and Comparators, 201018



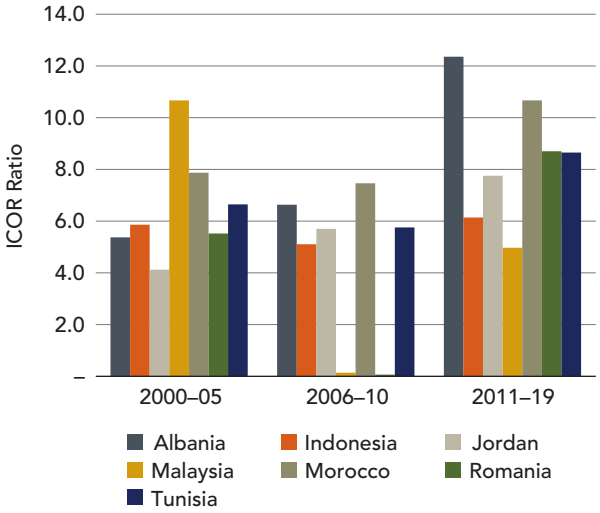
Source: Based on background paper for the 2021 Tunisia SCD Update.

FIGURE 1.24. Trends in GDP, Total Factor Productivity, Labor Productivity, and Capital per Worker, 2000–19



Source: Based on data from the Penn World Table version 10.0.

FIGURE 1.25. Trends in the Incremental Capital Output Ratio, Tunisia and Comparator Countries, by Subperiod, 2000–19



Source: Based on data from the Economist Intelligence Unit and Tunisian Institute of Competitiveness and Quantitative Studies.

human capital index, a measure of the productivity of the next generation, is 0.51 compared with 0.56 for Jordan, 0.5 for Morocco, and as high as 0.62 for a benchmark aspirational country, such as Malaysia. Similarly, the role of TFP is the lowest (and negative) among comparator countries (Figure 1.23).

The weak performance and recent decline of TFP might suggest a misallocation of resources. TFP performance over the past decade has been negative and subpar relative to rapidly growing economies, while labor productivity has continued to increase, although at a lower rate (Figure 1.24).[8] One possible explanation for this trend is inefficiency in the use of capital that could derive from allocative inefficiency. Thus, capital may not flow to the most productive sectors of the economy. Or it may arise because of technical inefficiency, that is, weak capacity in converting inputs into output.[9] The rate of capital accumulation has slowed recently, and capital per worker has increased at a lower rate since 2011. The trend in the incremental capital output ratio indicates that capital investments are decreasing in efficiency and produce marginal returns (Figure 1.25).

However, the fact that private investments have continued is a signal that returns to investments have remained high. There are also factor distortions linked to the barriers to entry and exit of firms and regulatory failures. Capital is not flowing to the most efficient firms. Although factor accumulation is appropriate for a country such as Tunisia, which has a large stock of untapped human capital, productivity growth is necessary to generate more wealth per capita and ultimately more rapid jobs creation. Had TFP growth been higher, labor productivity gains might have translated into higher output growth. Employment to growth elasticity would not matter as much because employment growth would be greater.

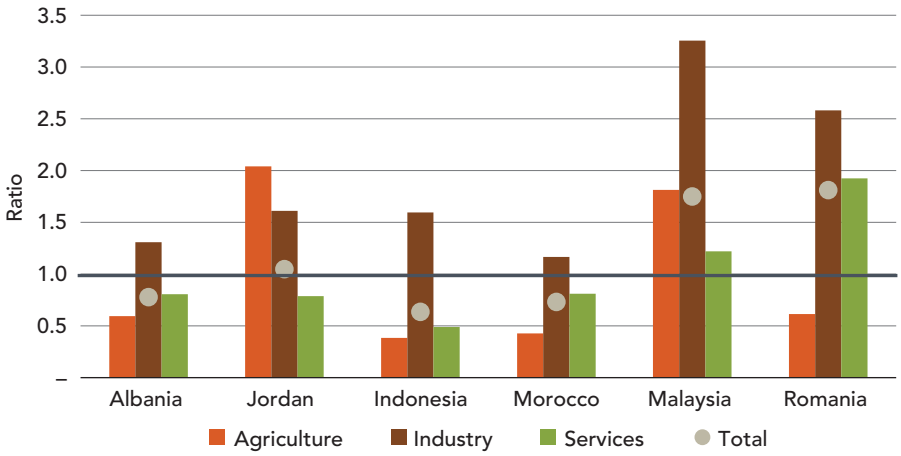
Aggregate labor productivity in Tunisia is above that of structural peers, but it below the regional average because of lagging secondary sector. Another commonly used indicator of productivity is labor productivity, which is strictly correlated with changes in living standards through wages. Labor productivity measures gross value added per unit of labor input and indicates how efficiently labor is used in production.[10] In Tunisia, labor productivity reached

[8] Many developed countries had TFP growth of over 50 percent between 1950 and 1970, with growth rates of TFP above 2 percent per year (Caves, Christensen. and Swanson 1980).

[9] However, this might not be the only explanation of a TFP decline because TFP may decrease because of a global decline in TFP. In 2000–19, many industrialized countries posted modest TFP growth or a decline, whereas large developing economies such as China, Indonesia, Nigeria, the Philippines, and the Russian Federation posted considerable TFP growth. In addition, the methodology adopted to construct the TFP productivity measure used in the analysis assumes that factor shares are constant across countries and over time.

[10] First, in this report, labor productivity is measured as gross value added per worker because information on hours worked is not readily available. This is problematic if large gaps in working hours exist across sectors and if sizable changes occurs over time. Second, changes in labor productivity result from the combined effects of various factors, including technological change, capital accumulation, the capacity of workers, and the intensity of their efforts; it can therefore be difficult to isolate the contribution of each component.

FIGURE 1.26. Labor Productivity Gaps Overall and by Sector, Tunisia and Comparator Countries, 2017



Source: Based on data from the Labor Force Survey (ENPE) and Statistical Yearbook, INS; World Development Indicators, World Bank.

$36,650 (constant 2017 PPP) in 2019, above the average among middle-income countries ($27,850 constant 2017 PPP), but still below the regional average ($41,650 constant 2017 PPP) (Figure 1.27 and Figure 1.28). The productivity of Tunisia's agricultural sector is relatively high among income group comparators and its structural peers (Figure 1.26) as is the productivity of the services sector. By contrast, Tunisia's secondary sector has lost ground and is considerably less productive than in Tunisia in other middle-income countries.[11]

Labor productivity gaps have narrowed over time, largely thanks to productivity gains in agriculture. Labor productivity gaps between agriculture and other sectors are the driving force of the process of structural transformation that pushes labor from low- to high-productivity sectors. In Tunisia, labor productivity gaps have narrowed over time (Figure 1.29). Such reduction is the by-product of three factors: (1) a rapid increase in agricultural labor productivity both before and after the revolution, (2) a decline in productivity in secondary sectors since 2011, and (3) a meager increase in labor productivity in the services sector. The secondary sector was on average as productive as the services sector in 2006, but its subpar performance over time translated into a decline of about 15 percent relative to services. Within industry, mining, other manufacturing, and construction posted the largest drop in output per worker, whereas, in services, all sectors except accommodation and food activities and other services were more productive in 2017 relative to 10 years earlier.

Although structural change has been slow over the past decade, Tunisia is ahead of the average middle-income country in terms of nonagricultural employment. Between 2006 and 2017, structural transformation proceeded at a pace slightly below the average in other middle-income countries.[12] In 2017, agriculture accounted for 15 percent of total employment, down from 19.2 percent in 2006 (–4.4 percentage points) (Figure 1.30). This share is below the average in middle-income countries, at 28.1 percent in 2017 (Figure 1.32, panel a). The employment share of the secondary sector increased slightly from 32 to 33 percent (+1.3 points), well above the middle-income countries average of 20.1 percent, and the services sector contributed 52 percent of total employment relative to 48 percent in 2006 (+ 3.1 points). The latter is in line with the share of 51.9 percent among middle-income countries. Within the secondary sector, the share of manufacturing declined to

[11] The productivity gaps described here reflect differences in average labor productivity. What matters is productivity at the margin that, with well-functioning markets and no constraints, should be equalized. Under a Cobb-Douglas production function, the marginal productivity of labor equals the average productivity, multiplied by the employment share. So, if labor shares differ greatly across sectors, comparing average labor productivities can be misleading. For example, average productivity in the mining sector is high. This is likely to be a reflection of the fact that the employment share of value added in this capital-intensive sector is small. Nonetheless, other sectors, such as agriculture, manufacturing, construction, public administration, and health and education services, have a comparable employment share, and gaps in average productivity can therefore approximate gaps in marginal productivity reasonably well.

[12] The average change in agricultural employment in middle-income countries over the period 2006–17 was –6 percentage points, whereas the average change in the secondary and tertiary sectors was +0.6 and +5.4 percentage points, respectively (based on data of World Development Indicators and ILO employment modeled estimates).

FIGURE 1.27. Trends in Output per Worker, 2000–19

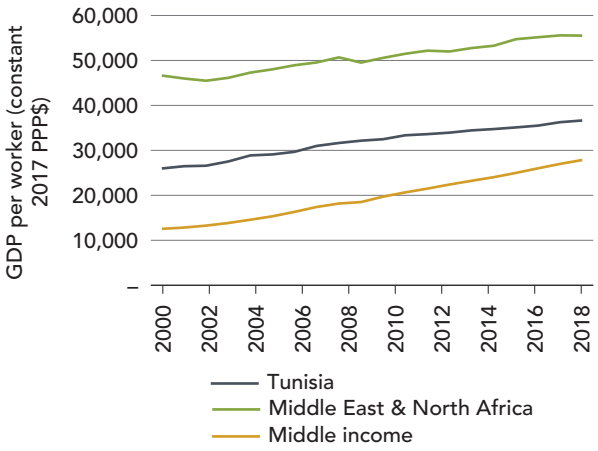
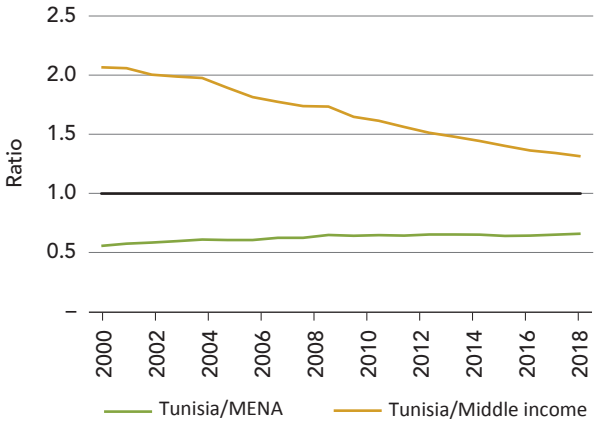
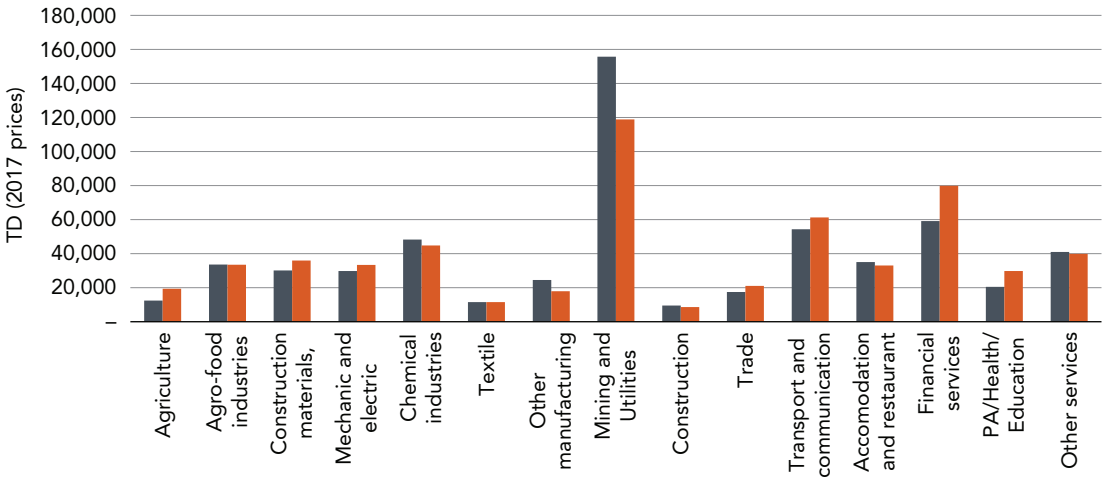


FIGURE 1.28. Ratio of Output per Worker in Tunisia vs. Middle East and North Africa, 2000–19



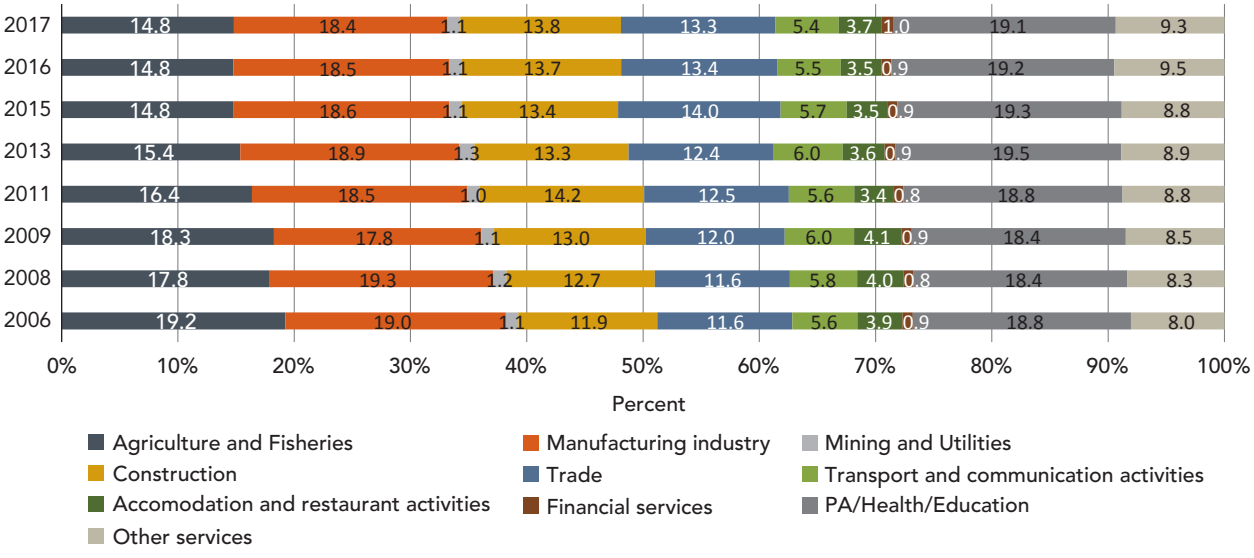
Source: Based on data from the World Development Indicators, World Bank.

FIGURE 1.29. Labor Productivity, by Sector, 2006 and 2017



Source: Based on data from the Labor Force Survey (ENPE) and Statistical Yearbook, INS.

FIGURE 1.30. Trends in the Sectoral Distribution of Employment, 2006–17



Source: Based on data from the Labor Force Survey (ENPE), INS.

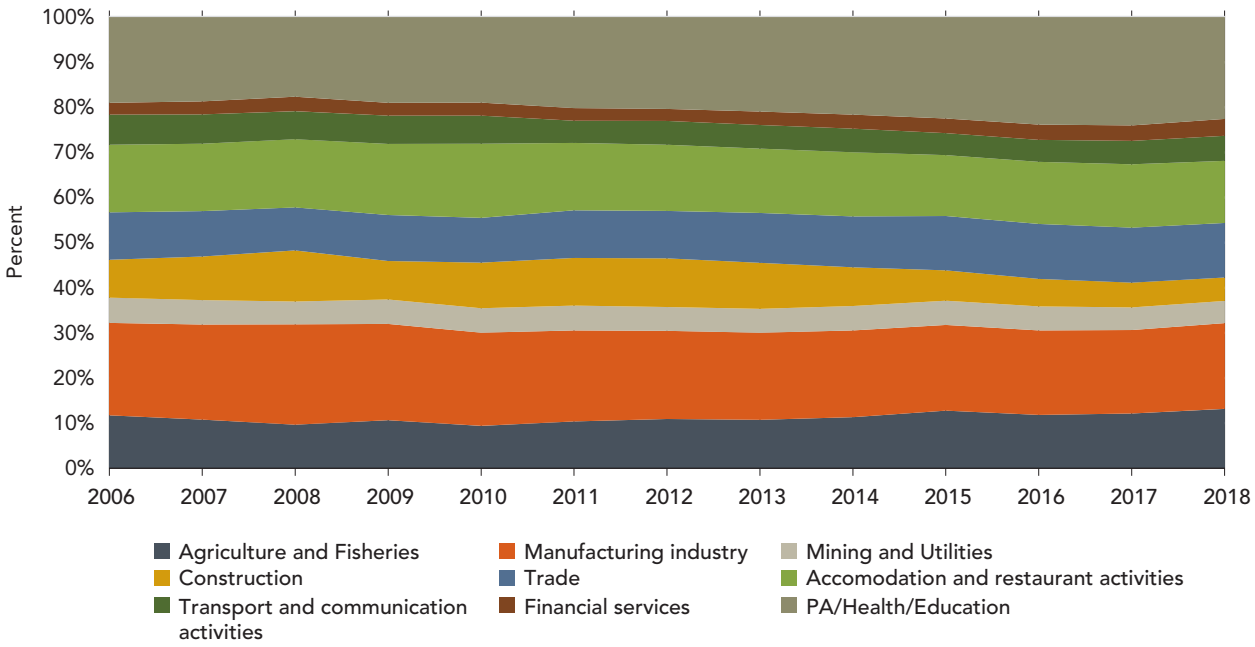
18.4 percent, although some industries posted an increase such as production of agrifood and mechanical and electrical goods. The construction sector's share increased by about 2 percentage points. Within the services sector, transport and communication, as well as accommodation and food services recorded a small decline in share, while trade and other services rose by 1.7 and 1.3 percentage points, respectively.

On the production side, the sectoral structure of the Tunisian economy is in line with the average middle-income country. Agriculture accounted for about 11 percent of value added in 2018, while industry contributed some 25 percent, and the service sector took the lion's share with over 63 percent (Figure 1.31). This puts Tunisia broadly in line with the average middle-income country in terms of structural change measured on the production side (Figure 1.32, panel b).

Yet, 6 workers in 10 are still employed in sectors with below average productivity. Workers have an incentive to move from lower to higher labor productivity sectors as long as labor productivity gaps persist across sectors and such gaps are reflected in the wages paid to workers. However, markets are not always competitive. Labor productivity can differ from wages within sectors, and workers might face barriers to mobility across sectors, for example because getting a job in a different sector might imply moving to a different location or might require a completely different set of skills. In 2017, 60 percent of Tunisian workers were employed in sectors with below average productivity (Figure 1.33). The low productivity sectors include construction (13.8 percent of employment), agriculture (14.8 percent), trade (13.3 percent), and manufacturing (18.4 percent). In addition, about 19 percent of workers are employed in public administration, education, and health services, which are sectors with a productivity level only slightly above the average. Except for mining, which is typically a capital-intensive sector that employs a small share of workers, high productivity sectors, including transport and telecommunication, financial services, accommodation and food services activities, and other services, employ less than 20 percent of Tunisian workers (Figure 1.33).

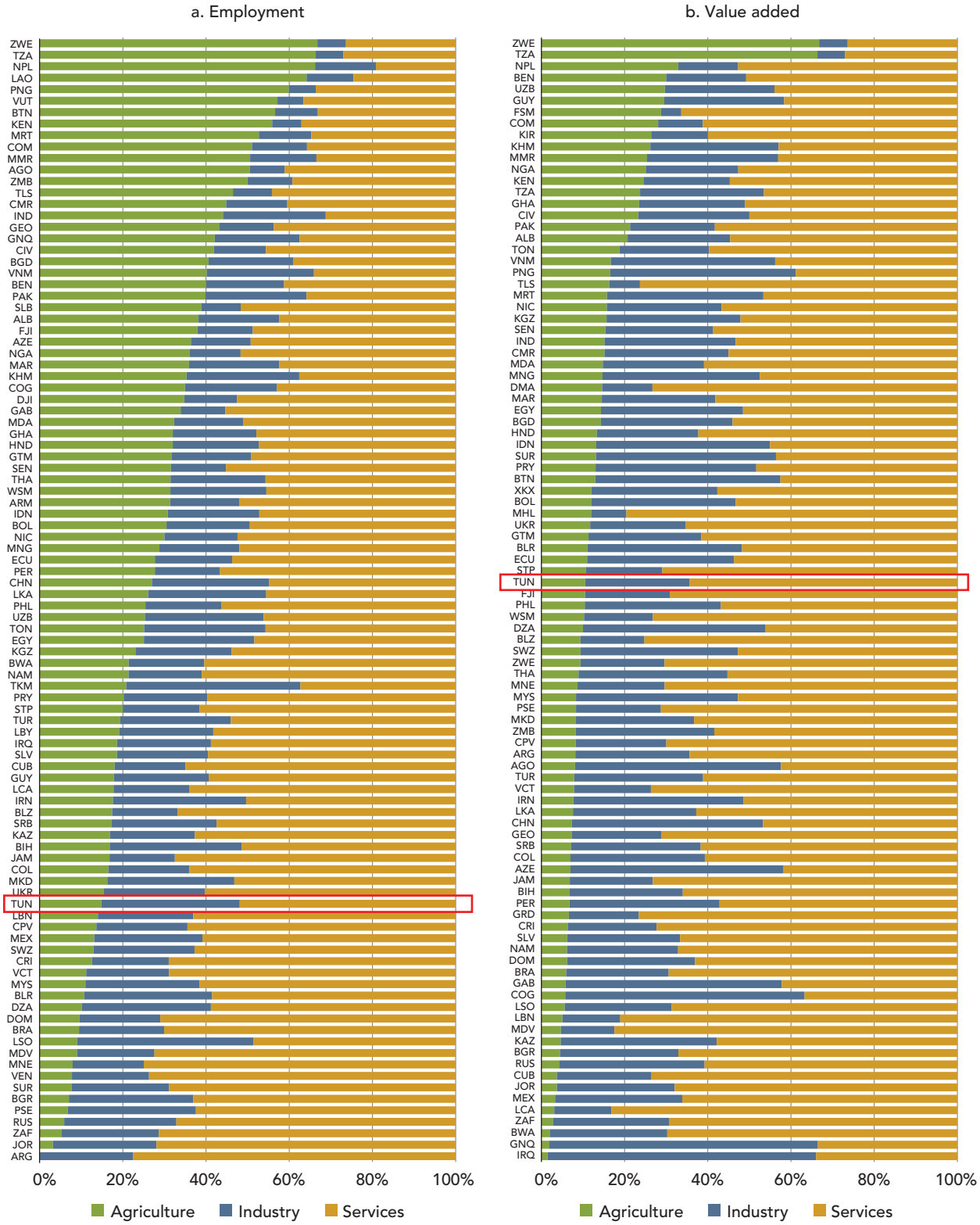
Economic growth was underpinned by labor productivity gains before the revolution and by employment creation thereafter. To ascertain the contribution of structural transformation to economic growth, the analysis carried out a decomposition of GDP per capita growth. GDP growth is decomposed into the contribution of changes in demographics, in employment, and in labor productivity (Box 1.1). Between 2006 and 2011, output per worker, a measure of labor productivity, increased by almost 3 percent per year. It was the main driver of economic

FIGURE 1.31. Trends in the Sectoral Distribution of Value Added, 2006–17



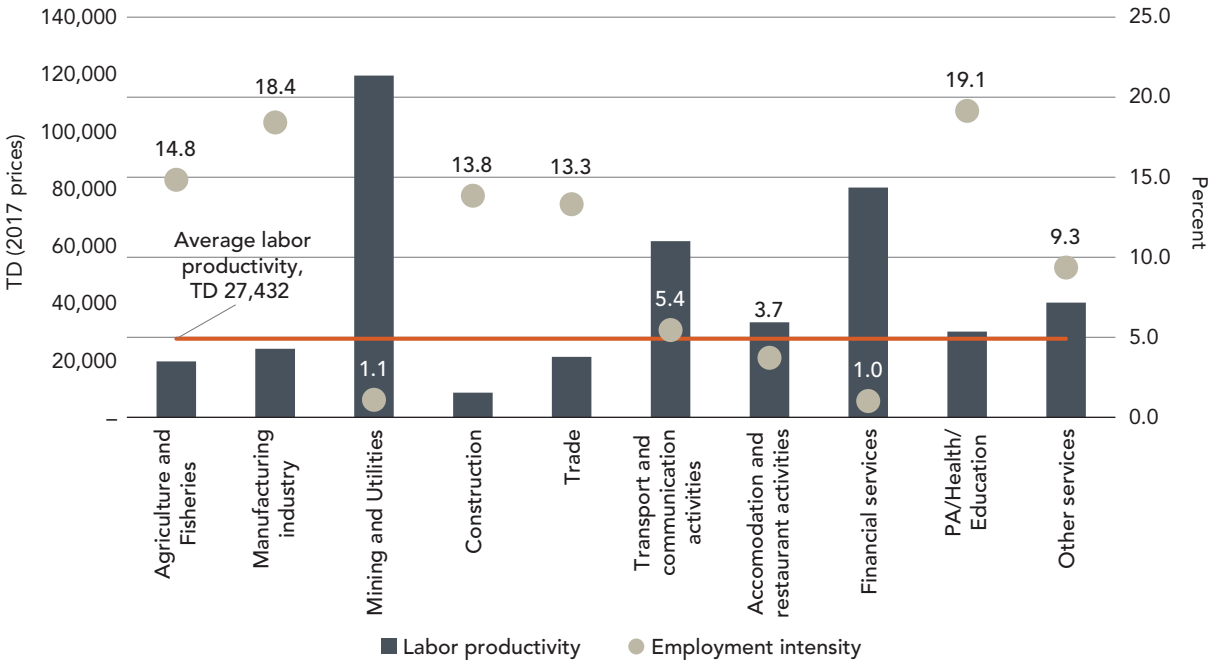
Source: Based on data from the Statistical Yearbook, INS.

FIGURE 1.32. Sectoral Distribution of Employment and Value Added, Tunisia and Middle-Income Countries, 2017



Source: Based on data from the Labor Force Survey (ENPE) and Statistical Yearbook, INS; World Development Indicators, World Bank.

FIGURE 1.33. Labor Productivity and Employment Intensity, by Sector, 2017



Source: Based on data from the Labor Force Survey (ENPE) and Statistical Yearbook, INS.

growth, with a contribution of 104.6 percent. Demographics, captured by the share of population of working age, contributed about 20 percent. Employment contributed negatively (–24.5 percent) to economic growth because employment creation fell short of the increase in the working-age population (Figure 1.34). Following the revolution (2011–17), labor productivity gains faded (+0.2 percent per year on average) as value added growth was outpaced by employment creation. Employment rose at a rate of 1.7 percent per year on average and contributed 80.4 percent to economic growth, becoming the main driver of growth. Demographics had a modest negative effect on growth as the number of elderly increased more rapidly than the population of working age (Figure 1.34). Over this period, Tunisia was the country with the smallest contribution of labor productivity to economic growth among comparators (Figure 1.36). It stands out though as the country with the largest positive effect of employment creation on economic performance.

Efficiency gains in the use of labor achieved before the revolution were lost to increases in employment levels. Before 2011, labor productivity increased in many sectors, except for accommodation and food services, construction, the chemical industry, and other manufacturing (Figure 1.35, panel a). Some of the sectors that posted large gains in output per worker, such as mining, financial services, and transport, were high-productivity sectors at the beginning of the period, while others, including mechanical goods manufacturing, public administration, health and education, and agriculture, were sectors with initial levels of productivity slightly above or below average. Except for agriculture and textiles, where employment declined, productivity gains were not the by-product of a reduction in the number of workers, but the results of the ability of firms to combine inputs more efficiently and increase value added. By contrast, in the second period (2011–17), labor productivity increased only in a handful of sectors, whereas employment grew across the board, with the exception of textiles and chemical industries (Figure 1.35-, panel b). In 2 sectors out of 3 where output per worker decreased, the decline is ascribable to a more rapid growth of employment relative to value added as opposed to a decline in value added. The sectors with the largest productivity gains were all sectors with productivity levels below the average in 2011, namely, agriculture, trade, and public administration, and health and education services.

Growth in labor productivity was driven by within-sector gains in productivity before the revolution. Changes in labor productivity can be unpacked into changes in output per worker within sectors and changes in output per worker ascribable to shifts in labor across sectors (see Box 1.1). The latter is one of the ways to measure the process of structural transformation, that is, the reallocation of economic activity across sectors that accompanies modern economic growth

BOX 1.1. Shapley Decomposition of Changes in Value Added per Capita

The methodology decomposes value added per capita growth using several consecutive steps. In a first step, growth in value added per capita is decomposed into changes in employment ratio, changes in output per worker (or labor productivity), and demographic changes, as follows (**Figure B 1.1**):

$$\frac{Y}{N} = \frac{Y}{E} \times \frac{E}{A} \times \frac{A}{N}. \tag{B1.1.1}$$

Y = total value added; N = total population; E = total employment; A = total population of working-age; $Y/E = \omega$ – → output per worker; $E/A = e$ – → share of working-age population that is employed; $A/N = a$ – → share of the total working-age population.

In the second step, employment changes, Δe, are further decomposed into changes in employment by sectors:

$$\Delta e = \sum_{i=1}^{S} \Delta e_i. \tag{B1.1.2}$$

The third step decomposes changes in output per worker into changes linked to changes in output per worker within sectors and changes linked to structural transformation or the reallocation of workers across sectors by noting as follows:

$$\frac{Y}{E} = \sum_{s=1}^{S} \frac{Y_i}{E_i} \times \frac{E_i}{E} \text{ or } \omega = \sum_{s=1}^{S} \omega_i s_i, \tag{B1.1.3}$$

where $\left(\omega_i = \frac{Y_i}{E_i}\right)$ is output per worker in sector i; and $\left(s_i = \frac{E_i}{E}\right)$ is employment share in sector i. Taking differences of equation B1.1.3 between the final year (t) and the initial year ($t - \tau$), one obtains the following:

$$\Delta\omega_t = \underbrace{\sum_{i=1}^{S} \bar{s}_i \Delta\omega_{i,t}}_{\text{Within component}} + \underbrace{\sum_{i=1}^{S} \bar{\omega}_i \Delta s_{i,t}}_{\text{Structural transformation}}, \tag{B1.1.4}$$

where $\Delta\omega_{i,t}$ and $\Delta s_{i,t}$ are the changes between period t and ($t - \tau$) in output per worker and employment share in sector i, respectively. Thus, changes in output per worker are the weighted sum of changes in output per worker in all sectors, where the weights are the employment shares of each sector. The weights of each sector are calculated as averages over the two periods of the shares in employment and the shares in output per worker in each sector.

A fourth step goes further in understanding the role played by each sector on the aggregate effect of employment shifts across sectors. Increases in the share of employment in sectors with above-average productivity will increase overall productivity and contribute positively to the structural transformation term. By contrast, movements of labor out of sectors with above-average productivity will have the opposite effect. Similarly, increases in the share of employment in sectors with below average productivity will reduce growth, while reductions in their share will contribute positively to growth. If a sector has productivity below average and its employment share shrinks, then its contribution will be positive; Thus, outflows of workers from this low-productivity sector will have contributed positively to the increase in output per worker. If the same sector sees an increase in its employment share, such inflows of workers into this low-productivity sector will contribute negatively to output per worker and thus have a negative effect on the structural transformation term. The magnitude of the effect will be proportional to (a) the difference in the sector's productivity with respect to the average and (b) the size of the employment shift.

The last step combines all the elements together to calculate how much each factor contributes to GDP per capita growth.

FIGURE B 1.1.1. Decomposition of per Capita GDP Growth

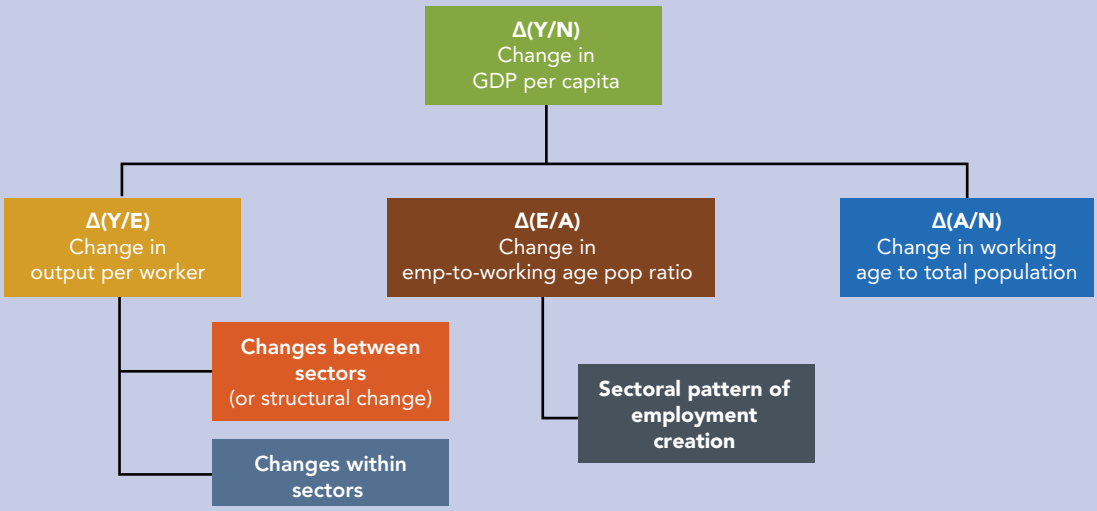
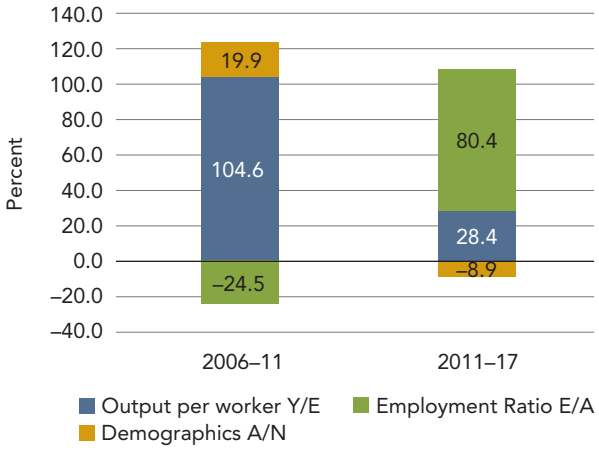


FIGURE 1.34. Decomposition of Changes in per Capita Value Added, by Subperiod, 2006–17



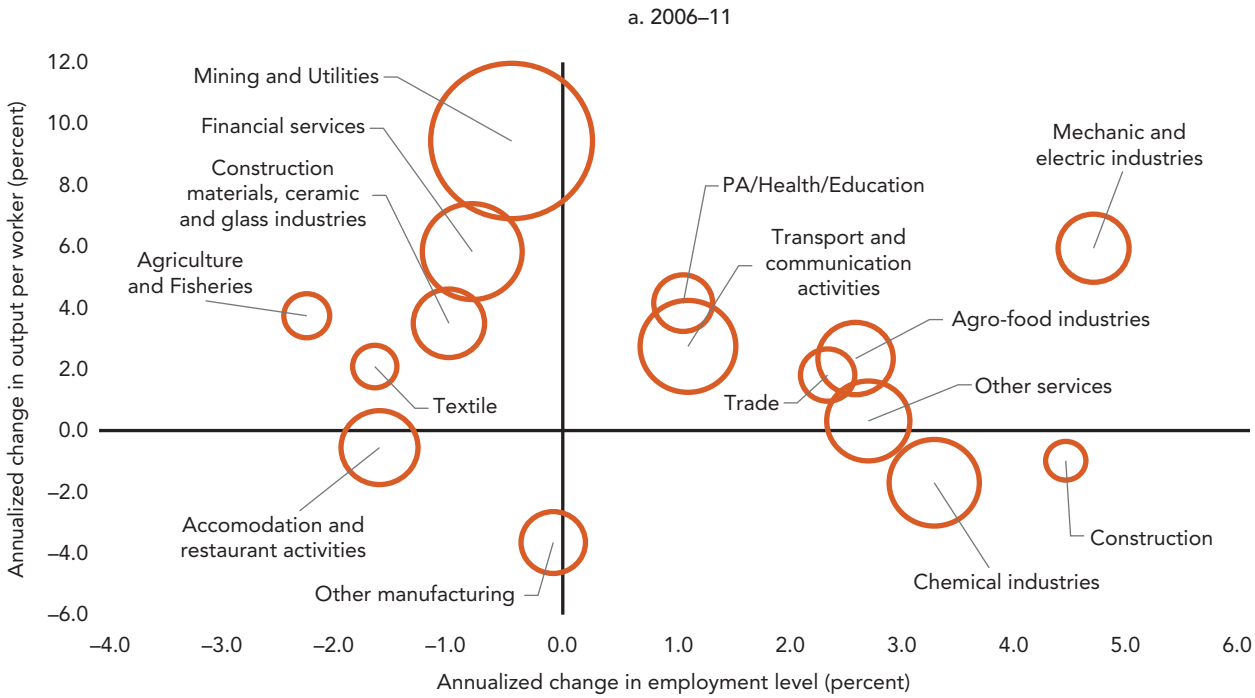
Source: Based on data from the Labor Force Survey (ENPE) and Statistical Yearbook, INS; World Development Indicators, World Bank.

(Herrendorf, Rogerson, and Valentinyi 2014). This step of the decomposition indicates that, between 2006 and 2011, the within-sector component explained virtually all the productivity gains. The increase in output per worker was particularly high in mining, utilities, financial services, public administration, health and education services, agriculture, manufacturing, and transport and communication (Figure 1.37, panel a). Structural change exerted a small negative effect because of the reallocation of labor toward sectors with below average productivity and away from sectors with above-average productivity.

Gains in labor productivity achieved before the revolution were lost to increases in employment. Between 2011 and 2017, the within-sector component contributed negatively because sectors posted a decline in productivity, with a few exceptions (public administration, health and education services, agriculture, trade, and financial services). The between-sector component that captures the effect because of the reallocation of labor from sectors with lower than average labor productivity to sectors with higher than average labor productivity explained the largest share of the modest labor productivity gains (Figure 1.37, panel b). However, the structural change observed during this period will not be able to drive economic growth going forward. Labor shifted to sectors with above-average productivity, but with negative productivity growth.

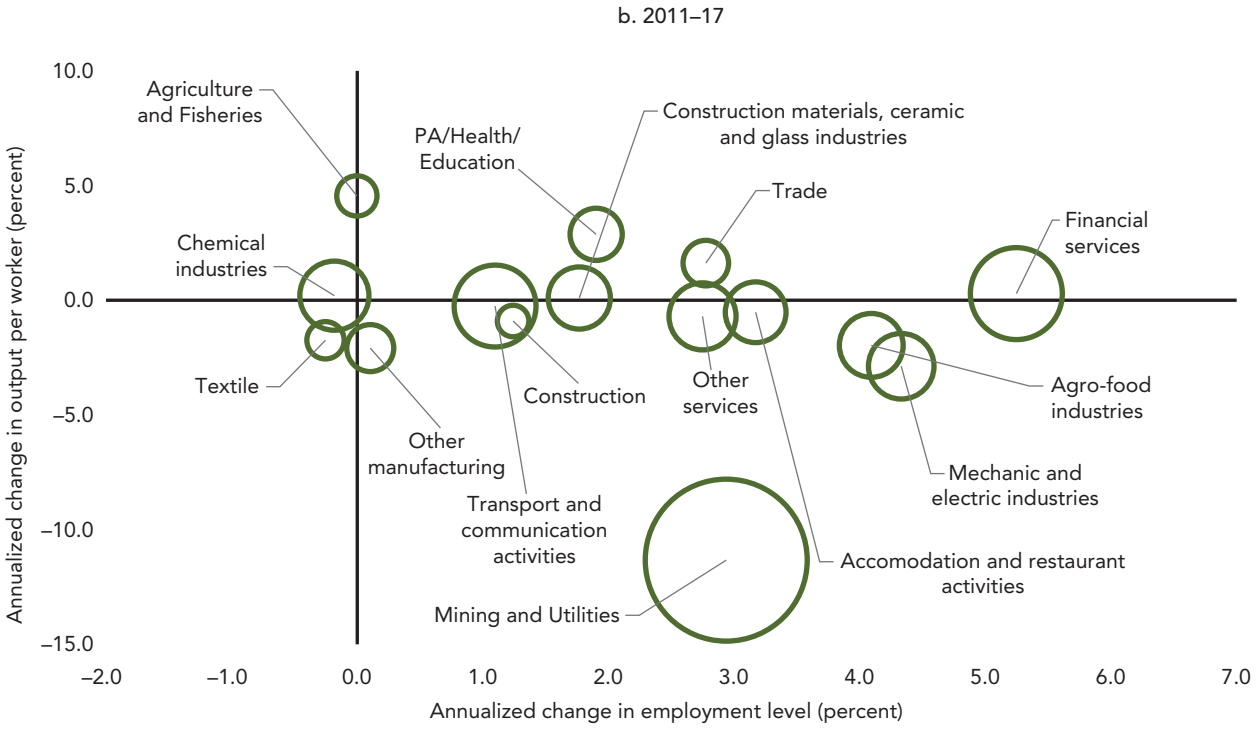
The Tunisian economy is stuck in a low productivity equilibrium and operates below potential. Before the revolution, sector level productivity increased the most in mining, utilities, public administration, agriculture, transport and communication, and manufacturing. With the exception of manufacturing, the productivity gains obtained before the revolution occurred in monopolistic or noncontestable

FIGURE 1.35. Annualized Change in Labor Productivity and Employment, by Sector, 2006–17



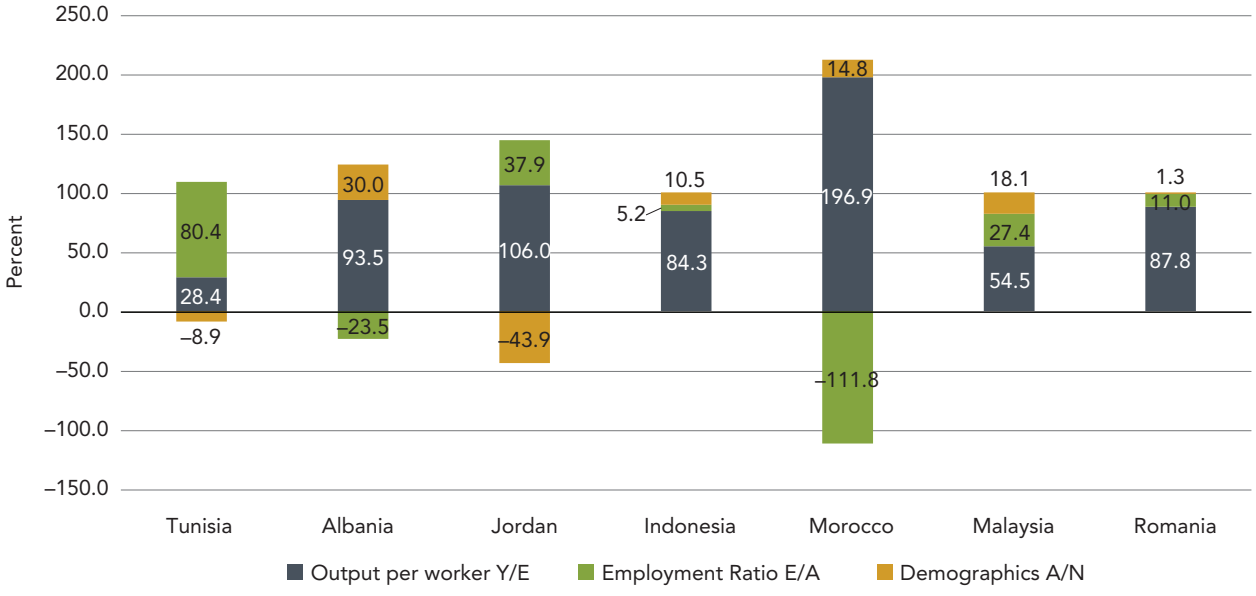
(continued)

FIGURE 1.35. Annualized Change in Labor Productivity and Employment, by Sector, 2006–17 *(continued)*



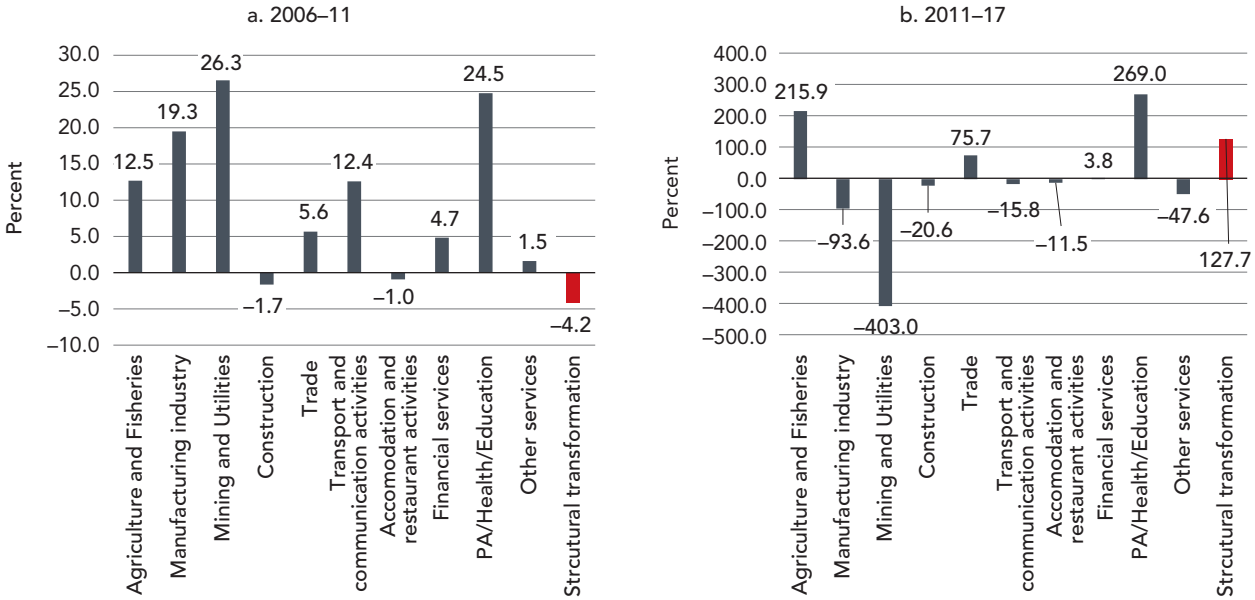
Source: Based on data from the Labor Force Survey (ENPE) and Statistical Yearbook, INS; World Development Indicators, World Bank.
Note: Circle size is proportional to sectoral labor productivity at the start of the period.

FIGURE 1.36. Decomposition of Changes in per Capita Value Added in Tunisia and Comparator Countries, 2011–17



Source: Based on data from the Labor Force Survey (ENPE) and Statistical Yearbook, INS; World Development Indicators, World Bank.

FIGURE 1.37. Sectoral Contributions to Growth in Output per Worker, 2006–17



Source: Based on data from the Labor Force Survey (ENPE) and Statistical Yearbook, INS; World Development Indicators, World Bank.

markets dominated by SOEs, where productivity reflects rents more than increases in efficiency. State-controlled enterprises still operate in banking, mining, and utilities (OECD 2018). Private sector participation is still restricted in the case of some agricultural products (Arezki et al. 2020). Furthermore, the productivity growth in public administration is the effect of a more rapid increase in public expenditures, that is, wages, relative to employment. Since the 2011 revolution, productivity gains have declined considerably across the board, and only public administration, agriculture, and trade posted a sizable increase in output per worker. The reduction in TFP points to misallocation of resources that are largely not captured by the most productive firms and sectors. The consequences are reflected in the subpar economic performance of the country and in the lack of employment creation in high productivity sectors.

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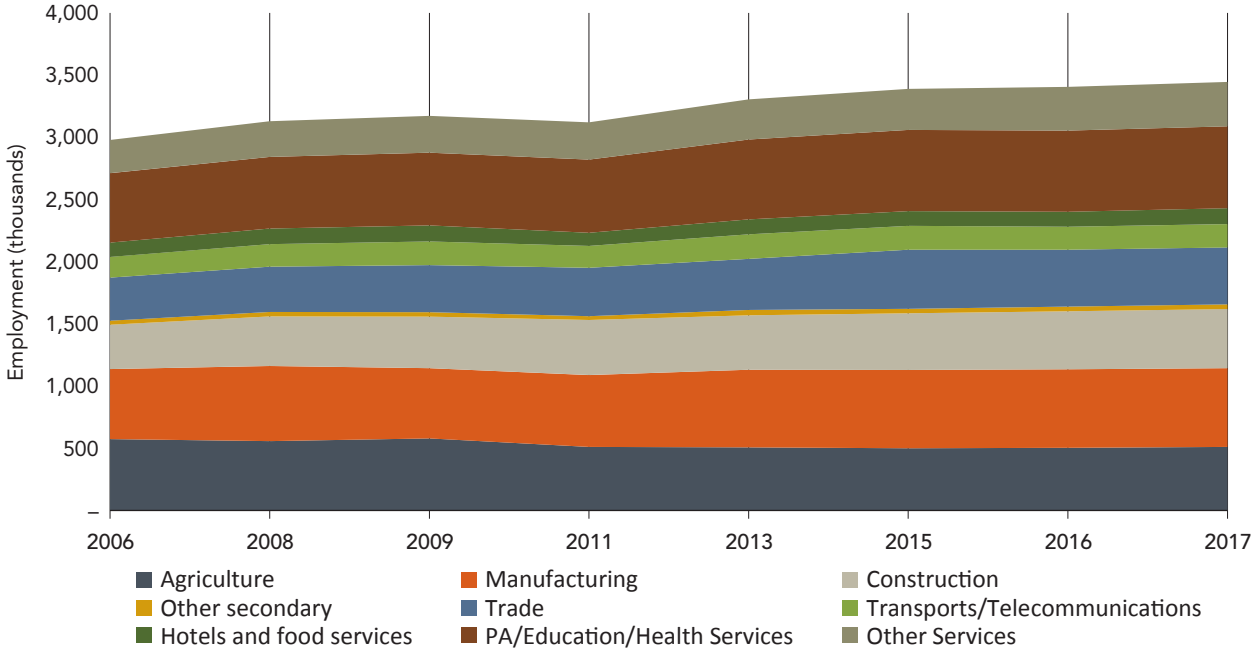
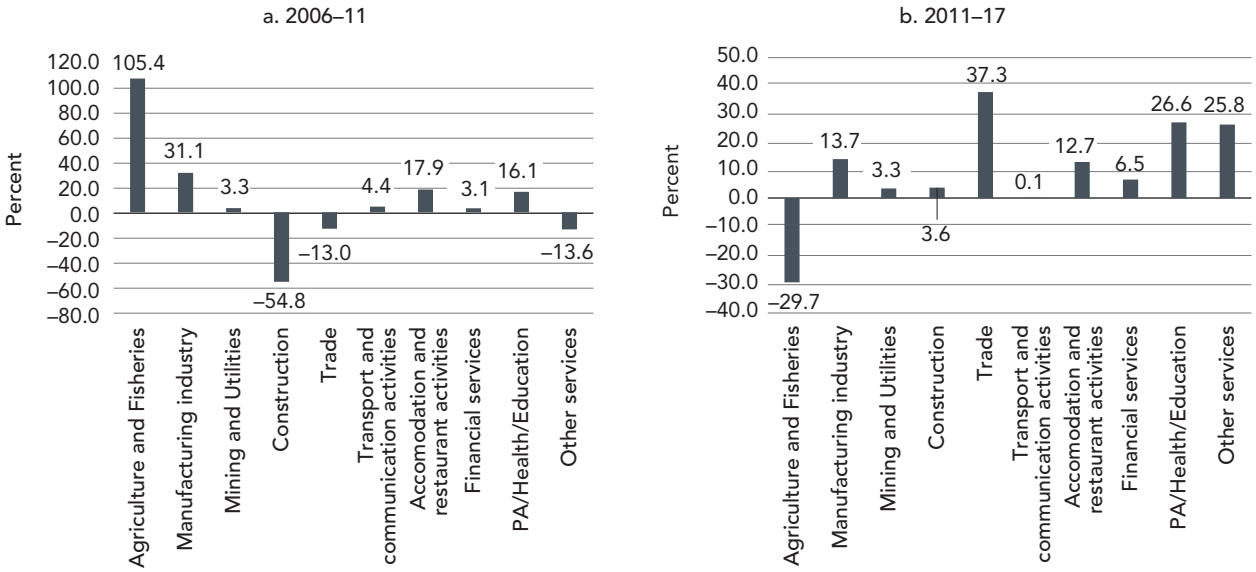
ANNEX CHAPTER 1

FIGURE 1.A.1. Trends in Employment, by Sector, 2006–17



Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 1.A.2. Sectoral Contributions to Employment Growth, 2006–17



Source: Based on data from the Labor Force Survey (ENPE) and Statistical Yearbook, INS; World Development Indicators, World Bank.

CHAPTER 2

Access to the Labor Market: A Spotlight on Women and Youth

HIGHLIGHTS

- Tunisia has realized considerable progress in educational outcomes, particularly enrollment, accompanied by a reversal in the gender gap
- Nonetheless, 1 Tunisian of working age in 5 has no schooling, and the country lags comparators in the quality of learning
- With only 1 working-age individual in 2 participating in the labor market, Tunisia underutilizes its human capital, particularly youth and women
- Despite some improvements over the past decade spearheaded by youngsters with tertiary education, women's labor force participation is extremely low
- Weak labor demand, assigned gender roles, limited availability of affordable childcare, and gender gaps in the ownership of productive assets and in private sector wages are among the main barriers to greater women's participation in the labor market
- With about 4 youth ages 15–29 in 10 not in education, employment, or training (NEET) and high unemployment rates among university graduates, 1 youth in 3 is unemployed; the youth challenge is of paramount importance
- Inactivity seems to be a matter of exclusion among young men with little education, of lack of jobs among young men with tertiary education, and a combination of modest job creation and assigned gender roles among young women with university degrees
- Sluggish job creation, together with skill mismatch and a sizable public sector wage premium, seems to be the factor driving high unemployment among university graduates
- Wage subsidies providing temporary employment opportunities at the cost of significant deadweight loss and substitution effects have little impact on long-term job creation
- The government and stakeholders need to boost the participation and employment of women and youth to take advantage of a small, but open demographic window

Chapter 1 sets the stage by providing the macroeconomic context and trends in terms of growth, living standards, and aggregate labor market outcomes over past decades. Chapter 1 documents a gradual shift of the Tunisian economy toward a less sustainable economic development model that is based on domestic demand and that includes the context of a decline in aggregate productivity that points to technical and allocative inefficiencies. It shows that structural transformation has continued slowly, and the majority of workers are still employed in sectors with below average productivity. It also illustrates that the gains in labor productivity achieved before the revolution have been lost to employment growth since 2011, a growth that has nonetheless not kept up with the expansion in the working-age population. (See Box 2.1 for definitions of selected terms.)

This chapter starts with an overview of the evolution of demographics in Tunisia in recent decades, including trends in the age structure and educational attainment of the population, and how demographics will likely change in future. The chapter illustrates labor market trends, such as recent changes brought about by the COVID-19 pandemic. The focus is on access to the labor market at the aggregate level and according to individual characteristics, as well as among groups that are at a disadvantage. The chapter turns a spotlight on the labor market participation of women and youth. It highlights how specific groups of women fare better than others in terms of access to the labor market, and it provides a summary of the constraints on women's participation in the labor market based on a desktop review of the available academic and grey literature. The chapter also focuses on youth unemployment and inactivity, particularly among university graduates, and investigates the main barriers to a smooth transition from school to work.

Demographics and Projections

Tunisia is at the later stages of a demographic transition. Changes in demographics have important effects on labor market developments, economic growth, and living standards in all countries. Thus, in Tunisia, the total fertility rate, which measures the number of births per woman, has fallen by more than half over the past 40 years, from 5.1 in 1980 to 2.2 in 2018 (WDI), and life expectancy increased from 62 years in 1980 to over 76 years today. These changes impacted the population growth rate, which declined from 2.6 percent in 1980 to about 1.1 percent over the last five years, as well as the age structure of the population. The total dependency ratio, which captures the ratio of nonworking-age to working-age population, declined from 84 (per 100 people of working age) in 1980 to 44.4 in 2011. It gradually increased (48.9 in 2019) and is projected to continue to rise slowly over the next two decades (Figure 2.1). A rising old-age dependency ratio that will outweigh a falling child dependency ratio will slowly push the total dependency ratio up from 49.6 in 2020 to 51.6 in 2040 (Figure 2.1).

The demographic window is narrow, but still open. The youth population, which is the main contributor to new labor market entries, will hover around 21 percent as a share of the total population over the next two decades and gradually decline thereafter (Figure 2.2; Figure 2.3). The population of working age (15–64) will shrink modestly, from 66.8 percent to 66.0 percent, by 2040. The latter is the by-product of a modest increase in the share of youth (15–29), a decline by 5.4 percentage points in the share of individuals ages 30–44, and an increase by 4 percentage points in the share of individuals ages 45–64. By contrast, the share of the elderly, ages 65 and above, will nearly double, from 8.9 to 16.0 percent, largely thanks to rising women's life expectancy. Creating more jobs for a still sizable and increasingly well-educated working-age population will be key to taking advantage of the demographic dividend. Raising participation and employment rates among groups that are currently lagging will be an important challenge that the government of Tunisia and other stakeholders will need to tackle given the aging of the population.

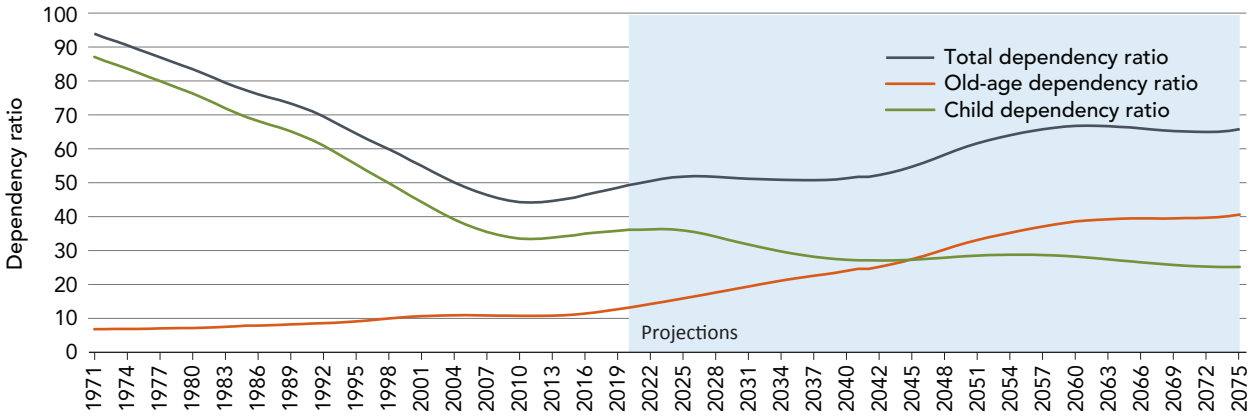
Over 60 (70) percent of the (urban) population is located in coastal regions. The share of the population located in Tunisia's coastal regions, namely, Greater Tunis, the North-East, and the Center-East, rose from 60 percent to 62 percent between 2006 and 2017 (Table 2.1). These regions have also become more urbanized, and, in 2017, they were home to almost 72 percent of the urban population of the country. Inland regions host 28 percent of the country's urban population. The share of the urban population increased from about 65 percent in 2006 to 68 percent in 2017. All regions posted an expansion in the rate of urbanization except the South-West, where the share has remained constant, at 68 percent.

In recent decades, Tunisians have achieved substantial progress in educational outcomes. In 2014, about 8 Tunisians in 10 were literate, compared with fewer than 1 in 2 three decades earlier. The literacy rate is comparable with the average rate in the region (79.3 percent in 2019)

BOX 2.1. Definitions of Key Labor Market Concepts

Labor market status	
Population of working age	All individuals ages 15 and above
Labor force	All individuals of working age who were either employed or unemployed during the reference week
Employed	The employed population consists of individuals of working age who have worked for pay, profit, or household gain for at least one hour during the reference week. It includes individuals who are temporarily absent from work for reasons such as working time arrangements, the nature of their work, public holidays, annual leave, sick leave, or maternity/paternity leave.
Unemployed	The unemployed population comprises all individuals of working age who were not employed during the reference week, looked for work during the past month, and were available for work during the reference week.
Out of the labor force	The population out of the labor force includes individuals who were neither employed nor unemployed during the reference week.
NEET	Youth, ages 15–24, who are not in employment, education or training.
Type of employment	
Wage worker or employee	A wage worker or employee is a person who works for pay for someone else, even in a temporary employment.
Apprentice	An apprentice is a person being trained for a job or trade. The individual may be paid or may receive some pocket money; a paid apprentice is considered in employment. Unpaid apprentices are considered as out of labor force.
Employer	An employer is a person who operates his/her own business or trade and hires one or more employees.
Own-account worker	An own-account worker is a person who operates his/her own business or trade and does not hire employees. He/She may be working alone or with the help of contributing family workers.
Unpaid or contributing family worker	A contributing family worker is a person who works without pay in a market-oriented enterprise operated by a household member.
Public/private employment	
Public sector employment	Employment in the public sector comprises all employees working in a public establishment or in a public company.
Private sector employment	Employment in the private sector includes all employees not working in a public establishment or in a public company, as well as all employers, own-account workers, and unpaid family workers.
Formal/informal employment	
Informal employment	Informal employment includes (a) employees and apprentices who work for an employer who does not contribute to social security on their behalf or, in the case of missing answers, if they do not benefit from paid annual leave and paid sick leave; (b) own-account workers and employers who run informal sector economic units (as defined below); (c) all contributing family workers.
Informal sector	The informal sector includes own-account workers and employers who run non-incorporated private enterprises without a tax identification number, or with a tax identification number, but without a formal bookkeeping system.

FIGURE 2.1. Total, Child and Old-Age Dependency Ratios, 1971–2075



Source: Based on data from the World Development Indicators, World Bank; World Population Prospects 2019 (database), Population Division, Department of Economic and Social Affairs, United Nations, New York, https://population.un.org/wpp/.

FIGURE 2.2. Population Pyramid, by Five-Year Age-Group, 2020

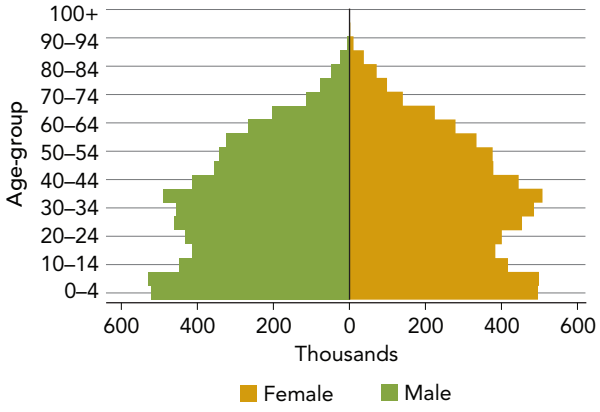
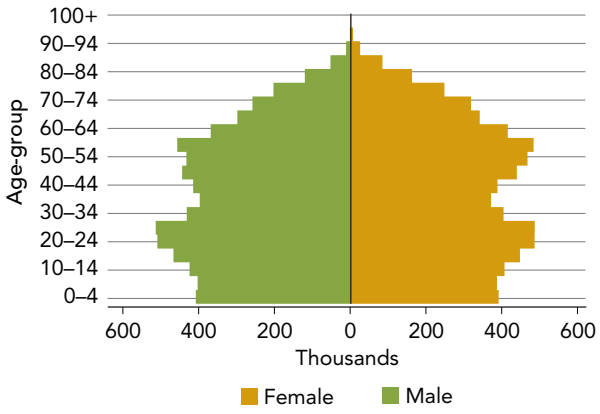


FIGURE 2.3. Population Pyramid, by Five-Year Age-Group, 2040 (Medium Variant Projection)



Source: Based on data of World Population Prospects 2019 (database), Population Division, Department of Economic and Social Affairs, United Nations, New York, https://population.un.org/wpp/.

TABLE 2.1. Distribution of the Population, by Region, Urban or Rural Area, and Share of Urban Population, 2006 and 2017

	National		Urban		Rural		Share urban	
	2006	2017	2006	2017	2006	2017	2006	2017
Greater Tunis	22.9	24.3	32.2	32.8	5.1	6.3	92.3	91.7
North-East	14.0	14.0	13.0	13.3	15.7	15.6	61.1	64.5
North-West	12.0	10.4	6.9	6.4	21.7	18.8	37.7	42.0
Center-East	22.8	23.8	25.1	25.5	18.4	20.3	72.1	72.8
Center-West	13.5	13.0	6.8	6.8	26.4	26.1	32.7	35.6
South-East	9.2	9.1	10.1	9.9	7.6	7.5	71.5	73.6
South-West	5.7	5.5	5.9	5.5	5.2	5.5	68.1	68.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	65.4	68.0

Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 2.4. Literacy Rates, by Birth Cohort, 2015

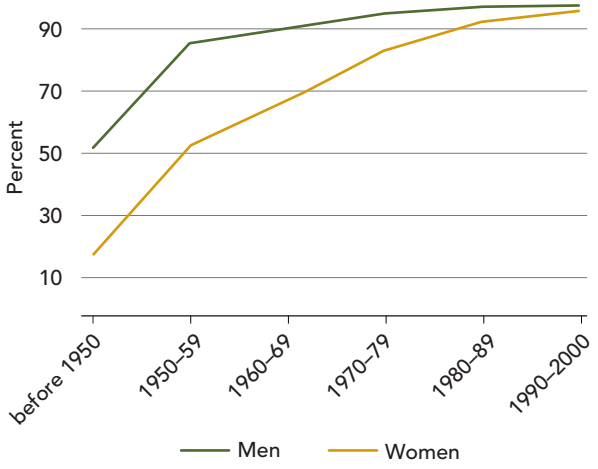
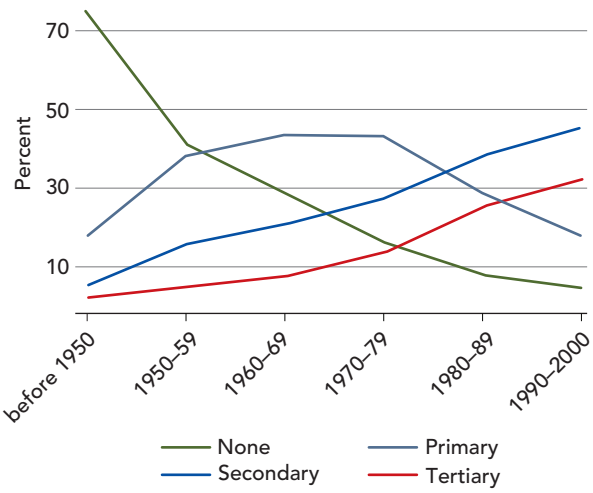


FIGURE 2.5. Educational Level, Distribution by Cohort, 2017



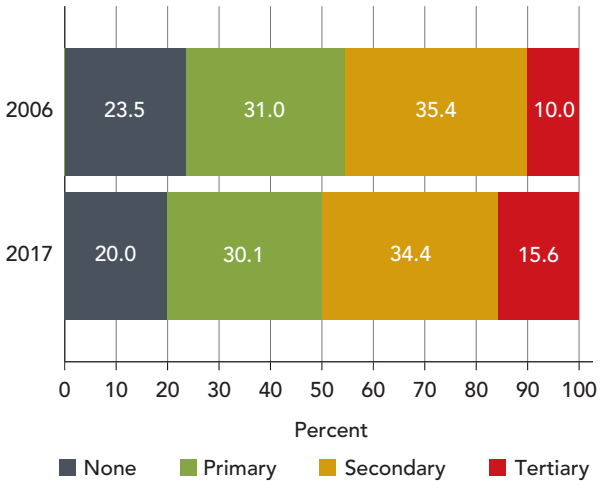
Source: Based on data from the EBCNV 2015, INS; and from the Labor Force Survey (ENPE), INS.

and below the average among middle-income countries (86.4 percent in 2019). The gross secondary-school enrollment ratio rose from 25.1 percent in 1980 to 92.7 percent in 2016, and the gross tertiary enrollment ratio increased from 5.0 percent in 1980 to 31.8 percent in 2019. This compares with 81.7 (41.0) percent and 77.2 (36.9) percent for the secondary (tertiary) enrollment ratio among regional and income group comparators, respectively.

Yet, 1 Tunisian of working age in 5 has not obtained any school certificate. The progress achieved in recent decades is reflected in the educational level among different cohorts of the working-age population. The literacy rate increased from about 17 percent and 51 percent among women and men born before 1950, respectively, to over 95 percent among younger generations (born in the 1990s) (Figure 2.4). Similarly, educational attainment has improved considerably over time. About 1 Tunisian in 3 born in the 1990s is a university graduate, compared with 1 in 4 among Tunisians born between 1980 and 1989 and less than 2 percent in the cohort born before 1950 (Figure 2.5). The number of additional university graduates peaked during the 2010/11 academic year and started to decline thereafter, to reach about 52,000 in 2018/19. Meanwhile, as of 2017, about 20 percent of the working-age population has no education (23.5 percent in 2006); about 30 percent has primary education; 34 percent has secondary education; and 15.6 percent has tertiary education (10 percent in 2006) (Figure 2.6).

The quality of education lags in Tunisia relative to comparator countries. Children born in Tunisia today will be 52 percent as productive when they grow up as they might have been if they had enjoyed complete education and full health. The human capital index in Tunisia is below the regional average, but higher than the average among lower-middle-income countries. The index is higher in Tunisia than in Morocco, but lower than in Albania (63), Indonesia (54), Jordan (55), Malaysia (61), and Romania (58). In 2010–20, the index in Tunisia declined slightly, from 0.53 to 0.52, largely because of a drop in harmonized test scores. These scores measure performance in international testing programs. Students in Tunisia score 384 (405 in 2010) on

FIGURE 2.6. Educational Level, Distribution Among the Working-Age Population, 2006 and 2017



Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 2.7. Mathematics Scores, Tunisia and Comparator Countries, Circa 2015

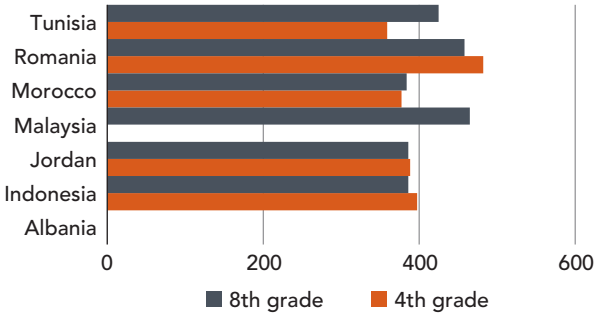
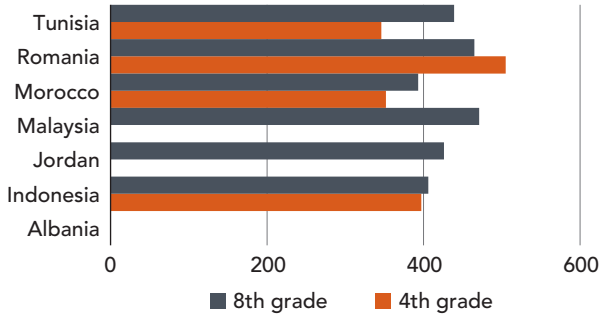


FIGURE 2.8. Science Scores, Tunisia and Comparator Countries, Circa 2015

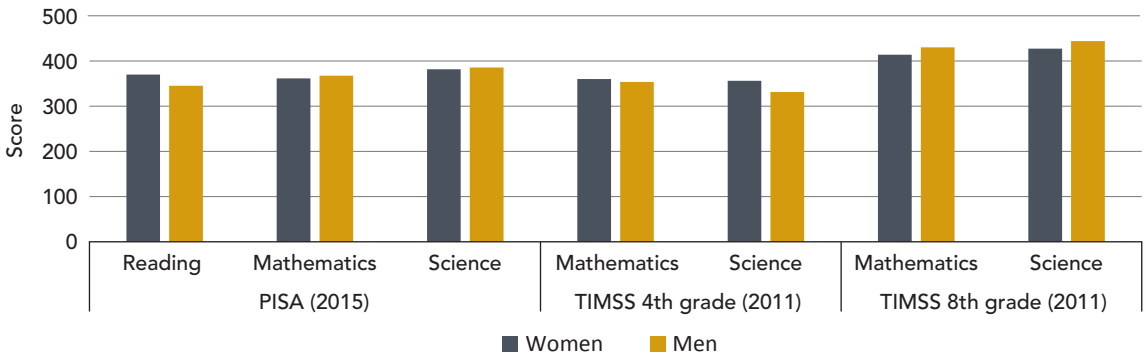


Source: Based on data of TIMSS (Trends in International Mathematics and Science Study) (data repository), International Association for the Evaluation of Educational Achievement, Amsterdam, https://www.iea.nl/data-tools/repository/timss.
Note: Administration year changes across countries: Indonesia (2015, 4th; 2011, 8th), Jordan (2015), Malaysia (2015), Morocco (2015), Romania (2011), Tunisia (2011).

a scale on which 625 represents advanced attainment and 300 minimum attainment. According to the 2015 Program for International Student Assessment (PISA), Tunisia performed well below the OECD average in reading (361 vs. 490), science (386 vs. 491), and mathematics (367 vs. 487). There was also a decline in scores in 2012–15. The Trends in International Mathematics and Science Study (TIMSS) provides data on mathematics and science achievement among students at grades 4–8 every four years since 1995. In 2011, the average mathematics scores of 4th and 8th graders in Tunisia were 359 and 425, respectively, and the average science scores were 346 and 439 (Figure 2.7; Figure 2.8). This is below comparator countries for 4th grade students and below aspirational peers (Malaysia and Romania) for 8th grade students.

The rapid improvement in educational outcomes was accompanied by a closure and, in some cases, a reversal of gender gaps. The literacy rate among women rose from 35.8 percent to 72.2 percent between 1984 and 2014, and, among younger cohorts, women are today on par with men (see Figure 2.4). About 17 percent of women of working age have tertiary education, compared with 13.9 percent among men. The gap is considerably larger among youth ages 25–29 (38.2 percent vs. 23.7 percent among young women and young men, respectively). Over the past decade, about 70 percent of university graduates are women. The human capital index is higher among women (54) than men (50). In 4th grade, girls outperform boys in science assessments (2011 TIMSS), but, in 8th grade, boys do slightly better than girls both in mathematics and

FIGURE 2.9. PISA and TIMSS Test Scores, by Sex, 2011 and 2015



Source: Based on data of PISA (Programme for International Student Assessment) (dashboard), Organisation for Economic Co-operation and Development, Paris, http://www.oecd.org/pisa/pisaproducts/; TIMSS (Trends in International Mathematics and Science Study) (data repository), International Association for the Evaluation of Educational Achievement, Amsterdam, https://www.iea.nl/data-tools/repository/timss.
Note: Scores range from 0 to 1000. Some apparent differences between estimates may not be statistically significant.

science. Among 15-year-old students, girls outperform boys in reading, while boys and girls perform equally in mathematics and science (2015 PISA) (Figure 2.10).

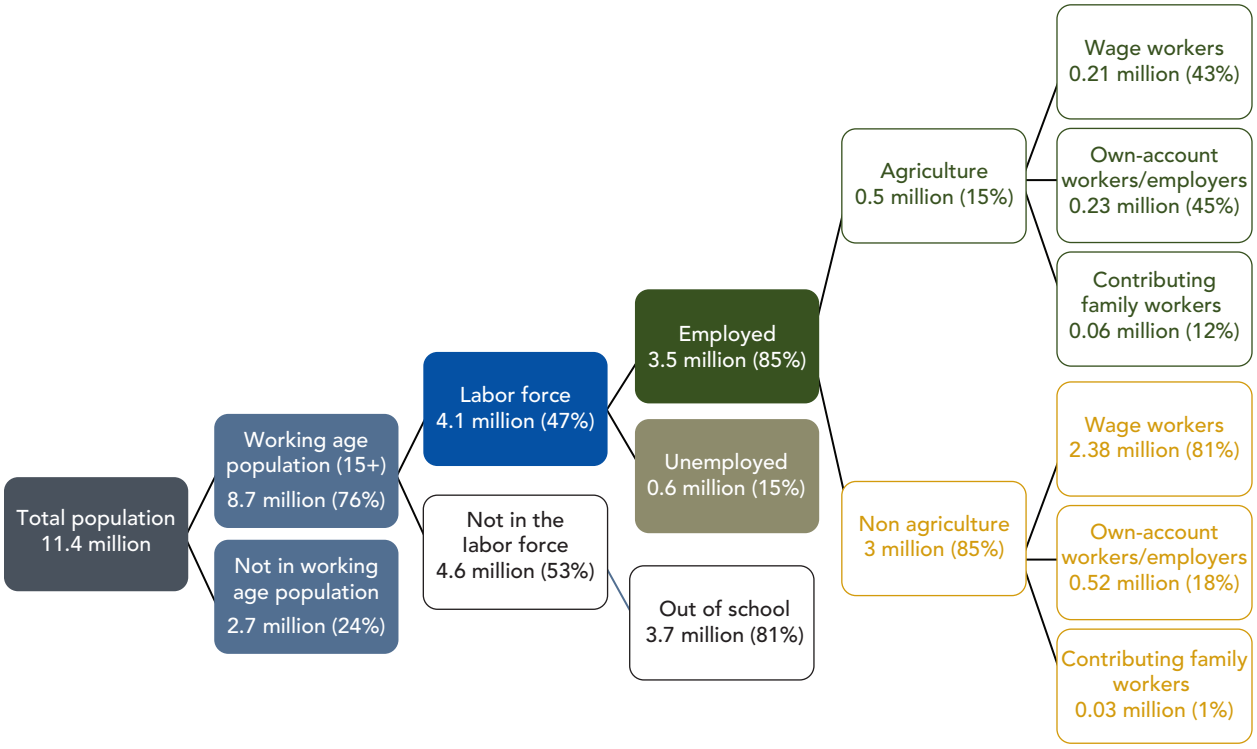
Trends in Access to the Labor Market

In Tunisia, human capital is underutilized: more than 1 Tunisian of working age in 2 are not employed and not looking for work. The working-age population ages 15 and above, comprises 8.7 million people (76 percent of the total population) who can contribute productively to the economy (2017) (see Figure 2.10). About 47 percent of the working-age population is active in the labor market, and 53 percent is neither employed nor looking for work, corresponding to 4.6 million people. Among the inactive, more than 8 in 10 (or 3.7 million people) are also not in education. Tunisia's labor force participation rate is above the average in the Middle East and North Africa region (43.2 percent in 2017, excluding high-income countries), but considerably low compared with the average middle-income country (64.9 percent in 2017).

Labor force participation among women is unusually low, particularly among women with little education. Fewer than 3 women in 10 participates in the labor market. At 26.5 percent, compared with 68.3 percent among men (2017), women's labor force participation rose modestly during the decade (24.4 percent in 2006) (Table 2.2). Youth also showed lower than average participation, largely thanks to increases in secondary and tertiary enrollments. The activity rate of people with no education was exceptionally low. In 2017, the participation rate among these people was estimated at 18.1 percent, down from 24.7 percent in 2006. This was mainly ascribable to women ages 30–44 and 45–64 with no education.

About 15 percent of the labor force is unemployed, a rate higher than a decade ago. About 0.6 million people looking for work were unable to find job in 2017 (see Figure 2.10). This corresponds to an unemployment rate of 15.3 percent, almost three times as high as the rate

FIGURE 2.10. Labor Market Structure, Tunisia, 2017



Source: Based on data from the Labor Force Survey (ENPE), INS.
Note: The percentages in brackets are calculated as a share of the level displayed in the higher-level cell. Estimates of public sector employment differ from administrative data possibly due to measurement error in information about place of work reported by respondents in the labor force survey.

TABLE 2.2. Key Labor Market Indicators, by Sex, Age-Group, Educational Attainment, and Urban or Rural Location, 2006–17

	2006	2008	2009	2011	2013	2015	2016	2017
				Labor force participation rate				
By sex								
Men	67.3	68.0	68.7	70.1	70.0	68.8	68.5	68.3
Women	24.4	24.7	24.8	24.9	25.6	26.0	26.6	26.5
By age-group								
Youth 15–29	40.1	41.7	41.0	44.5	45.3	41.6	43.2	42.2
Adults 30–54	60.3	60.9	62.0	60.5	61.1	62.9	62.5	62.7
Older workers 55+	22.4	20.5	20.5	21.0	20.3	21.5	21.1	21.2
By educational level								
No education	24.7	22.4	23.1	22.0	18.0	19.4	18.4	18.1
Primary	54.3	55.6	55.5	53.8	52.6	52.0	51.9	51.2
Secondary	46.6	47.0	46.4	47.8	52.8	50.6	51.7	51.3
Tertiary	64.6	65.5	67.3	69.8	63.5	67.2	66.1	66.6
By area								
Urban areas	46.3	47.5	46.6	47.8	49.0	49.2	49.4	48.8
Rural areas	44.3	43.4	46.2	46.0	44.1	42.5	42.2	43.0
				Employment-to-population ratio				
By sex								
Men	59.5	60.4	61.0	59.6	60.7	60.3	60.0	59.8
Women	20.7	20.8	20.1	18.1	19.7	20.3	20.4	20.5
By age-group								
Youth 15–29	30.2	31.0	29.4	27.5	30.1	27.8	28.7	28.2
Adults 30–54	56.4	57.4	58.1	55.2	56.2	57.2	56.9	57.1
Older workers 55+	21.7	20.0	20.2	20.5	19.9	21.1	20.8	20.9
By educational level								
No education	23.1	21.5	21.7	20.2	17.2	18.4	17.4	17.4
Primary	47.2	49.7	49.7	47.2	47.4	47.4	47.4	46.9
Secondary	40.8	40.7	39.9	38.0	44.2	42.4	43.2	43.2
Tertiary	53.7	52.4	52.5	49.4	44.3	49.2	47.2	47.2
By area								
Urban areas	40.2	41.4	40.6	39.2	41.1	41.5	41.6	41.0
Rural areas	39.3	38.3	39.7	37.1	37.3	36.6	36.0	37.0
				Unemployment rate				
By sex								
Men	11.5	11.1	11.3	15.0	13.3	12.4	12.4	12.4
Women	15.1	15.9	18.8	27.4	23.0	22.2	23.5	22.6
By age-group								
Youth 15–29	24.6	25.6	28.2	38.2	33.5	33.1	33.5	33.2
Adults 30–54	6.4	5.6	6.3	8.7	8.0	9.0	9.0	9.0
Older workers 55+	2.8	2.2	1.5	2.1	1.8	2.0	1.5	1.8

(continued)

TABLE 2.2. Key Labor Market Indicators, by Sex, Age-Group, Educational Attainment, and Urban or Rural Location, 2006–17 *(continued)*

	2006	2008	2009	2011	2013	2015	2016	2017
By educational level								
No education	6.3	4.2	6.1	8.0	4.7	5.5	5.6	4.3
Primary	13.0	10.6	10.4	12.4	9.9	8.8	8.6	8.3
Secondary	12.5	13.4	14.0	20.6	16.2	16.3	16.5	15.6
Tertiary	16.9	20.0	21.9	29.2	30.2	26.8	28.5	29.1
By area								
Urban areas	13.0	12.8	12.9	17.9	16.1	15.7	15.9	15.9
Rural areas	11.4	11.7	14.0	19.3	15.4	13.9	14.8	13.9

Source: Based on data from the Labor Force Survey (ENPE), INS.

observed in middle-income countries and about 2.5 percentage points higher than the regional average. During the years preceding the 2011 revolution, the unemployment rate rose from 12.5 percent in 2006 to 18.3 percent in 2011. Since then, it has gradually declined, and, yet, it remains above the rate a decade ago and is significantly higher than the average among regional (10.9 percent) and income group comparators (5.6 percent) (Table 2.3).

Unemployment is higher among women and university graduates. The average unemployment rate of 15.3 percent masks considerable heterogeneity. Although women and men alike posted a decline in unemployment beginning in 2011, the unemployment rate is higher among women than among men. In 2017, it was estimated at 22.6 percent among women and 12.4 percent among men. Large gaps exists across age-groups and educational levels. The unemployment rate among youth ages 15–29 was 33.2 percent in 2017, on the decline relative to the level reached in 2011 (38.2 percent). This compares with less than 1 in 10 among individuals of prime age (30–54) and 1.8 percent among older individuals (ages 55 or more). Similarly, young university graduates face high unemployment rates (29.1 percent in 2017, roughly stable since 2011) relative to individuals with secondary (15.6 percent) or lower education (8.3 percent, primary education; 4.3 percent, no schooling).

Rural areas and inland regions lag in all labor market outcomes. Individuals in rural areas are engaged in the labor market less than their urban counterparts: in 2017, about 4 in 10 Tunisians in rural areas participated in the labor market relative to almost 5 in 10 in urban areas (see Table 2.3). The gap in the activity rate expanded from 2 percentage points in 2006 to almost 6 percentage points in 2017 because of both a constant increase in urban areas and a decline in rural areas since 2011. At 15.9 percent in 2017, the unemployment rate in urban areas was above the rate in rural areas (13.9 percent), while both declined beginning in 2011 and are still above the level observed in 2006. Wide gaps exists across regions (see Table 2.3). The more deprived inland regions showed both lower participation rates (42.3 percent vs. 49.8 percent in inland and coastal regions, respectively, in 2017)

TABLE 2.3. Key Labor Market Indicators, 2006–17

	2006	2008	2009	2011	2013	2015	2016	2017	MICs	MENA
Labor force participation rate	45.6	46.2	46.5	47.2	47.4	47.1	47.2	47.0	64.9	43.2
Labor force participation rate, women	24.4	24.7	24.8	24.9	25.6	26.0	26.6	26.5	45.2	18.0
Employment-to-population ratio	39.9	40.4	40.3	38.5	39.9	39.9	39.8	39.8	61.3	38.1
Unemployment rate	12.5	12.4	13.3	18.3	15.9	15.2	15.6	15.3	5.6	12.9
Share of wage employment, % of total employment	68.2	69.3	—	71.2	72.0	72.8	72.2	75.1	47.6	62.6
Share of nonagricultural employment, % of total employment	80.9	82.3	81.9	83.8	84.7	85.2	85.3	85.3	30.7	20.4

Source: Based on data from the Labor Force Survey (ENPE), INS; and World Development Indicators, World Bank.
Note: The data on middle-income countries (MICs) and countries in the Middle East and North Africa (MENA) refer to 2017 and are based on national estimates with the exception of the share of employment in agriculture in both MICs and MENA countries and the overall and female labor force participation rate in MICs, which are based on modeled estimates o the International Labour Organization. The data on the MENA region exclude high-income countries.

and higher unemployment (20.1 percent vs. 12.9 percent in inland and coastal regions, respectively, in 2017). The unemployment rate was 25.6 percent and 24.3 percent in the South-West and South-East regions, respectively, followed by the Center-West and North-West regions, at 17.4 percent and 16.7 percent. The North-East and Center-East regions exhibited unemployment rates of around 10.0 percent, whereas the Greater Tunis region reached 17.0 percent. Unemployment modestly declined beginning in 2011 across all regions, but only the North-East in 2017 had an unemployment rate lower than a decade previous (10.4 percent in 2017 vs 14.2 percent in 2006) thanks to steady growth in the number of the employed.

The unemployed are largely youth, men, individuals with up to primary or secondary education, and urban residents. Of 0.6 million unemployed in 2017, about 2 in 3 were youth ages 15–29 (31 percent in the 15–24 age-group and 32 percent among the 24–29 age-group) (Figure 2.11). This is particularly concerning because, over the next two decades, the share of youth in the total population will remain roughly constant, at about 23 percent. Around 58 percent of the unemployed were men, and almost 60 percent had at best obtained a certificate of secondary education: 38 percent had secondary education; 18 percent had primary education; and about 2 percent had no schooling. Individuals with tertiary education contributed 42 percent to total unemployment. Most of the unemployed live in urban areas and are predominantly located in the Greater Tunis region (30.5 percent) and in the Center-East region (15 percent).[13]

The inactive population is prevalently composed of youth, women, individuals with up to primary education, and urban residents. About 40 percent of the inactive are youth ages 15–29, of whom 31 percent are ages 15–24 and largely in school (see Figure 2.11). About 20 percent of the inactive population is ages 30–44, and 42 percent are ages 45 or more. The large majority of inactive individuals are women (71 percent) and have little education. Almost 1 in 3 had no schooling, 26 percent has primary education, and 34 percent have secondary education. Less than 9 percent of the inactives have a university degree. Over 2 inactives in 3 live in urban areas, and over 1 in 2 lives in coastal regions.

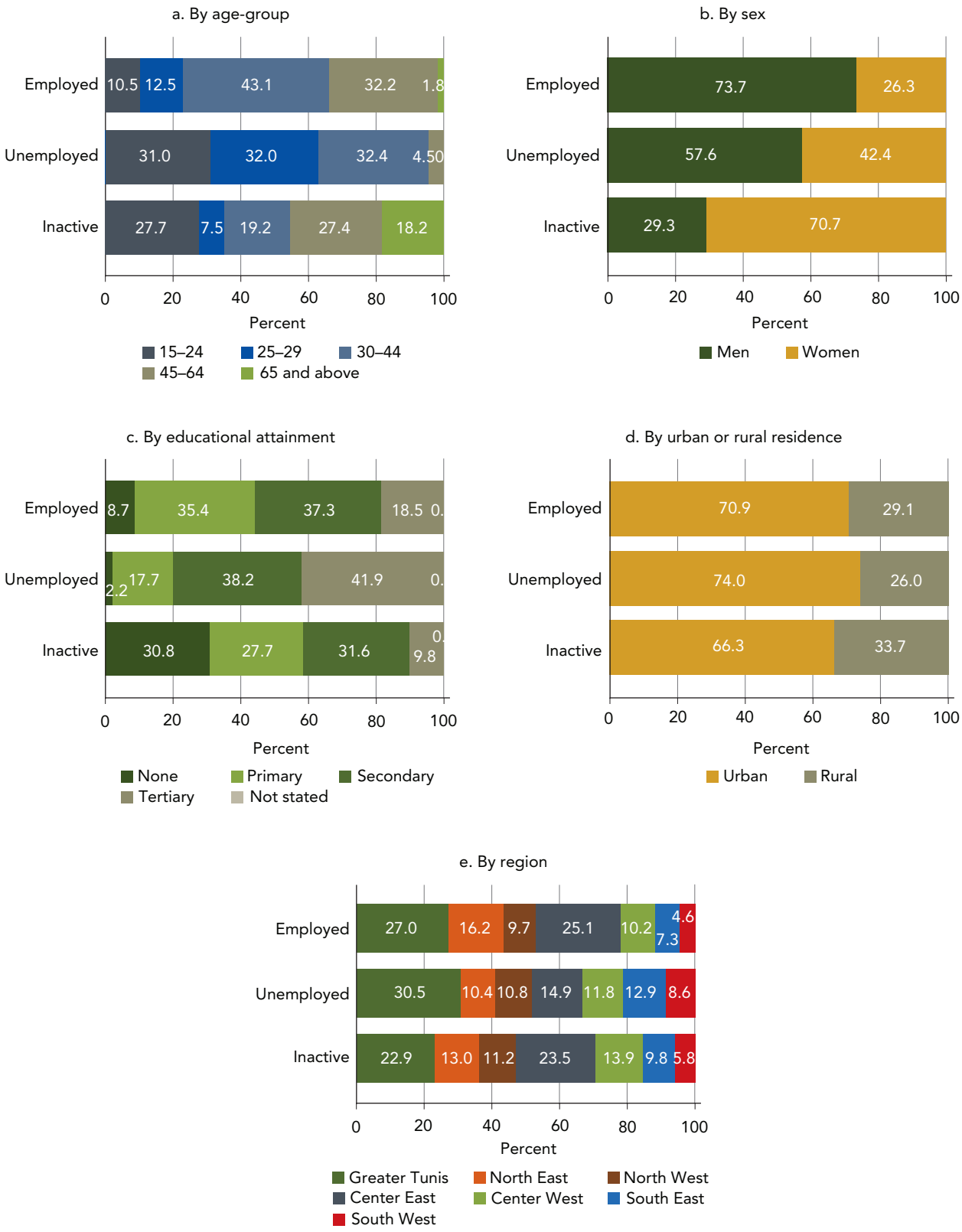
Tunisians are moving out of agriculture and are increasingly employed in the services sector.[14] Of about 3.5 million employed in 2017, 85 percent were working in nonagricultural sectors, mostly in services (52 percent) (Figure 2.12). The share of workers in agriculture declined by 23 percent (more than 60,000 individuals) over the decade, from 19.2 percent in 2006 to 14.8 percent in 2017, and the pace of the transition accelerated beginning in 2011. The share of the secondary sector rose from 32.0 percent to 33.3 percent in 2006–17, but this was below the peak reached in 2011 (33.7 percent). Within the secondary sector, food manufacturing posted a growth of over 44.0 percent (or more than 28,000 individuals), followed by construction, with an increase of about 34.0 percent, and other manufacturing (26.7 percent) (Table 2.4). By contrast, textiles shed jobs, and employment declined by almost 10 percent (a loss of 24,500 individuals). The services sector continued a slow yet steady expansion, from 48.8 percent in 2006 to 51.9 percent in 2017, adding over 330,000 workers, which is an increase of about 23 percent, compared with a growth of 20 percent in the secondary sector. Public administration, together with the education and health sector, contributed about 20 percent to total employment, with approximately 658,000 employed. Trade was the second largest sector. Trade was also the main contributor to employment creation in the services sector (+111,300), followed by public administration, health and education services, real estate and professional services, and transport.

Most Tunisians work for a wage. About 75 percent of the employed work for a wage (2017), an increase by more than 10 percent over the decade, with steady and stable growth both before and after the 2011 revolution (Figure 2.13). The rate is above the average in middle-income countries (47.6 percent) and in the region (62.6 percent, excluding high-income countries). The share of unpaid family workers decreased considerably, from nearly 7.0 percent in 2006 to less than 3.0 percent in 2017, as did the share of own-account workers, from about 19.0 percent to 15.5 percent. By contrast, employers had gained importance; in 2017, they contributed about 6 percent to total employment. In agriculture, only 43 percent of the employed are wage workers, compared with 81 percent in nonagricultural sectors (see Figure 2.10). Self-employment represents the majority of agriculture workers: 45 percent

[13] Combined, the two regions contributed about 48 percent of the total working-age population.

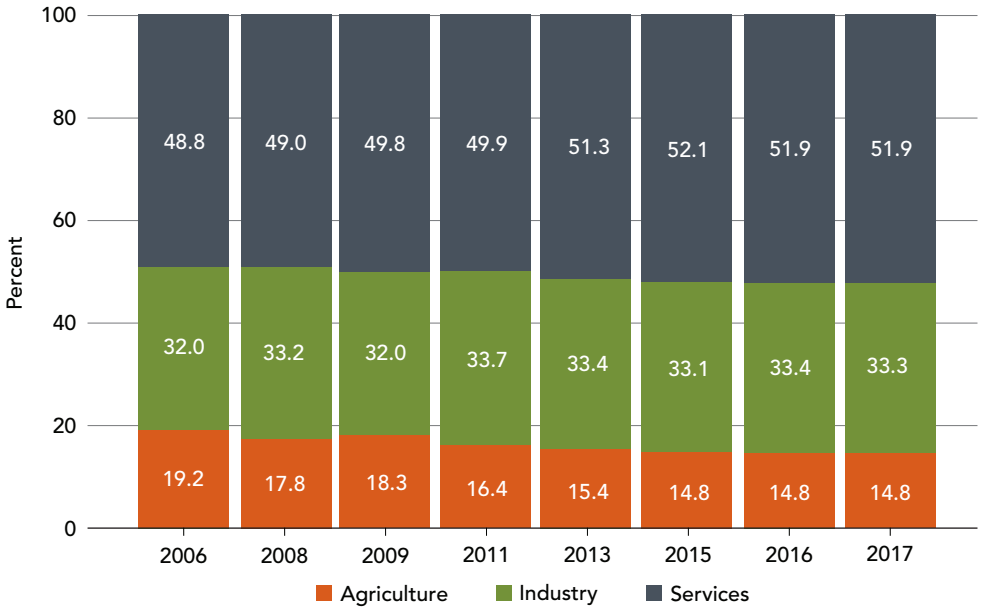
[14] Movements of labor indicate individual transitions across sectors, which are typically rare, particularly movements out of agriculture and a net addition of more workers in services relative to agriculture.

FIGURE 2.11. Distribution of Working-Age Individuals, by Labor Status, Age-Group, Sex, Educational Level, and Residence, 2017



Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 2.12. Distribution of the Employed Population, by Broad Sector, 2006–17



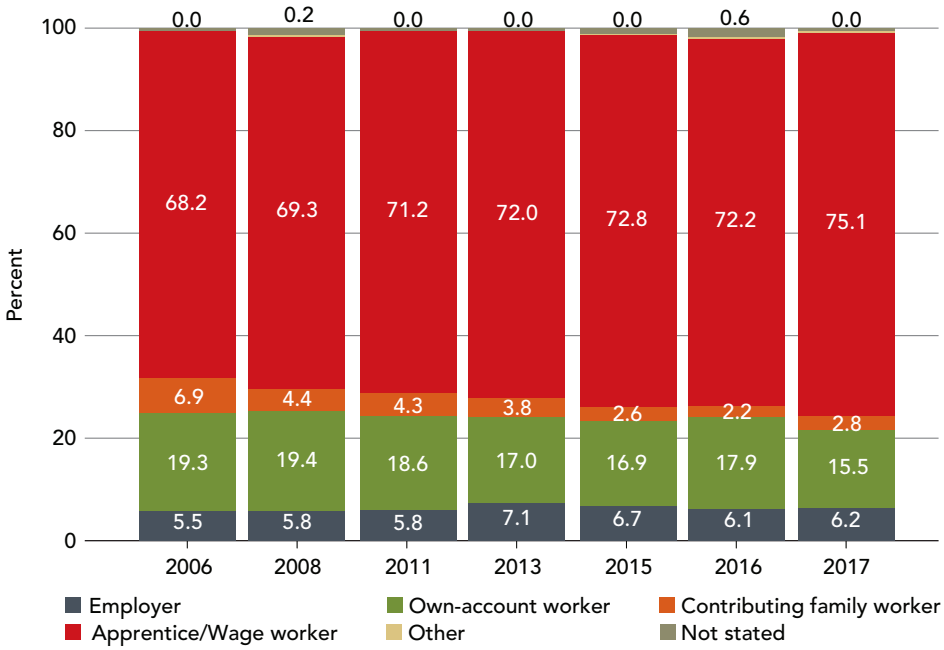
Source: Based on data from the Labor Force Survey (ENPE), INS.

TABLE 2.4. Trends in Employment, by Industry, 2006, 2011, and 2017

	2006	2011	2017	Change in level	Percentage change	2006	2011	2017
	Level			2006–17		Share (%)		
Agriculture	572,689	510,022	509,924	–62,765	–11.0	19.1	16.2	14.7
Food manufacturing	63,719	72,339	92,016	28,297	44.4	2.1	2.3	2.7
Textile manufacturing	256,935	236,036	232,477	–24,458	–9.5	8.6	7.5	6.7
Other manufacturing	243,334	269,732	308,348	65,014	26.7	8.1	8.6	8.9
Construction	355,266	441,686	475,592	120,326	33.9	11.8	14.1	13.8
Other secondary	32,331	31,597	37,590	5,259	16.3	1.1	1.0	1.1
Trade	346,074	388,130	457,393	111,319	32.2	11.5	12.4	13.2
Transports	136,364	175,284	187,140	50,776	37.2	4.5	5.6	5.4
Hotels and restaurants	115,262	106,116	127,977	12,715	11.0	3.8	3.4	3.7
Financial services	26,805	25,737	34,978	8,173	30.5	0.9	0.8	1.0
Real estate and professional services	105,517	133,607	174,050	68,534	65.0	3.5	4.3	5.0
Public administration and health/ education services	558,063	587,332	657,610	99,547	17.8	18.6	18.7	19.0
Other services	163,678	139,648	147,475	–16,203	–9.9	5.4	4.4	4.3
Not defined	28,857	22,505	15,534	–13,323	–46.2	1.0	0.7	0.4
Total	**3,004,893**	**3,139,770**	**3,458,104**	**453,211**	**15.1**	**100.0**	**100.0**	**100.0**

Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 2.13. Distribution of the Employed Population, by Type of Employment, 2006–17



Source: Based on data from the Labor Force Survey (ENPE), INS.

were employed as own-account workers or employers, and 12 percent as contributing family workers.

A growing majority of workers (about 80 percent in 2017) are employed in midlevel and low-end occupations. Between 2006 and 2017, the number and share of high-end occupations, including managers, professionals, technicians, and associate professionals, declined by 3.8 percent (27,000) because of a reduction in the number of managers and technicians, while the number of professionals rose sizably (Table 2.5). The number of employed in midlevel occupations increased by almost 222 percent (370,000) thanks to growth in the number of services and sales workers as well as craft and trade workers. The number of workers in elementary occupations expanded by about 17 percent (99,000). Overall, the number of high-end occupations declined from 24 percent to 20 percent, and the share of midlevel occupations rose by about 3 percentage points to reach around 60 percent in 2017.

The employed population is largely composed of individuals ages 30–64, men, individuals with primary and secondary education, and residents of urban areas and coastal regions. Over 75 percent of the employed population is ages 30 or more; 43 percent is ages 30–44; and they are predominantly men (see Figure 2.11). Only about 9 percent of workers have no education, whereas 35 percent and 36 percent have primary and secondary education, respectively. About 18.5 percent of workers hold a university degree. Around 66 percent are urban residents. Almost 60 percent live in coastal areas. The largest share (23.5 percent) is in the Center-East. A multivariate regression of the probability of employment conditional on being in the labor force, separately by sex, confirms that youth, university graduates, and individuals in inland regions have a lower probability of being employed (Figure 2.14).[15] Conditional on participating in the labor market, single men and women have a lower probability of being employed. A similar exercise conducted separately on coastal and inland regions indicates that men are considerably more likely to be employed relative to women in inland regions, and university graduates are significantly penalized in access to jobs in inland regions. Among coastal regions, residing outside the Greater Tunis area increases the likelihood of being employed as does living in the North-West among the interior regions (Figure 2.15).

[15] A probit regression was estimated on the sample of working-age individuals in the labor force. The dependent variable was equal to 1 for individuals who reported that they were employed in the reference week. The set of covariates included in the model are as follows: a set of dummies for different age-groups, a dummy for women, a set of dummies for marital status, a set of dummies for educational level, region of residence, and cohort of birth, and a dummy for urban residency. In addition, the number of children ages 0–5 and 6–15 are included in the specification.

TABLE 2.5. Trends in Employment, by Occupation, 2006, 2011, and 2017

	2006	2011	2017	Chane in level	Percentage change	2006	2011	2017
	Level			2006–17		Share (%)		
Managers	292,776	211,056	158,985	–133,791	–45.7	9.7	6.7	4.6
Professionals	188,021	188,980	349,803	161,782	86.0	6.3	6.0	10.1
Technicians and associate professionals	244,295	233,765	189,064	–55,231	–22.6	8.1	7.4	5.5
Clerical support workers	167,420	182,317	147,568	–19,853	–11.9	5.6	5.8	4.3
Services and sales workers	304,662	477,734	632,911	328,249	107.7	10.1	15.2	18.3
Skilled agricultural workers, forestry and fishing	490,696	380,211	363,054	–127,641	–26.0	16.3	12.1	10.5
Craft and related trade workers	380,573	414,273	489,465	108,892	28.6	12.7	13.2	14.2
Plant and machine operators and assemblers	356,232	383,308	436,565	80,333	22.6	11.9	12.2	12.6
Elementary occupations	577,235	663,413	676,245	99,010	17.2	19.2	21.1	19.6
Not stated	2,983	4,713	14,443	11,460	384.1	0.1	0.2	0.4
Total	3,004,893	3,139,770	3,458,104	453,211	15.1	100.00	100.00	100.00

Source: Based on data from the Labor Force Survey (ENPE), INS.

COVID-19, lockdowns, and the economic crisis have had deleterious effects on the labor market. Compared with the first quarter (Q1) of 2020, employment dropped by 4.5 percent in Q2, and, after a partial rebound in Q3, it continued to decline in the last quarter of 2020 as well as in the first three quarters of 2021 (Figure 2.16, panel b). Total employment was estimated at 3.38 million in the third quarter of 2021, which is about 3.8 percent (or almost 133,000 workers) below the level observed one year earlier. The reduction in employment was significantly larger in relative terms among women between Q1 and Q2 of 2020. Women's employment bounced back more rapidly, and, in Q3 2021, it was above the prepandemic level (Q1 2020). By contrast, men continued to experience job losses, and their employment level was more than 8 percent below the level observed in Q1 2020. As of Q3 2020, the partial rebound in employment was largely ascribable to the dynamic of informal employment, which rose by 2.6 percent relative to the same quarter of 2019. Informal employment increased more rapidly among women than among men (5.5 percent vs. 2.0 percent, respectively; Figure 2.16, panel c). A sectoral breakdown indicates that, between Q1 and Q4 2020, the largest reduction in employment (in relative terms) was in agriculture and fishing (–9.8 percent), followed by manufacturing (–8.1 percent; about 54,000 jobs lost), and the services sector (–0.9 percent). By contrast, other secondary sectors, mainly construction, posted an increase of about 1.8 percent. With the reduction in employment, unemployment rates increased, and, as of Q3 2021, they were still above the levels estimated before the pandemic, particularly among men (Figure 2.16, panel d). Similarly, the youth unemployment rate rose and was estimated at 42.4 percent in Q3 2021, relative to 34.2 percent before the pandemic.

The effects on the labor market translated into a deterioration in living standards among Tunisian households.[16] Public sector workers were the least affected by the pandemic, mainly because of a reduction in working hours or delays in wage payments (based on data relative to November 2020). Formal wage workers were less likely to be temporarily or permanently laid off, whereas informal workers suffered a higher probability of being permanently laid off (35 percent). Employers and own-account workers faced a number of difficulties, mainly because of a loss in demand (76 percent), difficult access to customers arising from mobility restrictions (74 percent), difficult access to suppliers (71 percent), and limited availability of inputs and price increases (75 percent).[17] Although farmers accounted for a small share of total employment, they experienced severe challenges, including reductions

[16] The data presented here are based on household phone surveys collected by the INS, in collaboration with the World Bank (5 rounds conducted between April and October 2020), and on household phone surveys collected by the INS, in collaboration with the Economic Research Forum (one round collected in October/November 2020). The data refer to the population of mobile phone owners. Alfani et al. (2021) and Krafft, Assaad, and Marouani (2021) have analyzed the data collected by the INS and the World Bank and by the INS and the Economic Research Forum, respectively.

[17] Responses refer to the 60 days prior to the survey week.

FIGURE 2.14. Correlates of Employment, by Sex, 2017

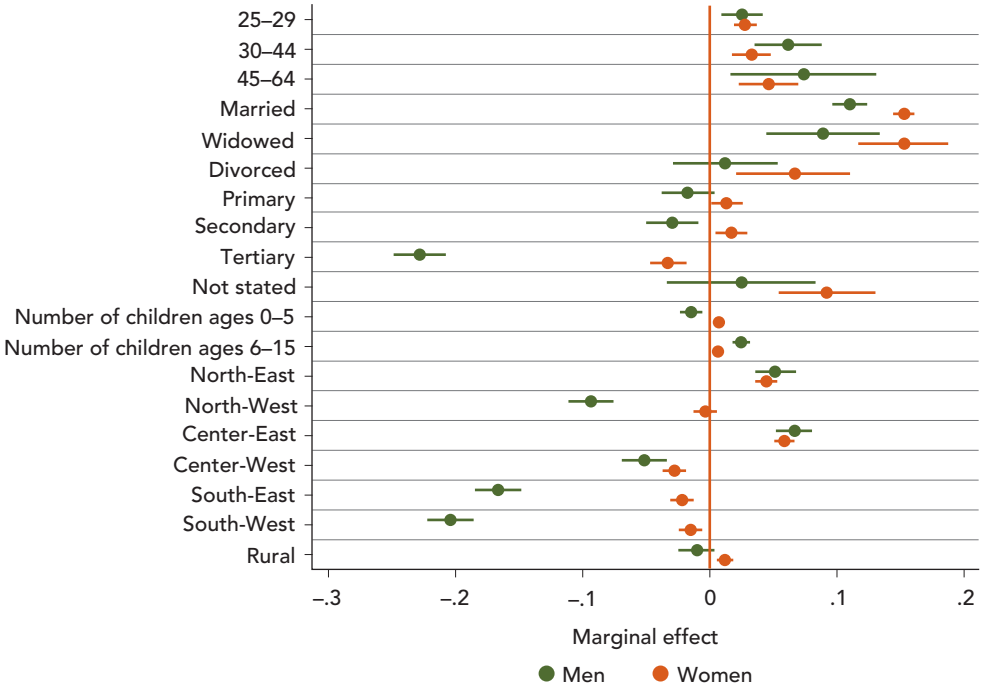
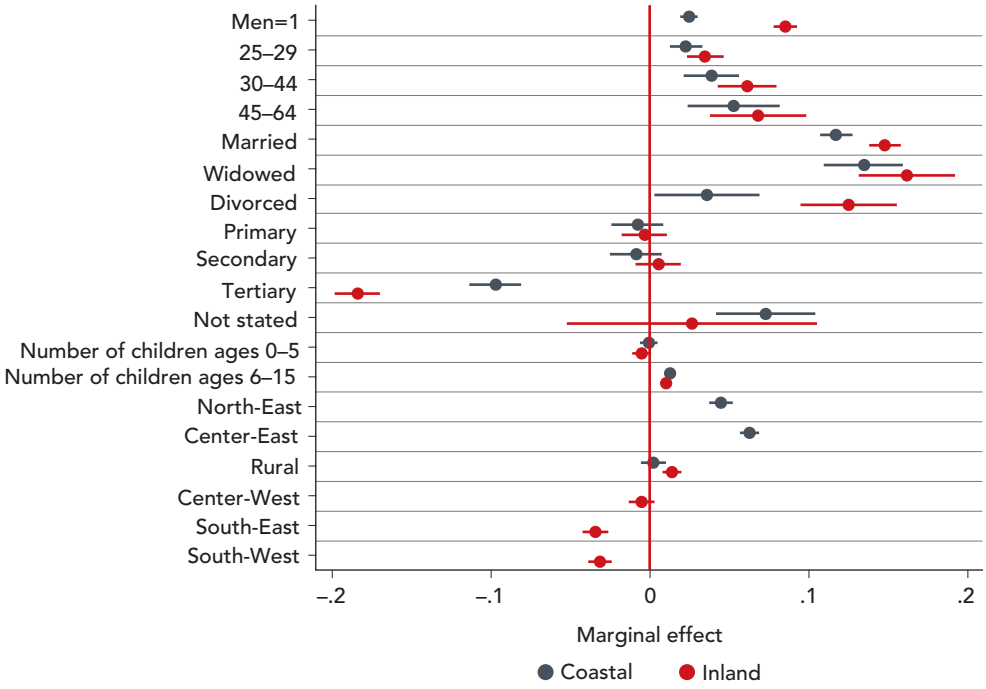
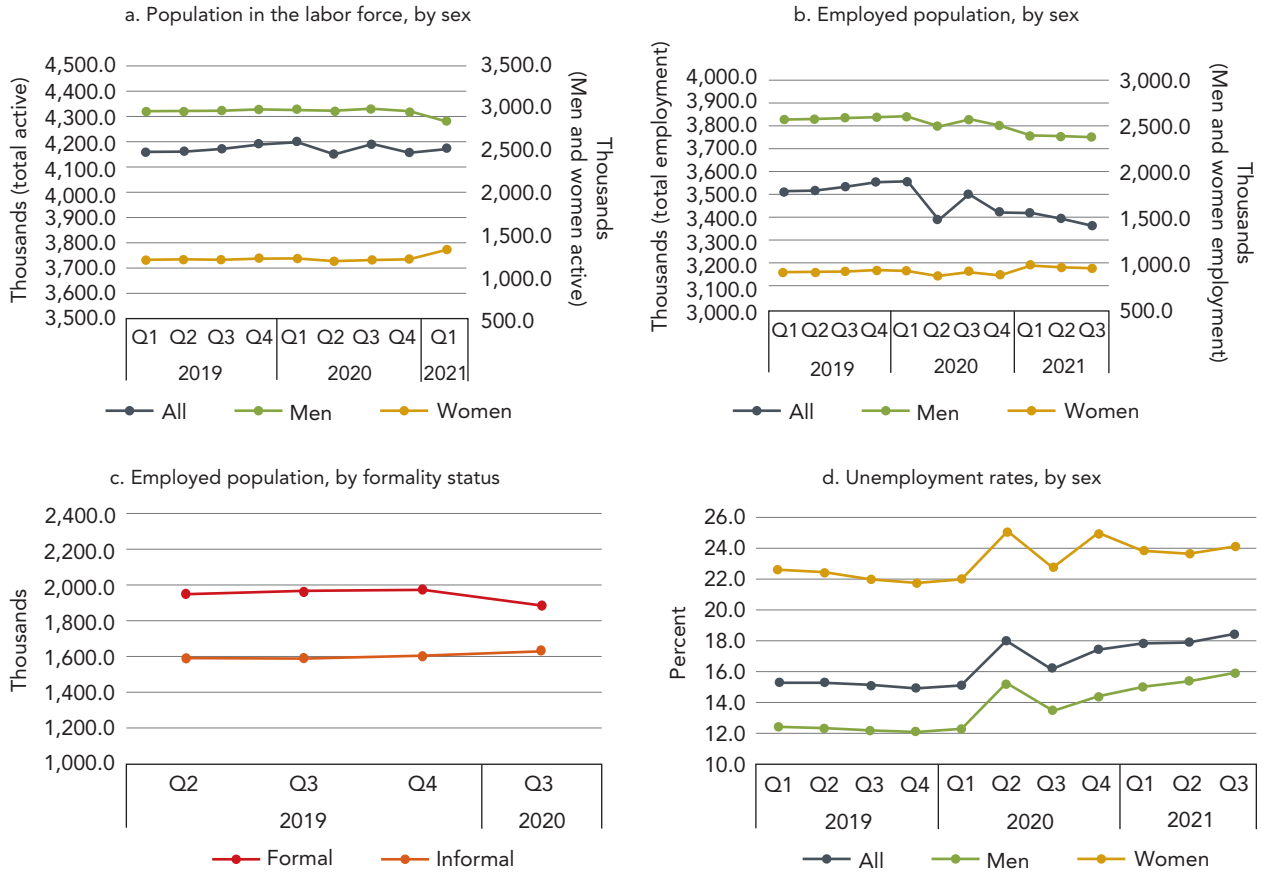


FIGURE 2.15. Correlates of Employment, by Region (Coastal vs. Inland), 2017



Source: Based on data from the Labor Force Survey (ENPE), INS.
Note: The reference categories are as follows: age 15–24, single, no schooling, residence in Greater Tunis, in urban areas.

FIGURE 2.16. Trends in Selected Labor Market Indicators, by Sex, Q1, 2019–Q1, 2021



Source: Based on data from the Labor Force Survey (ENPE), INS.

in inputs and a drought that led to a drop in revenues, and 77 percent of farmers experienced or expected smaller harvests). Together with employers, own-account workers, and informal wage workers, farmers posted large declines in household income, and only 18 percent of the relevant respondents reported in February 2020 that they had received some form of government assistance. The main coping mechanisms consisted of savings (50 percent), social networks (national, 45 percent; international, 10 percent), financial assistance from banks or other lenders (11 percent), or sale of assets (15 percent). A major consequence of the negative effects on the labor market, combined with difficulties in access to services and increases in prices, was a worsening in living standards. About 1 Tunisian household in 2 reported a decline in welfare in October relative to before the pandemic; the proportions were more than 6 in 10 among households in the bottom 40. About 1 household in 5 declared that there had been a worsening throughout the pandemic, that is, between May and October. Meanwhile, the pandemic accelerated a digital transformation (Box 2.2).

Gender Gaps

LABOR FORCE PARTICIPATION

There are important economic and social equity arguments for improving labor market conditions among women. From a merely economic perspective, the low participation of women constitutes an underutilization of human resources, particularly in light of the humongous progress achieved in education whereby girls are outstripping boys in educational outcomes. Lower participation of women contributes to lower incomes and living standards and can translate into higher poverty rates. Population aging exacerbates the issue. A rising share of elderly and a shrinking workforce will need to be counterbalanced with rising participation among groups with low activity rates. Raising labor force participation among less well educated women, many of whom are among the poor and the bottom 40, can also make growth more inclusive. In addition, gender equality and women's empowerment are fundamental rights and important development objectives on their own,

BOX 2.2. Digital Labor Platforms

The outbreak of COVID-19 and the lockdowns introduced in many countries to contain the spread of the virus accelerated a digital transformation that has been under way for decades. Millions of citizens worldwide moved online. Children with internet access at home attended virtual classes. Many employees, particularly those in midlevel and high-end occupations, started to work from home. Many firms adopted digital business models to continue their operations and minimize revenue losses. At the same time, digitalization helped contain the pandemic, for example through the use of mobile applications developed to track and trace infected individuals and their contacts. Yet, the pandemic also exacerbated inequalities associated with gaps in access to digital technologies across countries and, within countries, across less and more affluent households.

Telephone penetration is greater in Tunisia than in most of the developing countries in the Maghreb, excluding Algeria. At about 86 percent, 4G coverage is the second highest in Tunisia after Morocco (AUC and OECD 2021). The share of enterprises with a website is estimated at 66 percent on average, with a peak at 81 percent among large businesses. Together with Morocco, at 69 percent, these are the highest rates in the Maghreb (AUC and OECD 2021). The share declines with firm size. Thus, it ranges between 81 percent among large businesses and 59 percent among small businesses (AUC and OECD 2021). This excludes small, informal production units, among which the share with a website is estimated at less than 2 percent. About 9.4 percent report that they use the internet, and a similar share report that they use computers (10.5 percent).[a]

In addition to good internet coverage and high mobile phone penetration, the provision of electronic payment methods, well-developed fintech, and adequate transport infrastructures is key to fostering the development of digital platforms for the exchange of goods, services, and labor. This could help sustain a service-led growth model, whereby global innovator services, such as information and communication technology (ICT), finance, and professional services, coexist with low-skill domestic and tradable services to create more higher-productivity job opportunities for all. Global innovator services are intensive in skilled labor, but generate positive spillover effects in other sectors, including manufacturing, thanks to their links and to the greater demand induced by higher incomes (Nayyar, Hallward-Driemeier, and Davies 2021). Low-skill services may find more opportunities on larger markets because of digital platforms and the incentive to scale up based on intangible capital (Nayyar, Hallward-Driemeier, and Davies 2021).

Digital labor platforms provide a new way to boost labor demand and labor supply and also expand labor demand by increasing the size of the market. On online web-based platforms, tasks may be performed remotely, for instance, in legal and financial services, software development, translation services, programming, and data analysis, and there is no geographical limit to the size of the market. In the case of location-based platforms, work is carried out in person in physical locations identified by workers; this may include, for example, taxi services, delivery and home services, domestic work, and care services. The first type of platforms are likely to expand job opportunities among well-educated workers, whereas location-based platforms can provide an additional and more efficient way to match the demand or and supply of low-skill labor. Both have the potential to foster labor force participation and employment among women.

According to surveys conducted by the International Labour Organization (ILO), the majority of workers on digital labor platforms are young (ages below 35) and well educated (ILO 2021). Women, too, are on such platforms, though they contribute 4 workers in 10 on online web-based platforms and only 1 worker in 10 on location-based platforms because of the sectoral composition of jobs on location-based platforms (ILO 2021). Evidence also shows that greater flexibility, better pay, and lack of alternative job opportunities are the main factors that push workers to use location-based platforms. Virtually all workers find their main sources of labor income on these platforms, and earnings can be higher than in traditional sectors, as in the case of app-based taxi and delivery services.

Digital platforms are no panacea, however, and the opportunities they provide are often accompanied by important challenges. Regularity of work and incomes, working conditions, access to social protection, the right to collective bargaining, and discrimination and harassment are examples of issues commonly reported by workers engaged on digital labor platforms (ILO 2021). In addition, unfair competition is often cited as the most important issue traditional businesses raise because some platforms are not subject to the conventional tax and regulatory framework.

To take full advantage of digital platforms, the regulatory framework should guarantee low barriers to market entry to check the market power of digital incumbents and to allow new entrants to keep their incentives to compete (World Bank 2019). Moreover, in the case of location-based labor platforms that can help mediate labor in traditional sectors, such as low-skill labor in construction or food services, the degree of competition in the sectors in which employers are seeking to hire labor through digital platforms is crucial. Intermediating labor through digital platform will likely not generate more or higher-quality jobs if there is only one or a handful of firms operating in the sector that can therefore command the prices of the products, services, and labor they use.

Some governments have successfully introduced regulatory responses that can help improve the working conditions on digital platforms,. Several have extended social security to platform workers, including coverage of accident insurance costs paid by platforms, the extension of social security, and the provision of work injury and death benefits and sick and unemployment benefits (ILO 2021).

(continued)

BOX 2.2. Digital Labor Platforms *(continued)*

In Tunisia, the social contract that has for decades hinged on a large public sector and state-owned enterprises (SOEs) to deliver on the promise of job creation has failed. High unemployment rates among university graduates and the large number of workers employed informally with low incomes and little protection represent an urgent call to action. Job creation cannot be a responsibility of the public sector and a few well-connected incumbents. A new way forward might take advantage of e-commerce, fintech, digital labor platforms, and of the digital economy more generally to establish a new equilibrium, whereby new markets are reached and more job opportunities with better working conditions are created. Yet, competition on and off digital platforms in shielded sectors and the regulatory framework of digital platforms are critical to reducing the risk of generating new cohorts of unprotected workers with low earnings.

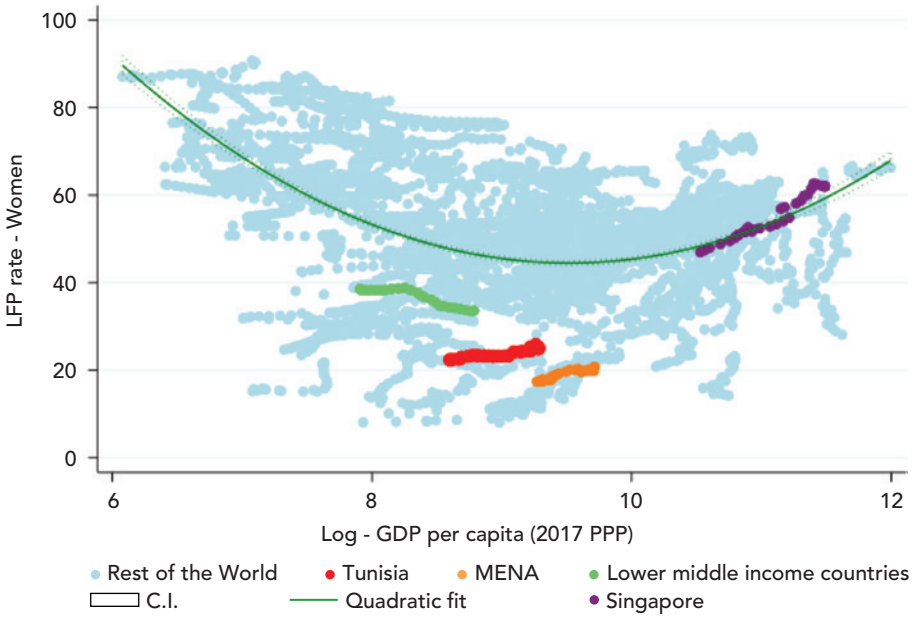
a. Figures based on the 2016 Survey of the Economic Activities of Micro-Enterprises (ENAE). The sample is extracted from the business registry and covers nonagricultural microproduction units—that is, fewer than six employees and revenues below TD 1 million a year—that have tax IDs, operate from fixed premises, and do not undertake precise accounting.

as established by the United Nations Sustainable Development Goals. Globally, gender gaps in labor market outcomes have been remarkably resistant to change, despite progress in other dimensions of gender equality (Klasen 2019a; World Bank 2011, 2014a).

Despite some progress, women's labor force participation is low in Tunisia relative to international standards and relative to men. On average, labor force participation among women has been around 25 percent over the decade, which is about half the average rate among OECD countries (51.5 percent), about 20 percentage points below the average among middle-income countries (45.2 percent in 2017), and about 8 percentage points higher than the regional average (18 percent in 2017) (Figure 2.17). Over time, the participation of women in Tunisia has increased. In 2017, 26.5 percent of working-age women participated in the labor market, compared with 24.4 percent in 2006 (Figure 2.18). Estimated at 41.8 percentage points in 2017, the gender gap in labor force participation rates is striking, although it narrowed by about 1 point relative to 2006 thanks to a less rapid increase in participation rates among men relative to women (1.5 percent vs. 8.6 percent, respectively, between 2006 and 2017).

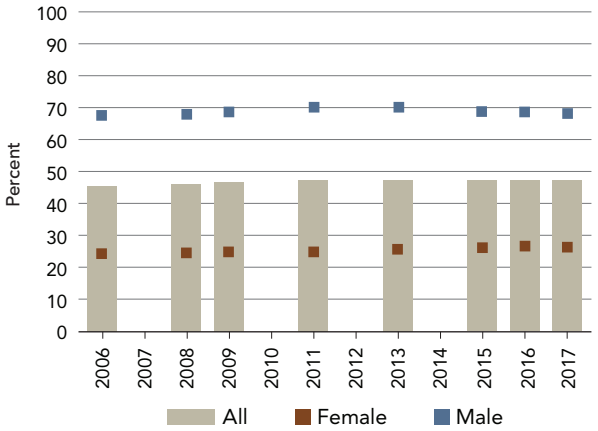
Women's labor force participation is particularly low in the center and south as well as in rural areas. The average women's labor force participation hides significant disparities

FIGURE 2.17. Women's Labor Force Participation Rates (Ages 15+), Tunisia and the Rest of the World, 1990–2019



Source: Based on data from the World Development Indicators, World Bank.

FIGURE 2.18. Labor Force Participation Rates, by Sex, 2006–17



Source: Based on data from the Labor Force Survey (ENPE), INS.

across governorates and regions and between urban and rural areas. Governorates in the center and south show significantly lower women's participation rates. For example, in Kasserine, the rate is estimated at 15.7 percent relative to 35.4 percent in Tunis (Map 2.1). Substantial differences exist across regions as well as between urban and rural areas overall and between urban and rural areas within each region (Figure 2.19). At the regional level, gender participation gaps range from 35.3 percent in Greater Tunis to 49.4 percent in the South-East. However, the largest geographical differences are detected between urban and rural areas. The average participation rate of women in rural areas is 18.3 percent, compared with 30.3 percent in urban areas. The gender gap is much wider in rural areas, at over 51 percentage points, than in urban areas, where it is estimated at 37.5 percent. (This is also ascribable to slightly lower rates among men in urban areas relative to rural areas.) In rural areas of southern regions and the North-West, the gender gap is estimated at 54–55 percentage points (Figure 2.19).

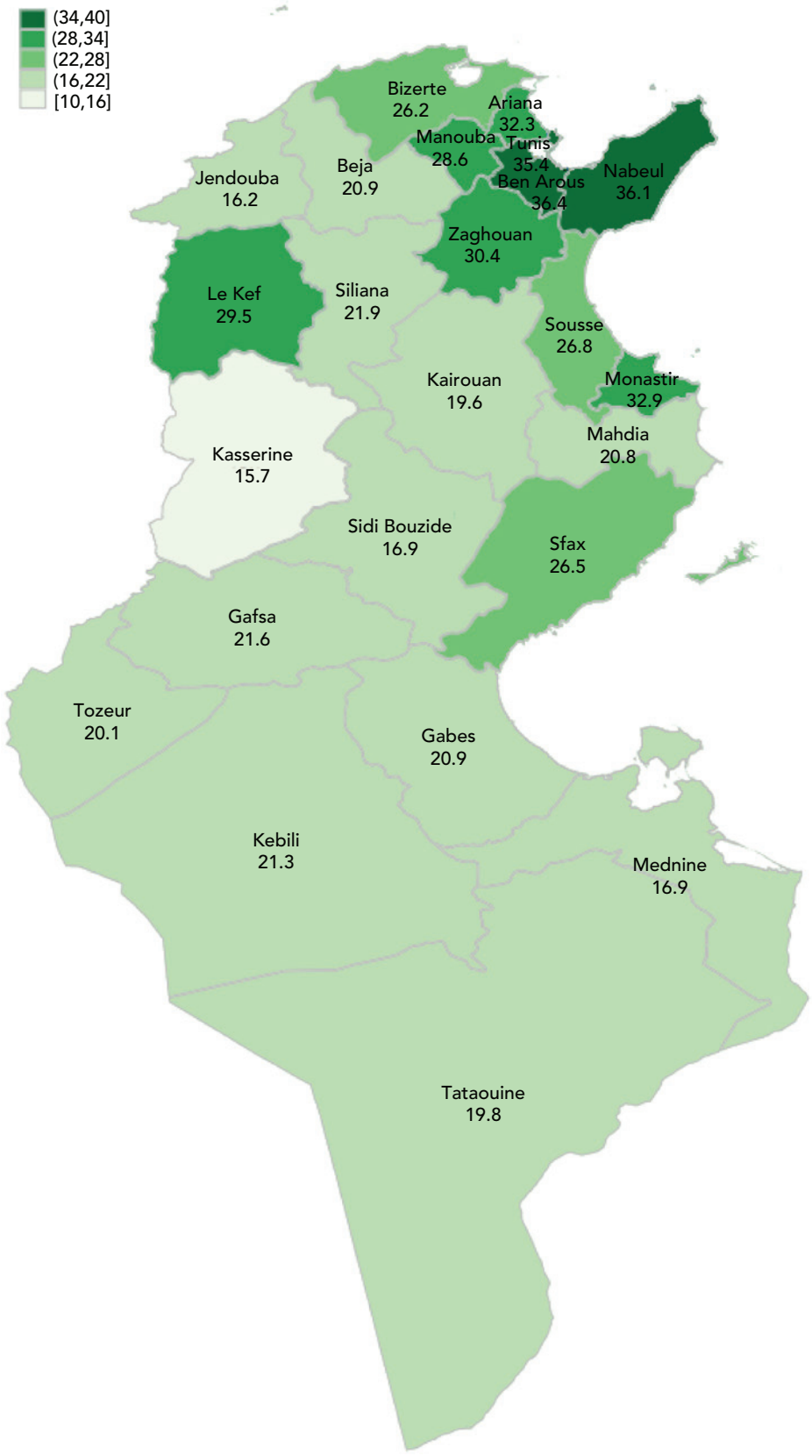
Differences in women's observable characteristics are a key factor in explaining geographic differences in women's labor force participation, but other factors play a role in some governorates. A simple exercise to understand whether most of the differences in participation rates among women across governorates are driven by women's characteristics rather than other factors, such as infrastructure, institutions, discrimination, or social norms, indicates that a large part of the gaps can be ascribed to differences in demographics, including age, marital status, the presence and number of children, and educational attainment (Figure 2.18).[18] Composition-free and in-sample predicted probabilities line up well around the 45-degree line. In particular, governorates with the lowest women's labor force participation rates have a larger number of young women, married women, and households with children ages under 15. In addition, considerable differences in the share of women with tertiary education are observed between the north and south of the country. However, a few governorates, namely, Beja, Bouzide, Jendouba, Kairouan, Kasserina, Sidi Mahdia, and Siliana, have low female participation rates that cannot be explained by women's observable characteristics. These governorates are located in the north and center of the country, and governorate-specific characteristics, in addition to unobservable characteristics of women, seem to play an important role in this case.

The gender gap in labor force participation widens with age and peaks among individuals ages 30–44. Labor force participation among both men and women is low among the youngest age-group, ages 15–24, thanks to school attendance. In the 15–24 age-group, about 4 boys in 10 participated in the labor market in 2017 compared with 2 girls in 10 (Figure 2.21). The gap is ascribable to a higher school attendance rate among girls, but also to a larger share of girls who are not in education and not in the labor force. The gap widens in the next two age-groups, 25–29 and 30–44, where it reached 35 and 53 percentage points in 2017 because more women fail to enter or exit the labor market as they grow older. However, the gap narrowed over the decade thanks to sizable increases in participation rates among women in the corresponding age-groups (about 6 and 7 percentage points), whereas participation among men of the same age declined by almost 1 percentage point. The gender gap in participation is even larger among the population ages 45–64 (59 percentage points in 2017) and has remained constant over time because of a similar reduction in labor market engagement among both men and women in the same age-group.

The younger cohorts of women exhibit higher participation rates than older cohorts of women. Average figures hide important variations across cohorts and throughout the life cycle (Figure 2.22). Among women, both cohort

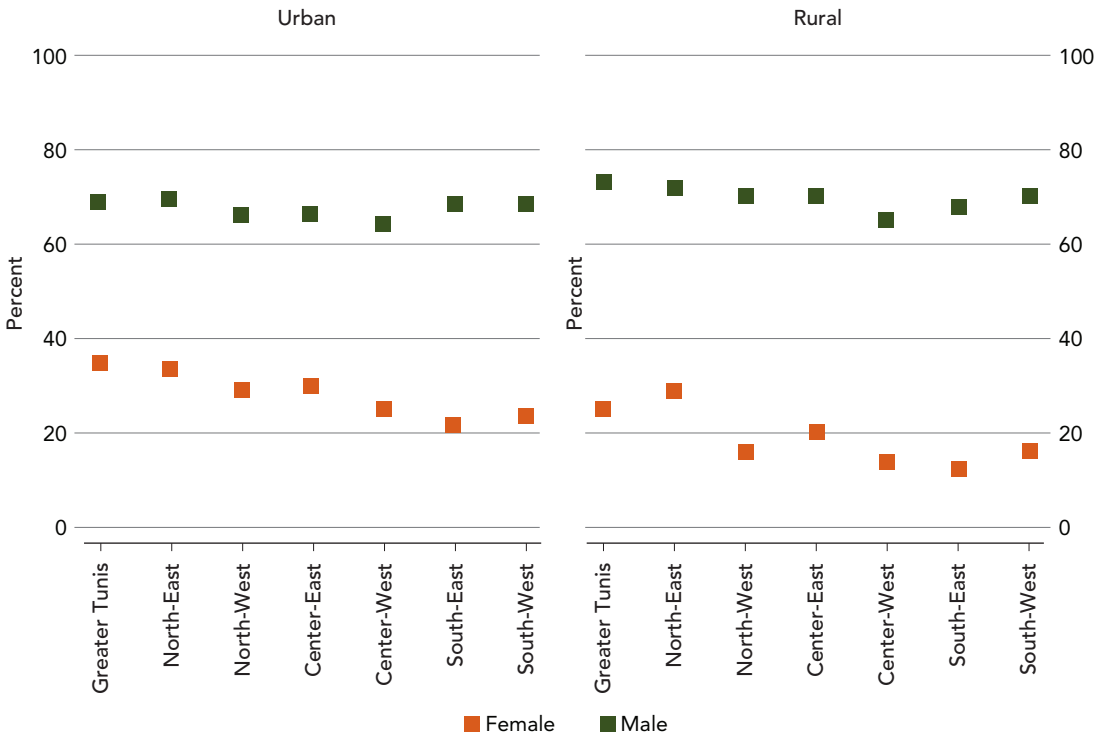
[18] The exercise consists in estimating separate equations for each governorate of the probability of women participating in the labor market based on individual, household, and geographical characteristics. In a second step, probabilities of participating are predicted for each governorate based on the governorate-specific estimate coefficients in the sample (the characteristics of women living in each governorate) and the characteristics of women out of sample, that is, in the entire country.

MAP 2.1. Female Labor Force Participation Rates, by Governorate, 2017



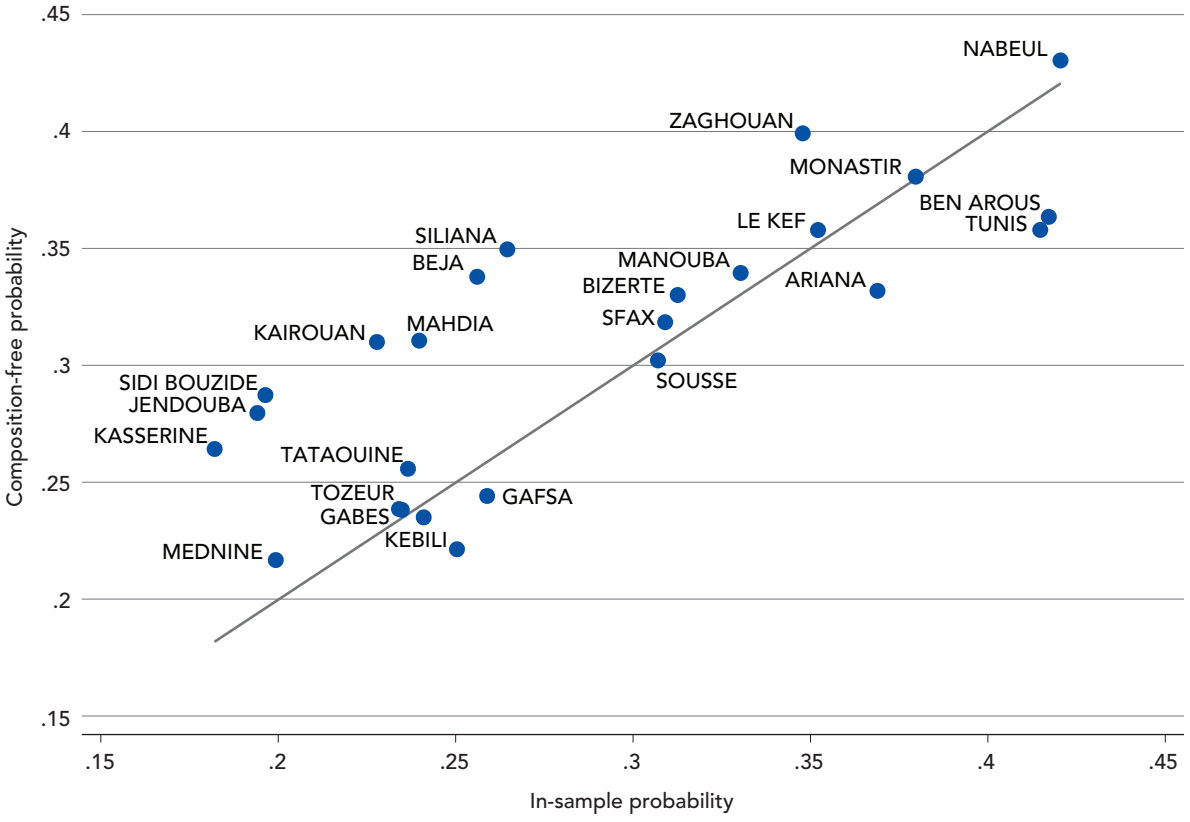
Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 2.19. Female Labor Force Participation Rates, by Region and Urban and Rural Areas, 2017



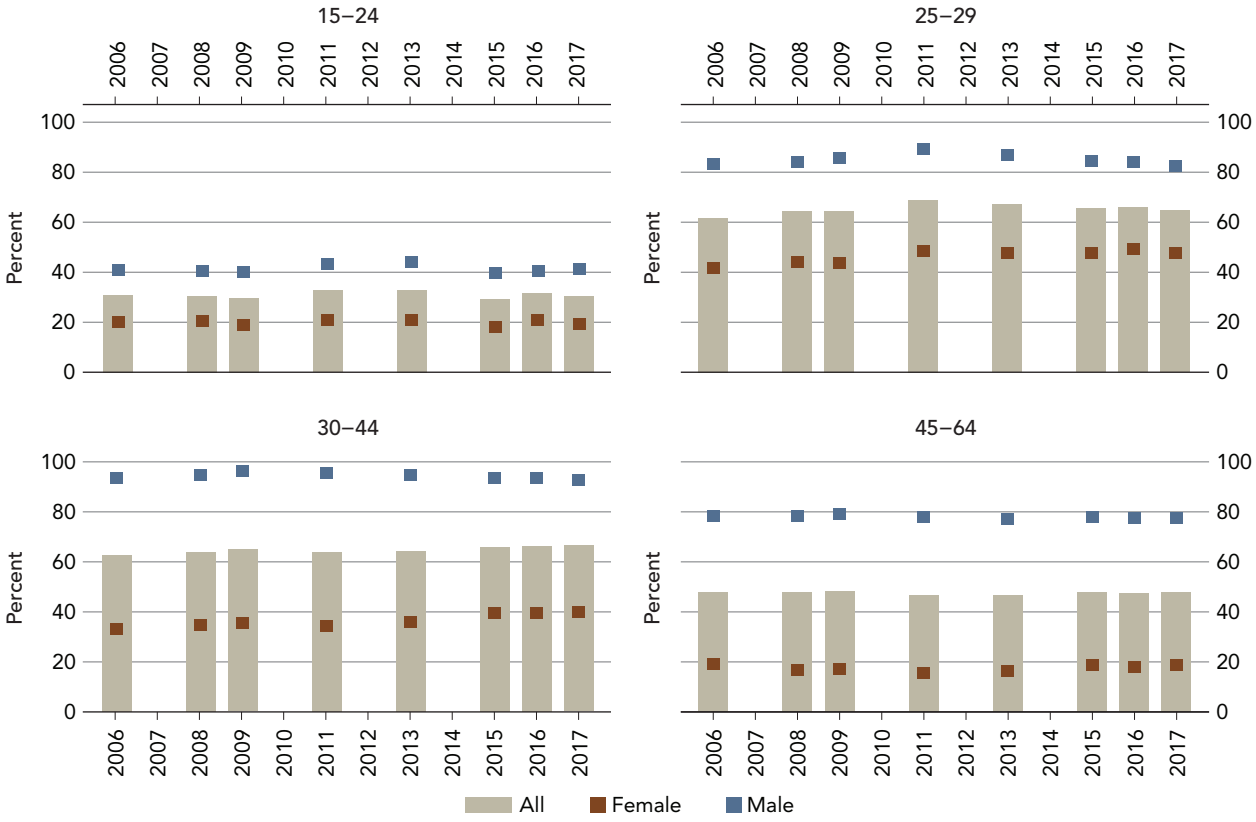
Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 2.20. The Role of Observable Characteristics of Women in Gaps in Women's Labor Force Participation Across Governorates, 2017



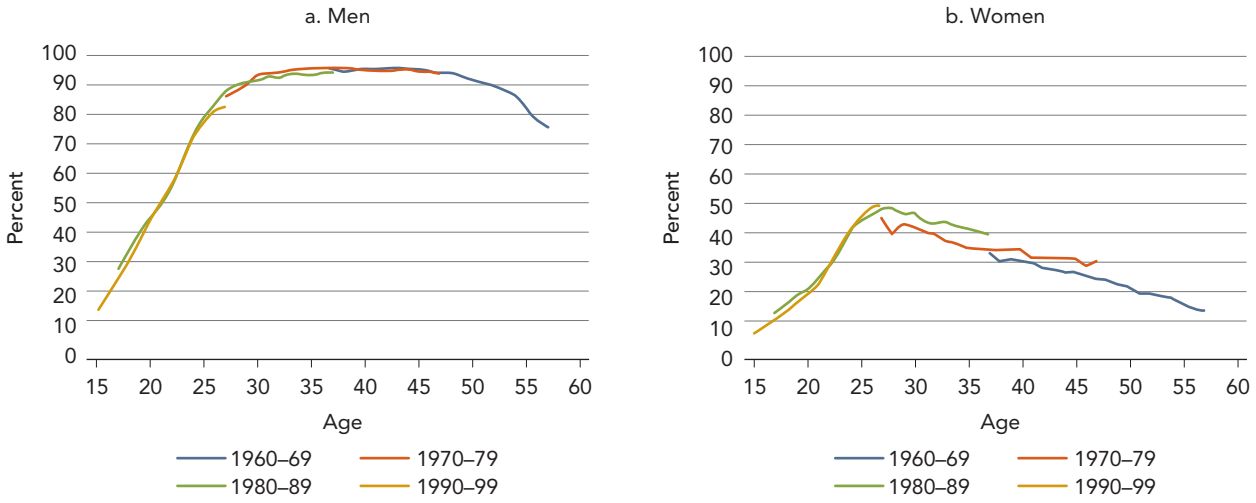
Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 2.21. Labor Force Participation Rates, by Sex and Age-Group, 2006–17



Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 2.22. Female Labor Force Participation Rates, by Cohort Over the Life Cycle, 2006–17



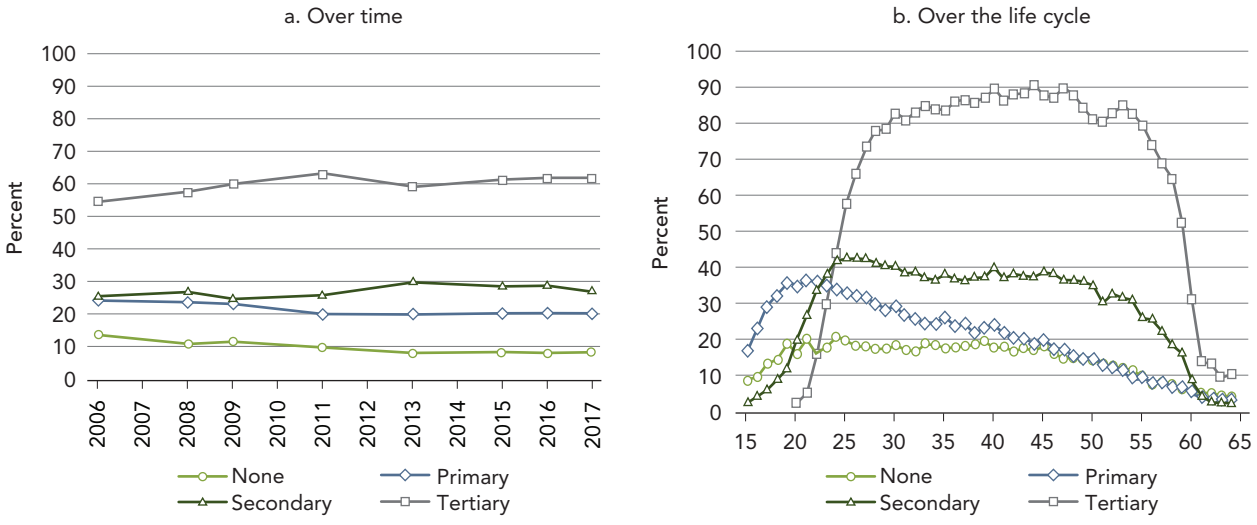
Source: Based on data from the Labor Force Survey (ENPE), INS.

and life-cycle effects are important, whereas cohort effects do not play much of a role among men. Men tend to reach high participation rates, above 90 percent, and younger (older) cohorts of men increase (decrease) their participation as they enter (exit) the labor market, whereas participation rates among middle cohorts remain constant at high levels (Figure 2.22, panel a). By contrast, a look at female labor force participation at various ages indicates that, at any age, women born more recently participate in the labor market in greater numbers than women in previous cohorts. For example, about 45 percent of women born in the 1990s were participating in the labor force at age 25, while fewer than 40 percent of women born a decade earlier were participating in the labor force at age 25 (Figure 2.22, panel a). Similarly, at age 35, 41 percent of women born in the 1980s are active in the labor market, while the corresponding share at age 35 among women who were born in the 1970s is 35 percent. About 31 percent of women born in the 1970s were active in the labor market at age 45, compared with about 26 percent of women who were born in the 1960s. This is not an age effect given that the various cohorts are compared at the same age. This seems to point to a set of factors that are positively correlated with women's participation that improved over time. Educational attainment, norms and attitudes, and conditions of employment are potential candidates.

Higher educational levels among women contribute to greater participation in the labor market. Individuals with higher educational attainment typically participate in larger numbers in the labor market and exhibit a greater degree of attachment to labor. Tunisian women are no exception (Figure 2.23, panel a). In 2017, fewer than 1 woman in 10 with no schooling participated in the labor market. This compares with over 2 women in 10 with primary education, almost 3 women in 10 with secondary education, and more than 6 women in 10 with tertiary education. The last is close to the average rate among men (68.3 percent). Over the decade, participation rates declined among women with no schooling or with primary education, while they increased among well-educated women, particularly among women with tertiary education (7 percentage points). The additional key element has been the change in the composition of the working-age population by educational level. The share of women with tertiary education in the female working-age population rose by over 8 percentage points, from 8.9 percent in 2006 to 17.1 percent in 2017. At the same time, the share of women with no education declined from 32 percent to 27 percent.

High educational attainment leads to a higher degree of labor market attachment throughout the life cycle. In addition to participating in the labor market on average almost as much as men, women with tertiary education maintain an attachment to the labor market throughout the life cycle that is similar to the attachment of men (see Figure 2.23, panel b). The association between tertiary education and labor market participation remains strong at various ages. Women with a university degree enter the

FIGURE 2.23. Female Labor Force Participation Rates, by Educational Level Over Time and Over the Life Cycle, 2006–17



Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 2.24. Female Labor Force Participation Rates, by Marital Status Over Time and Over the Life Cycle, 2006–17

Source: Based on data from the Labor Force Survey (ENPE), INS.

labor market at older ages relative to their less well educated counterparts, but their participation rates rise rapidly to over 80 percent by age 30. It increases again at ages 30–44 and hovers around 86 percent on average (the rate among male university graduates is 97 percent at ages 30–44). The association, however, is not as strong at lower levels of education, where women are outperformed by men by at least 30 percentage points, suggesting that high education is one of the key factors that can help close the participation gap by sex.

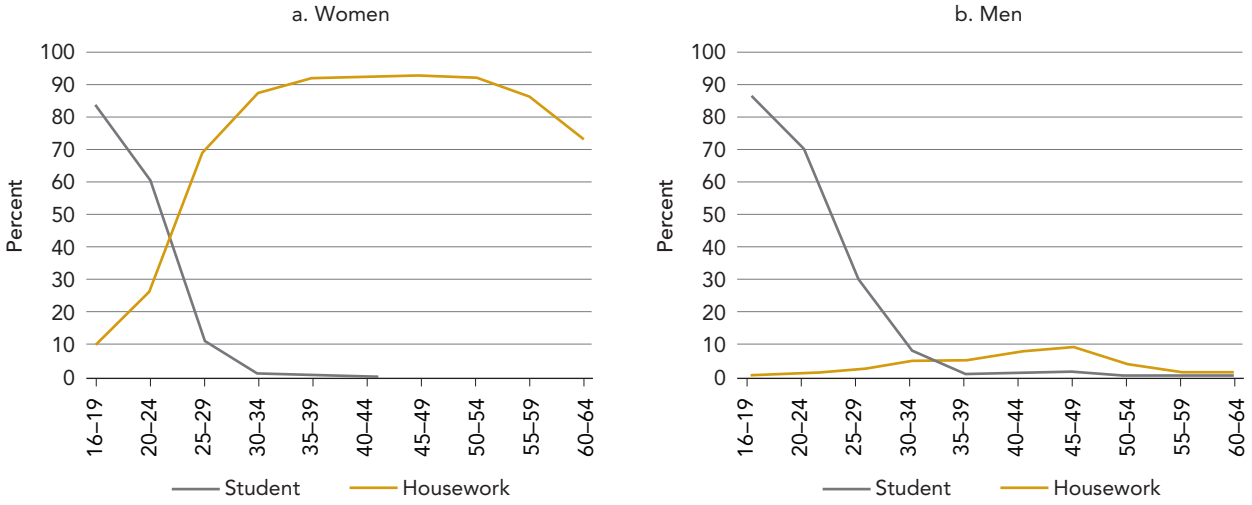
Marriage, childbirth, and childcare responsibilities are key explanatory factors of female labor force participation. Women's marital status can explain large differences in women's participation rates. The average age at first marriage is 22.5 (based on the 2014 population census), and about 80 percent of women are married by age 36.[19] Participation rates among single and married women increased virtually at the same rate over the decade. The share of married women who participate in the labor force thus remains about 6 percentage points below that of single women (estimated at 27.2 percent and 33.5 percent, respectively, in 2017) (Figure 2.24, panel a). The gap between married and single women widens over the life cycle, with a more rapid rise in participation among single women (Figure 2.24, panel b). This gap expands during the early stages of the life cycle, reaching a peak of about 31 percentage points in the late 20s and fluctuating between 1 and 12 points after age 40. This pattern might indicate that marriage, pregnancy, and childcare deter women from (re)entering the labor market because of prevailing social norms and gender roles that attribute to women the primary role of caregiver. This seems to be corroborated by the main reason for not being engaged in the labor market that most women report. Most inactive women ages 25–29 and over 90 percent of women ages 30 or more mention household responsibilities, whereas men rarely mention housework as a reason for not looking for work (Figure 2.25). The share of women reporting household responsibilities as the main reason for not working differ considerably at young ages across quintiles of household consumption expenditures (Figure 2.26; Box 2.3). This is largely ascribable to the fact that young women in richer households can afford to stay in school longer. The difference in the share of women reporting household duties narrows considerably as women grow older.

A multivariate analysis confirms the correlation between observable characteristics and women's labor force participation. All the bivariate correlations illustrated so far can be combined in a multivariate analysis of labor force participation (Figure 2.27).[20] Women's participation rises at young ages and then progressively slows at older ages.

[19] This includes women who, by age 35, are divorced or widowed.

[20] A probit model is fit by regressing a dummy for participation—taking the value of 1 if a woman participates in the labor market and 0 otherwise—onto a set of individual and household characteristics, including a second-degree polynomial in age, dummies for year of birth cohort, dummies for residing in each of the Tunisian regions, a dummy for urban areas, dummies for marital status, dummies for educational level, household age composition (presence of children ages under, presence of children ages 2–5, presence of children ages 6–15, and presence of household members ages 65 or more).

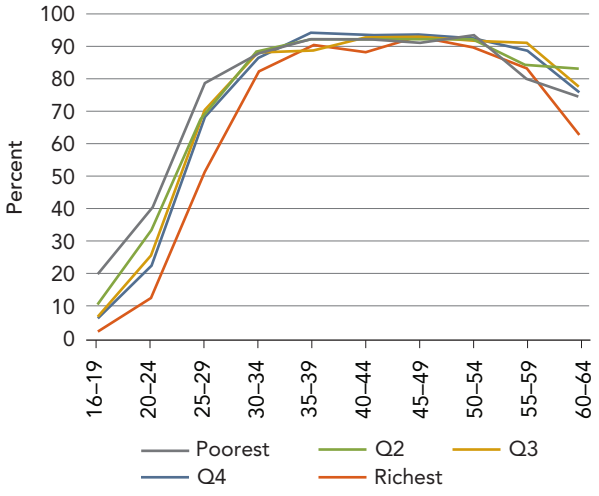
FIGURE 2.25. Reasons for Not Working Over the Life Cycle, by Sex, 2015



Source: Based on data from the EBCNV 2015, INS.
Note: Respondents could also mention other reasons. Responses therefore do not sum to 100 percent.

Married women are about 12 percent less likely to enter the labor market relative to single women (the negative effect declines in more recent years), while divorced or separated women are relatively more likely to do so (about 6 percent in 2017; again, the effect is attenuated in more recent years). The important role of the level of education, particularly tertiary education, in shaping women's participation decisions is confirmed. While every woman with some level of education is more likely to participate in the labor force compared with a woman with no schooling, it is tertiary education that plays the most important role. It is estimated that, relative to having no education, having tertiary education was associated with a 40 percent greater chance of entering the labor market in 2017, which is higher than the effect estimated 10 years earlier. The effect of secondary education is sizable, too (16 percent in 2017), and it has increased over time. Household composition matters. The presence of young children (ages less than 2) reduces the probability of participating by about 3 percent. Similarly, the presence of children ages 2–5 reduces participation by about 2 percent. The presence of children ages 6–15 has a similar negative effect. By contrast, the presence of elderly people (ages 65+) in the household does not seem to be a major obstacle to women's engagement in the labor market in most years, but its effect is significant and estimated at –1.3 percent in 2017. Women in rural areas as well as women in all regions except the North-East are less likely to participate in the labor market relative to women in urban areas and in Greater Tunis.

FIGURE 2.26. Share of Inactive Women Reporting Household Duties as a Main Reason for Not Working Over the Life Cycle, by Quintile of Household Expenditure, 2015



Source: Based on data from the EBCNV 2015, INS.

Observable characteristics leave a large part of the gender gap in labor force participation unexplained. This is because individual and household characteristics controlled for in the analysis are not able to account for most of the variation observed in women's labor force participation. This is corroborated by a Blinder-Oaxaca decomposition of the participation gap between men and women (Figure 2.28, panel a).[21] Nearly all the difference in participation

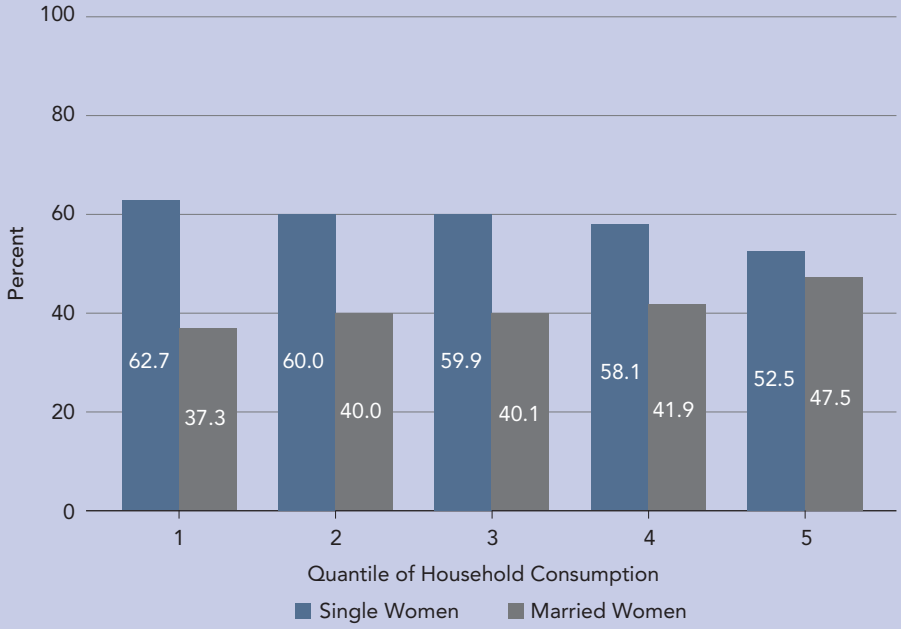
[21] Figure A 2–1 in annex illustrates the effect of covariates broken down by groups, including demographics, marital status, educational level, household composition, and location.

BOX 2.3. Women's Labor Market Participation Along the Household Welfare Distribution

Close to 70 percent of the Tunisian population ages 25–54 is married. The share of married couples declined slightly, from 78 percent in 2006 to 77 percent in 2017, and the share of two-earner households among married couples hovered around 19 percent over the decade. Hence, for many workers, decisions concerning labor force participation and employment take place with a partner within a household. Household economic status plays an important role (and is endogenous) to the labor market decision of household members. For example, in poor households, the employment of an additional member can raise household income considerably and potentially push the household above the poverty line. By contrast, women in affluent households might be able to afford to be inactive because of the prevalence of an income effect.

In Tunisia, the 2015 household budget survey allows an investigatio into the patterns of labor market participation among women along the distribution of household consumption expenditure (Figure B 2.3-1).[a] First, labor force participation among single women monotonically decreases along the consumption distribution. Thus, a larger share of single women in the poorest households participate in the labor market (62.7 percent) compared with women in richer households (52.5 percent in the top quintile). These figures include all women ages 15 and above who are single, excluding widows and divorced women. This group largely consists of young women who still live with their parents: 86 percent are single women ages 15–34, and over 45 percent are still in education. The declining pattern along the welfare distribution likely captures an income effect, whereby young single women among more affluent households can afford to continue pursuing educational goals. This pattern is also consistent with qualitative interviews, which show that young women's engagement in the labor market, especially in work that is considered below their educational qualifications, is often driven by the economic needs of their households (World Bank 2014a).

FIGURE B 2.3.1. Female Labor Force Participation Rates, by Marital Status and Quintile of Household Consumption Expenditure, 2015



Source: Based on data from the 2015 Household Budget Survey (EBCNV), INS.

Second, married women display the opposite pattern. Their labor force participation rate increases along the consumption distribution, from 37.3 percent in the first quintile to 47.5 percent in the richest quintile. While it is difficult to unpack the reasons behind such a trend, some hypotheses may be advanced. Married women in richer households are typically more well educated relative to women living in the poorest households, and, because of assortative mating, they also tend to be married to well-educated husbands (Table B 2.3-1).[b] This might lead to the prevalence of the substitution effect over the income effect, whereby the price of leisure is higher among well-educated women.

(continued)

BOX 2.3. Women's Labor Market Participation Along the Household Welfare Distribution *(continued)*

TABLE B 2.3.1. Correlation Between Educational Level of Heads and Spouses, by Quintile of Household Consumption Expenditure, 2015

		Spouse's educational level				
	Bottom quintile	**None**	**Primary**	**Secondary**	**Tertiary**	**Total**
Head's educational level	None	31.0	3.6	0.8	0.1	35.4
	Primary	22.0	22.2	5.0	0.4	49.6
	Secondary	3.7	5.6	4.0	0.3	13.6
	Tertiary	0.3	0.5	0.4	0.3	1.4
	Total	57.0	31.9	10.1	1.0	100.0
	Top quintile	**None**	**Primary**	**Secondary**	**Tertiary**	**Total**
	None	5.7	2.0	0.4	0.0	8.1
	Primary	5.7	12.1	5.2	1.3	24.3
	Secondary	2.6	10.0	19.4	5.7	37.6
	Tertiary	0.3	2.2	8.9	18.6	30.0
	Total	14.2	26.2	34.0	25.7	100.0

Source: Based on data from the 2015 Household Budget Survey (EBCNV), INS.

Well-educated women also have access to formal wage jobs that offer greater security and protection and provide access to maternity leave that can make reentry into the labor force after a pregnancy easier. The share of married women in wage employment increases along the welfare distribution from 58 percent in the lowest quintile to 84 percent in the top quintile at the expense of unpaid family work and own-account work (Table B 2.3.2). Among wage workers, the share of married women holding a public sector job ranges between 14 percent in the lowest quintile and 63 percent in the top quintile (Table B 2.3.2). Similarly, the share of married women employed in formal wage jobs in the private sector rises monotonically along the welfare distribution from 27 percent in the lowest quintile to 76 percent in the top quintile, respectively, monotonically increasing along the welfare distribution. Childcare is likewise more affordable among more affluent households because both parents have higher incomes from labor relative to parents in the poorest quintile. Perceptions of social norms might also be softer among well-educated couples that feel less constrained by traditional gender roles that assign wives the primary role as caregivers.

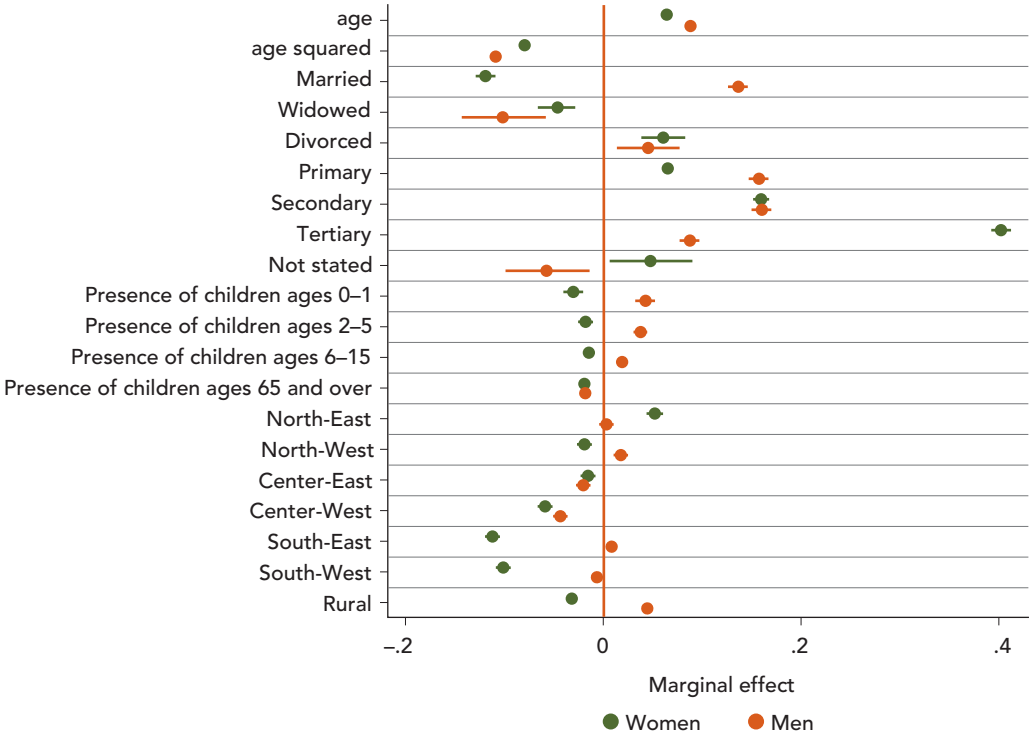
TABLE B 2.3.2. Married Women Employed, by Type of Wage Employment and Quintile of Household Consumption Expenditure, 2015

	Wage work	Public sector	Private sector formal
Quintile	**% of all employment**	**% of wage employment**	
1	58.2	13.7	26.7
2	64.4	21.8	40.9
3	71.8	30.9	55.1
4	75.2	45.1	64.7
5	84.4	63.4	76.3

Source: Based on data from the 2015 Household Budget Survey (EBCNV), INS.

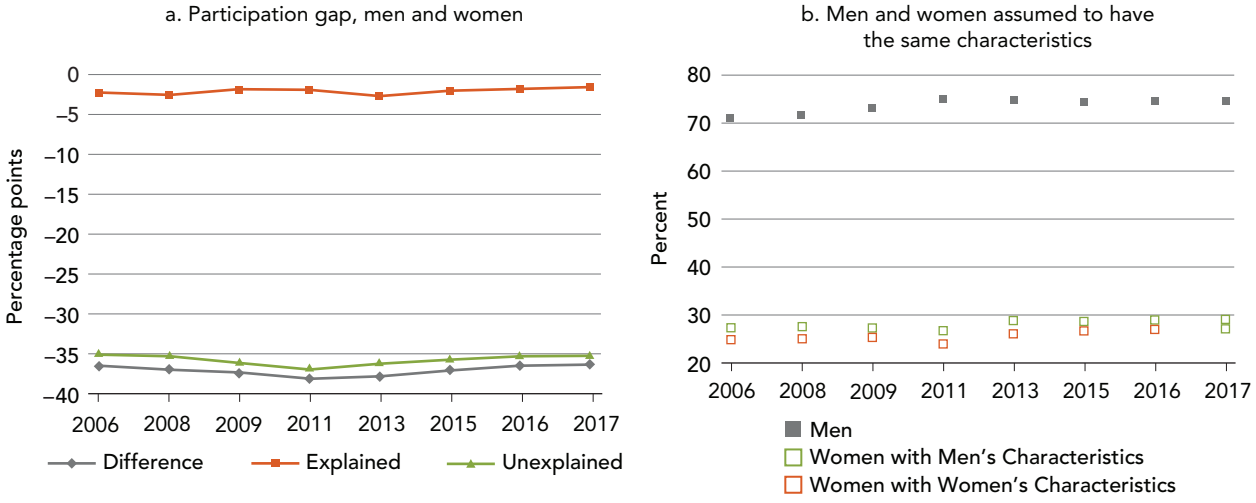
a. Estimates of participation rates among men and women derived from the 2015 household budget survey and the 2015 labor force survey (second quarter) differ to some extent. Men's participation rate is estimated at 68 percent in the household budget survey and at 68.8 percent in the labor force survey, whereas women's participation rate is estimated at 30.2 percent in the former and at 26 percent in the latter.
b. Following Fortin and Schirle (2006), assortative mating is defined as the likelihood of a person in labor income decile *i* to be married to a spouse in the same labor income decile, according to their respective labor income distribution. Lack of data on labor income in the household budget survey and relying on the strong correlation between educational level and income from labor at the individual level, Table B 2.3 1 shows the percentage of married couples sorted by the husband and wife's educational levels in 2015. The degree of assortative mating is captured by the percentage of couples along the main diagonal.

FIGURE 2.27. Correlates of Labor Force Participation, by Sex, 2017



Source: Based on data from the Labor Force Survey (ENPE), INS.
Note: The reference categories are as follows: single, no schooling, Greater Tunis region, urban areas.

FIGURE 2.28. Oaxaca-Blinder Decomposition of the Gender Gap in Labor Force Participation and Counterfactual Labor Force Participation Rates, 2006–17



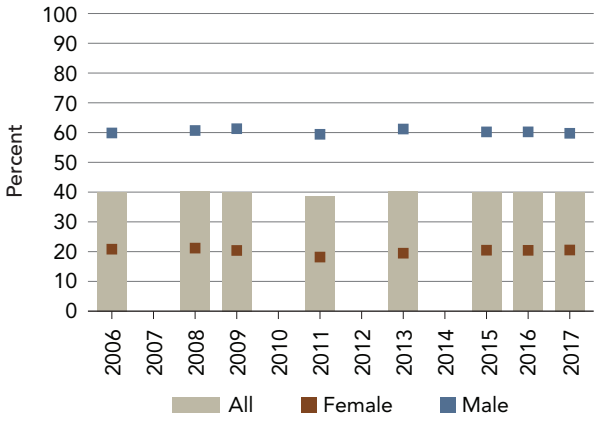
Source: Based on data from the Labor Force Survey (ENPE), INS.

rates—about 36 percentage points in 2017—is driven by the unexplained component; fewer than 2 percentage points are accounted for by observable characteristics. The unexplained part captures differences in the estimated parameters of the labor force participation equation of men and women as well as differences in unobservables. A large part of the differences in coefficients is ascribable to demographics and marital status (annex Figure A 2.1), factors that strongly correlated with participation in the bivariate correlations illustrated above. In addition, the regression does not control for some important factors, such as the supply and cost of childcare and eldercare services within regions, which could account for some of the unexplained component. In addition, the choice of curricula women decide to pursue in school might partly account for the difficulty in findings jobs and might, in the medium term, discourage women from entering the labor market. Nonetheless, the magnitude of the unexplained component might also point to factors other than socioeconomic and demographic characteristics. Cultural values and social norms assign to women a traditional role as the main providers of child and eldercare, household chores, and other nonmarket activities and might dominate over the empowering effect of education among women with less than tertiary education. A simple econometric exercise shows that, even if women had exactly the same characteristics observed among men, including age, educational level, marital status, and so on, the participation rate predicted by the multivariate regression would increase a little, but would still be far lower than that of men (Figure 2.28, panel b).[22]

EMPLOYMENT AND UNEMPLOYMENT

Despite a still large gender gap, women's access to jobs has improved since 2011. In 2006–17, the rate of employment creation was not sufficient to keep up with the increase in the working-age population, particularly among women. Yet, an important distinction needs to be made between the pre- and post-2011 periods (Figure 2.29). Between 2006 and 2011, the rate of employment creation was almost half the rate of growth of the working-age population, and the total number of employed women declined from 787,000 to 745,700. Between 2011 and 2017, women's employment increased by over 20 percent, which is about three times the rate of increase in the female population of working age. Among men, employment growth was slightly above the rate of increase in the population of working age. Therefore, beginning in 2011, the employment-to-population ratio increased modestly among men and by about 2.5 percentage points among women (from 18.1 percent in 2011 to 20.5 percent in 2017), and the gender gap narrowed by almost 2 percentage point, but was still slightly above the level observed in 2006.

FIGURE 2.29. Employment-to-Population Ratios, by Sex, 2006–17



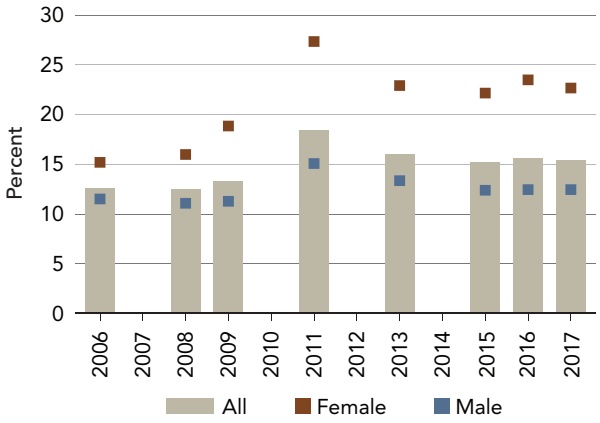
Source: Based on data from the Labor Force Survey (ENPE), INS.

Women continue to lag men in terms of jobs access, and unemployment rates are considerably larger among women than among men. In 2006, women's unemployment rate was estimated at 15.1 percent, compared with 11.5 percent among men, with a gender gap of about 3.6 percentage points (Figure 2.30). The latter expanded over time and peaked at over 12 percentage points in 2011 and then gradually declined to about 10 points in 2017. This trend is largely ascribable to a drastic increase in unemployment among women between 2006 and 2011, when the number of unemployed women increased by 100 percent to reach over 280,000 unemployed women in 2011, and then began a slow decline thereafter. The number of unemployed men increased by 46 percent during the first time span, and it declined more rapidly than among women thereafter (–15 percent between 2011 and 2017), thus contributing to a reduction in the gender gap in unemployment rates relative to the level reached in 2011.

Lack of job opportunities and limited geographical mobility translates into large inland and coastal gaps in unemployment rates among women. Large gaps exist in labor market

[22] A probit regression is estimated by regressing the participation dummy upon the same set of controls described above. Estimated coefficients are then used to generate a prediction of the probability of women participating in the labor market as if they had men's characteristics. Thus, counterfactual women's participation rates are predicted by applying coefficients estimated for women onto the distribution of men's characteristics.

FIGURE 2.30. Unemployment Rates, by Sex, 2006–17



Source: Based on data from the Labor Force Survey (ENPE), INS.

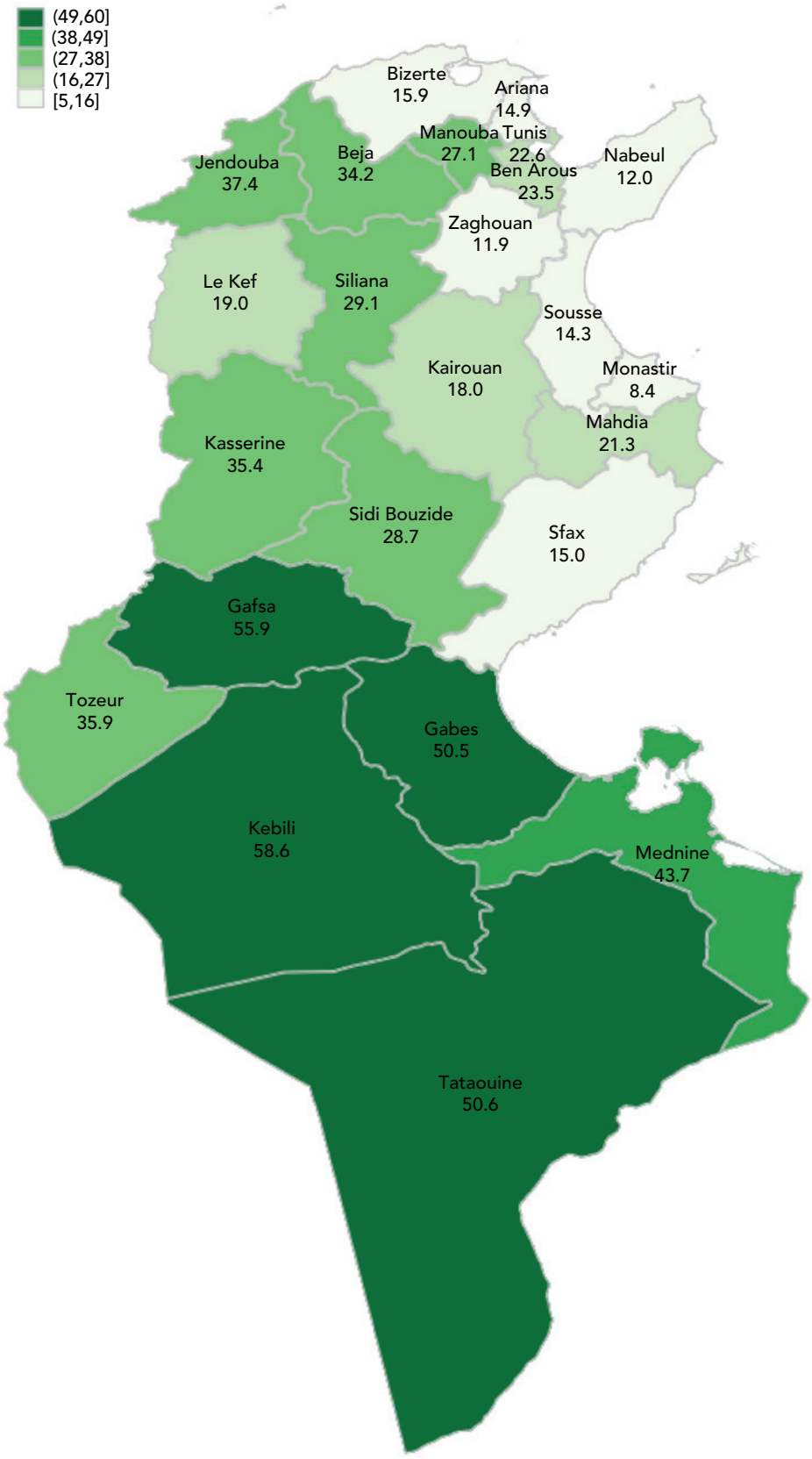
outcomes among both men and women across regions and governorates. This is driven by the different employment opportunities and limited economic development of inland regions. However, geographical unemployment gaps among women reach peaks of 50 percentage points (21 percentage points in the case of men in 2017) across governorates (Map 2.2). In the governorate of Monastir, located along the coast (Center-East region), the unemployment rate is estimated at 8.4 percent, compared with 58.6 percent in the governorate of Kebili, in the South-West region. In the case of women, the rapid improvement in educational outcomes is reflected in more severe issues in terms of labor market insertion, particularly in rural areas and inland regions that have fewer job opportunities. Young women face more difficulties in moving to areas where economic opportunities flourish and end up being more constrained than men by the lack of opportunities local labor markets offer (Box 2.4).

Young women lag older women and men in access to jobs. Employment-to-population ratios are the lowest in Tunisia among adolescent girls (Figure 2.31). Ratios of 12.1 percent and 28.0 percent in the 15–24 and 25–29 age-groups, respectively, compared with estimates of 32.5 percent in the 30–44 age-group and 17.8 percent in the oldest age-group (45–64) in 2017. The gender gap declined significantly between men and women ages 25–29 and 30–44, whereas it stayed virtually unchanged with respect to the youngest and oldest age-groups. Between 2011 and 2017, employment among female youngsters started to increase rapidly, more rapidly than the growth in the total population within the corresponding age-group. This occurred in parallel with an ongoing decline in employment among young men. Similarly, women ages 25–29 posted the highest unemployment rate across age-groups in comparison with men. Thus, women ages 15–24 and 25–29 exhibited unemployment rates of 37.9 percent and 41.9 percent in 2017 (Figure 2.32). In addition, gender gaps in the 25–29 and 30–44 age-groups expanded considerably. Virtually no difference was detected in unemployment rates within the oldest age-group, ages 45–64; the rates remained roughly constant over the decade. In 2006–11, the number of unemployed rose rapidly across all age-groups and among both men and women. Beginning in 2011, the number of young unemployed women started to decline, from over 89,000 to 65,500 (ages 15–24) and from 111,500 to 99,600 (ages 25–29). By contrast, the number continued to rise among the older age-groups. A similar pattern is observed among unemployed young and middle-age men.

In addition to being more likely to participate in the labor market, women with tertiary education are also more likely to land a job. Large gaps in employment-to-population ratios exist across women (and men) at different educational levels (Figure 2.33). For example, in 2017, the employment ratio of women with no schooling was estimated at 8.4 percent, compared with 19 percent among women with primary education and 37.7 percent among women with university degrees. Employment ratios declined across all educational levels, except secondary education, which bounced back beginning in 2011. The largest gender gap is observed among workers with primary and secondary education, where women employment ratios stood at 19 percent and 23 percent, respectively, relative to 70 percent and 59 percent among men. The large rise in the supply of new cohorts of women with university degrees outpaced the capacity of the economy to absorb it. Unemployment rates among women with tertiary education skyrocketed from 25.5 percent to 41.8 percent in 2006–11 and hovered around 40 percent thereafter (Figure 2.34). The gender gap was constant at around 20 percentage points.

The majority of working women are employed in wage work. Most of the employed population works for a wage in Tunisia, and wage employment has gained importance over time, from 67.8 percent in 2006 to 75 percent in 2017 (Figure 2.35). Women are employed as wage workers in an even greater proportion than men, 85 percent in 2017, compared with 71.4 percent among men. The share in wage employment rose at a much more rapid rate among women than among men over the decade; the shift occurred at the expense of lower contributions of women to household duties (3.7 percent in 2017) and own-account work (8.0 percent in 2017), while the share of women employers increased marginally (2.5 percent in 2017).

MAP 2.2. Unemployment Rates of Women, by Governorate, 2017

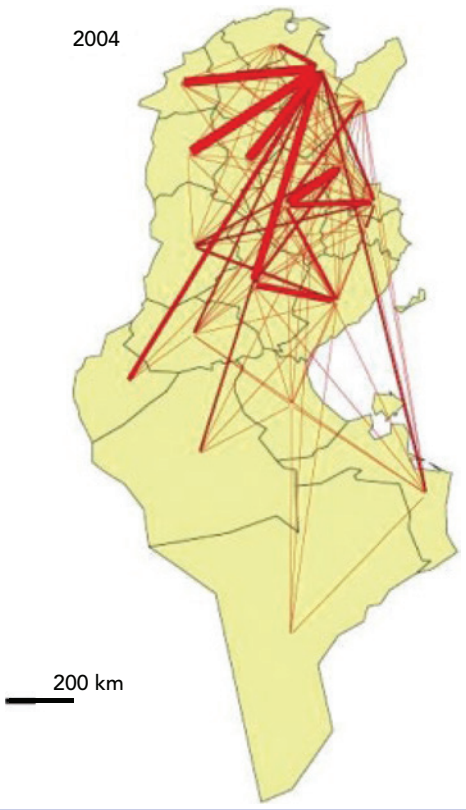


Source: Based on data from the Labor Force Survey (ENPE), INS.

BOX 2.4. Internal Migration and Two Secondary Cities in Tunisia

According to the INS, between 2009 and 2014, almost 690,000 individuals moved across delegations (Tunisian districts), which is the definition of internal migration. Over 62 percent of the internal migrants moved across governorates, accomplishing long distance moves. Coastal governorates remain the main recipients of population inflows thanks to a concentration of public and private investments, services, and economic activities (Figure B 2.4.1). Between 2009 and 2014, the migration balance was positive in Greater Tunis, the North-East, and the Centre-East and negative in the other regions (World Bank 2021b). Urban-to-urban migration is dominant. Over 80 percent of intergovernorate migration takes place among urban areas. The departure from rural areas to cities contributes less than 7 percent to all intergovernorate migration (World Bank 2021b).

MAP B 2.4.1. Net Interdelegation Flows (> 200), 1994 and 2004

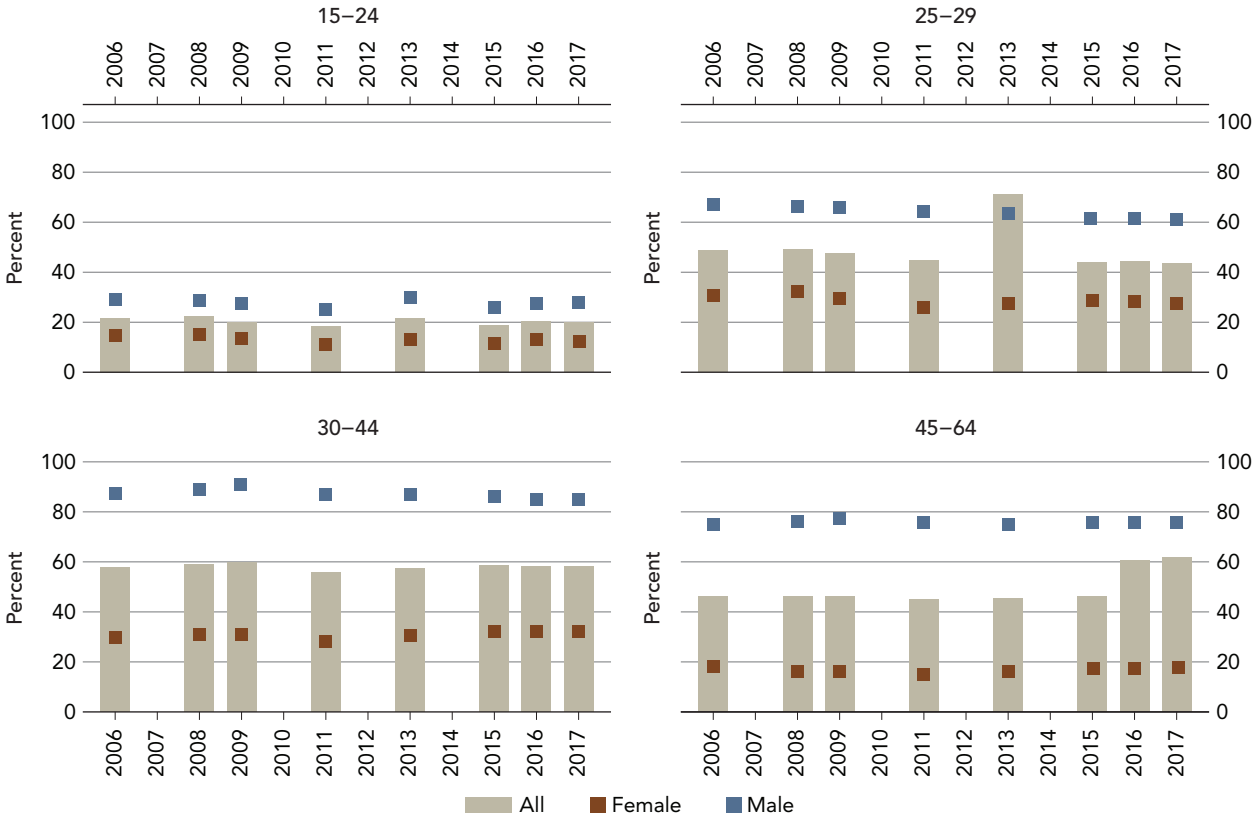


Source: World Bank 2021b.

A recent study conducted by the World Bank (2021b) on internal migration in Jendouba and Kairouan, two secondary cities in the two poorest internal regions of Tunisia, point to some interesting findings. Both cities have a weak industrial structure, with a predominance of agriculture, and therefore face difficulties in offering economic opportunities. Both cities are at the top of outmigration flows in favor of coastal cities. The flows are not unidirectional because the cities are also receiving large inflows of migrants from rural areas and from distant delegations within the same governorates. In 2009–14, the city of Jendouba attracted over 4,000 migrants, of which more than 1 in 2 was from urban areas, whereas the city of Kairouan received about 10,000 migrants, with over 7 in 10 migrating from other urban areas.

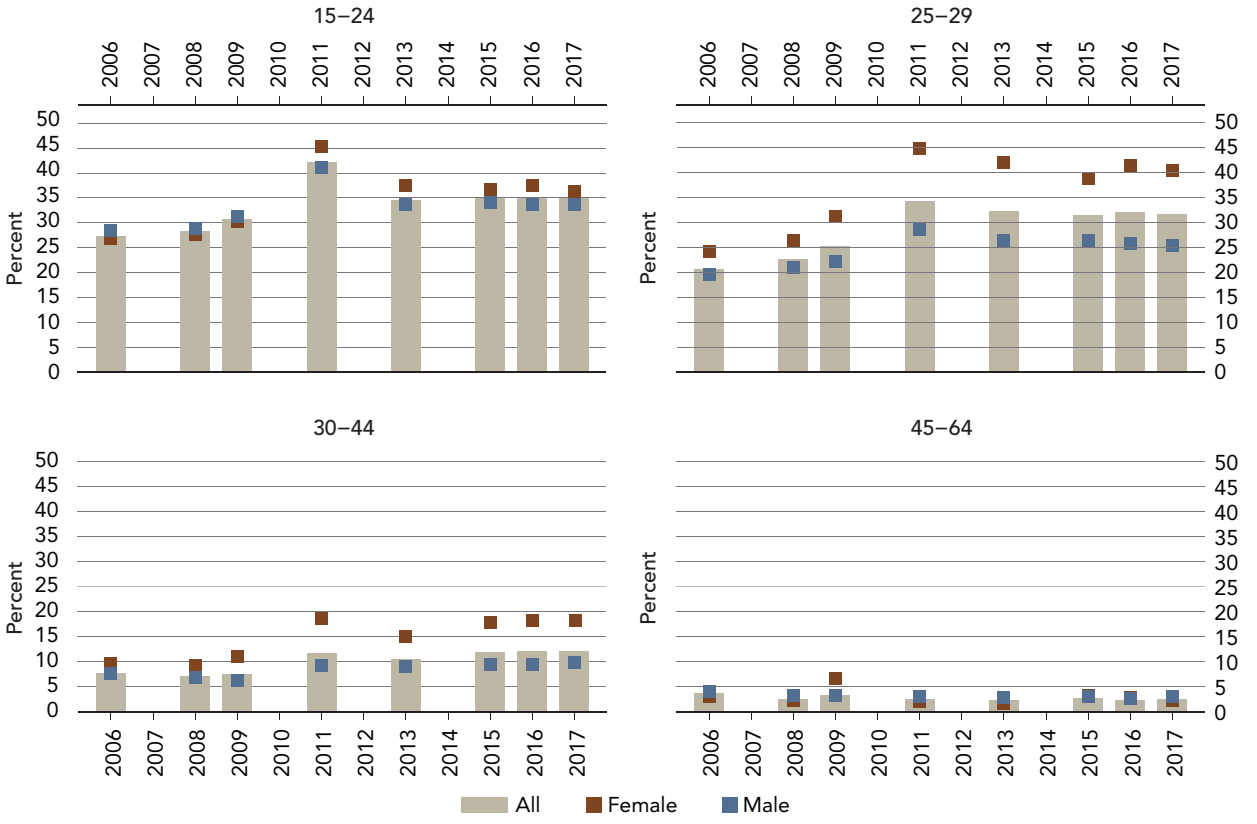
Based on focus group discussions, the World Bank (2021b) finds that many migrants moved to Jendouba or Kairouan before securing a job, and better job opportunities, together with superior access to services and security, are the main drivers of migration. Migrants though encounter challenges in finding jobs and often rely on informal channels in seeking jobs. In Jendouba, men typically find jobs as ay laborers in construction, whereas women are more likely to work in irrigated agricultural areas outside the city. In Kairouan, men migrants find jobs as waiters, and women migrants work as nannies, craftswomen, or in garment factories or agrifood processing if they have specialized skills given the presence of an industrial sector in the city. Most migrants face precarious working conditions with no labor law protection or social security coverage. In addition, women migrants have to bear the double burden of work and family care without the possibility of relying on social or extended family networks.

FIGURE 2.31. Employment-to-Population Ratios, by Sex and Age-Group, 2006–17



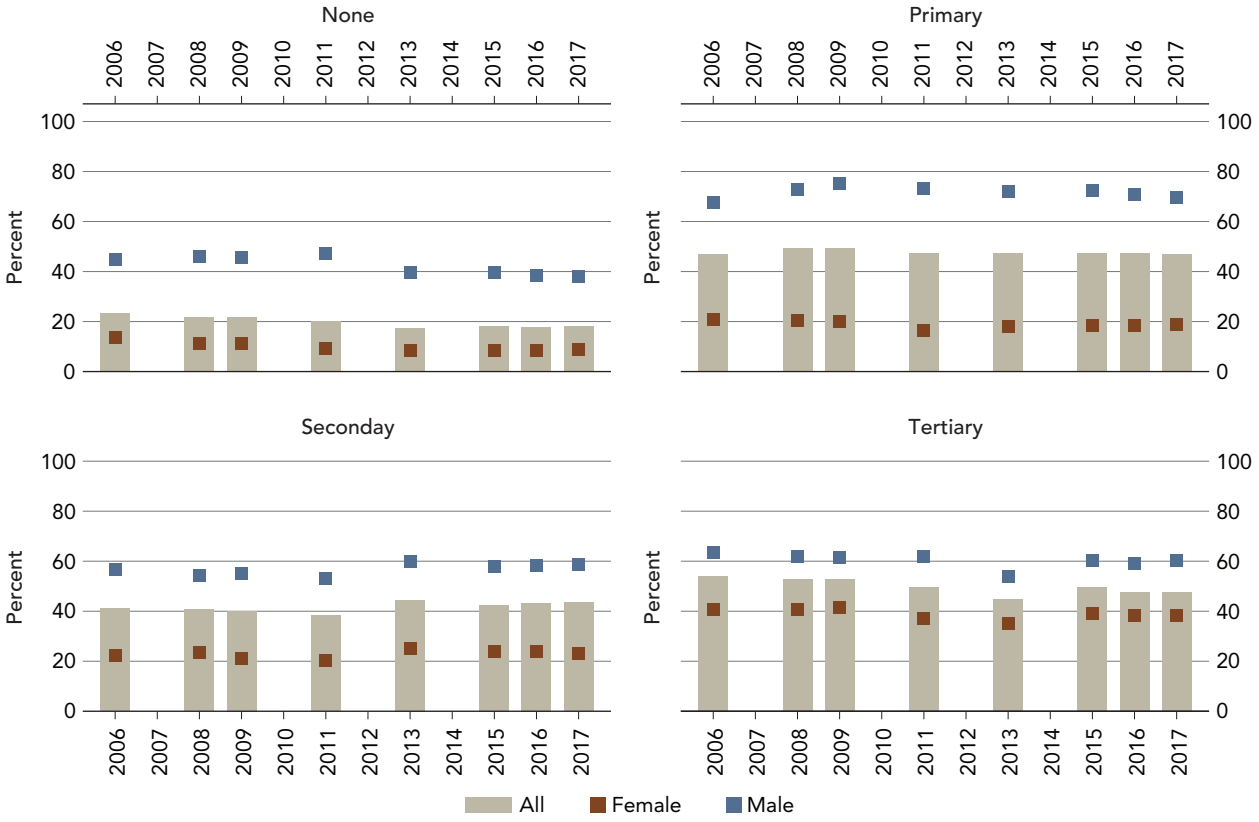
Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 2.32. Unemployment Rates, by Sex and Age-Group, 2006–17



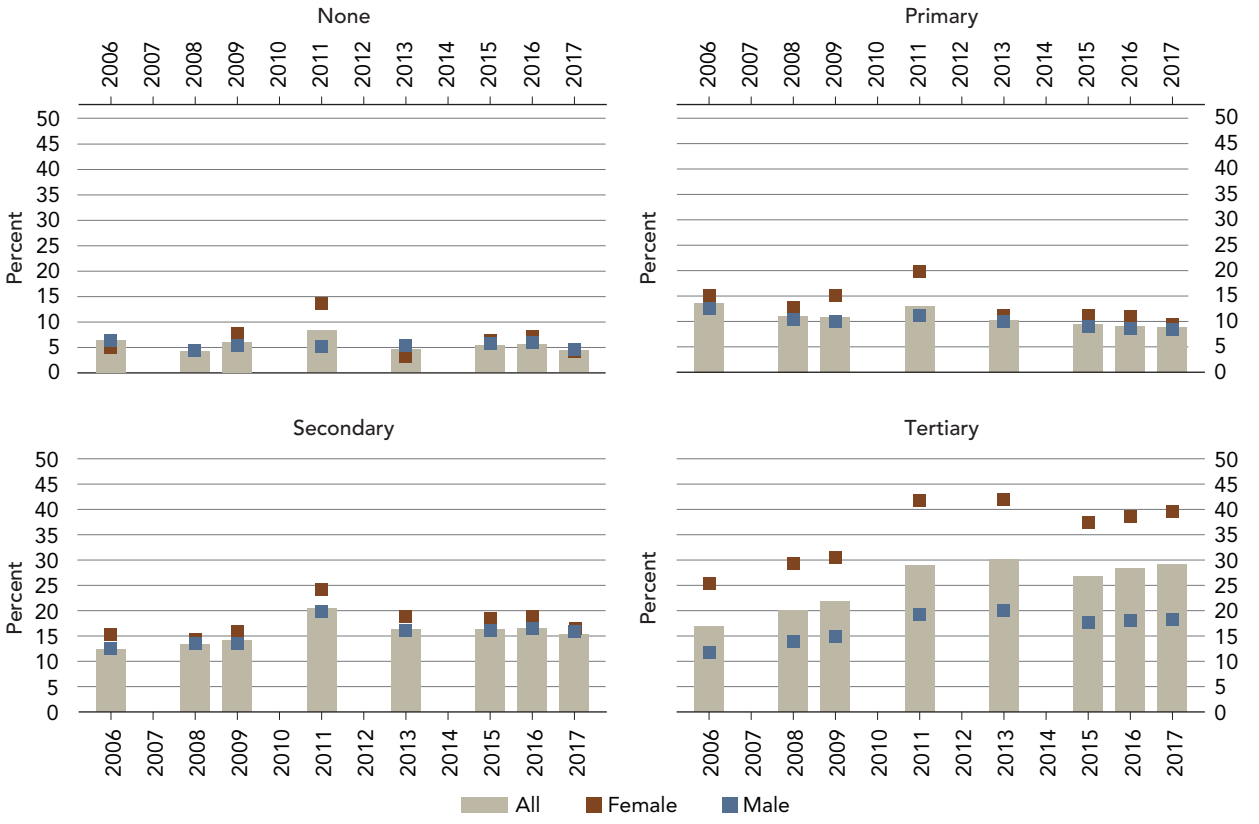
Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 2.33. Employment-to-Population Ratios, by Educational Level and Sex, 2006–17



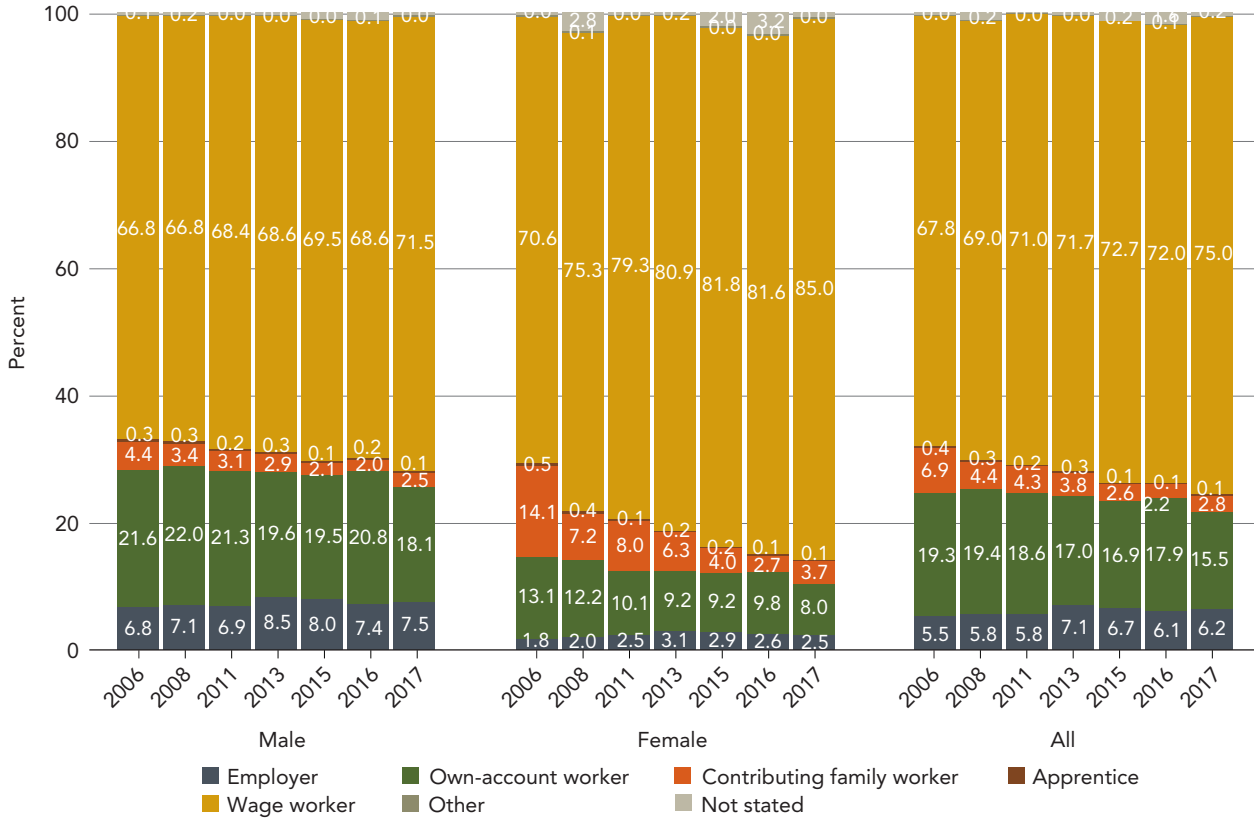
Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 2.34. Unemployment Rates, by Educational Level and Sex, 2006–17



Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 2.35. Employment Category Distribution, by Sex, 2006–17



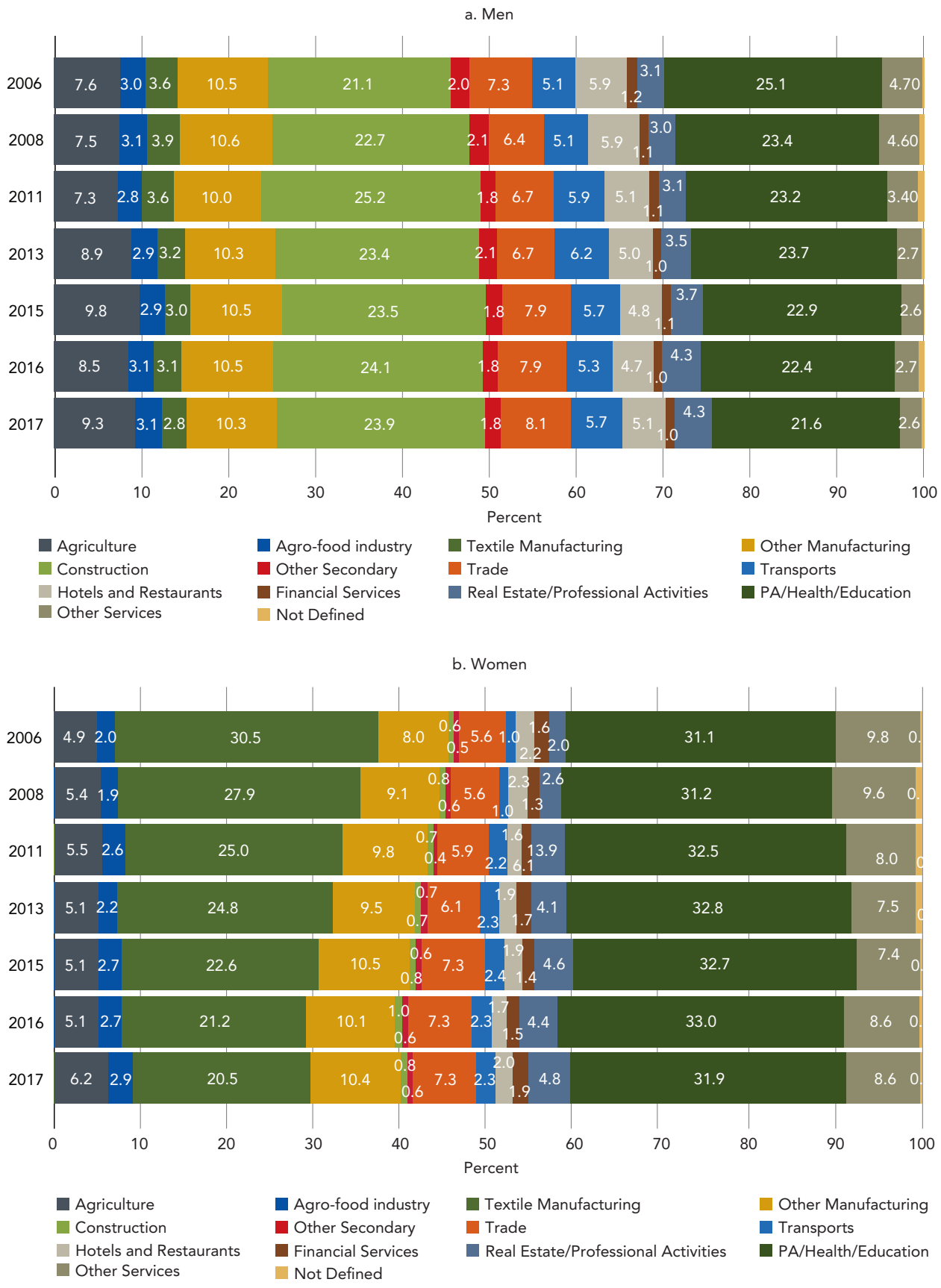
Source: Based on data from the Labor Force Survey (ENPE), INS.

The services sector employs almost 60 percent of women wage workers and less than 50 percent of men wage workers. As of 2017, about 6 percent of women working for wages were employed in agriculture, compared with over 9 percent among men; both shares increased over time by over 20 percent (Figure 2.36). The textile sector, which attracted many more women than men, shed jobs and employed about 20 percent of women wage workers in 2017, while the rest of the secondary sector—other manufacturing, construction, and utilities—accounted for about 15 percent of women's wage employment (Figure 2.36, panel b). The share of women wage workers employed in the secondary sector declined by over 15 percent, while the share of men increased by 5 percent thanks to the role played by the construction sector. The opposite trend was detected in services in 2006–17. The share of women wage workers in the services sector rose by 10 percent, while the share of men declined by about 7 percent. Trade, real estate and professional services, public administration, and health and education services were the drivers of the growth in service sector wage employment among women. In 2017, 32 percent of women wage workers were employed in public administration and in health and education services, followed by other services (8.6 percent), trade (7.3 percent), and real estate and professional services (4.8 percent). Within services, men showed larger shares of wage workers in trade, transport, and hotels and food services.

Although still largely employed in low- and mid-skill jobs in the private sector, the share of women wage workers in high-skill jobs was rising.[23] Although the trend was toward a decline in the share of women employed for a wage in low- and medium-skill jobs, more than 8 women in 10 were still performing elementary or medium-skill jobs in 2017, respectively 59.0 percent and 22.7 percent (Figure 2.37, panel b). Among women performing medium-skill jobs, the share of service and sales workers and of skilled agricultural workers increased, whereas

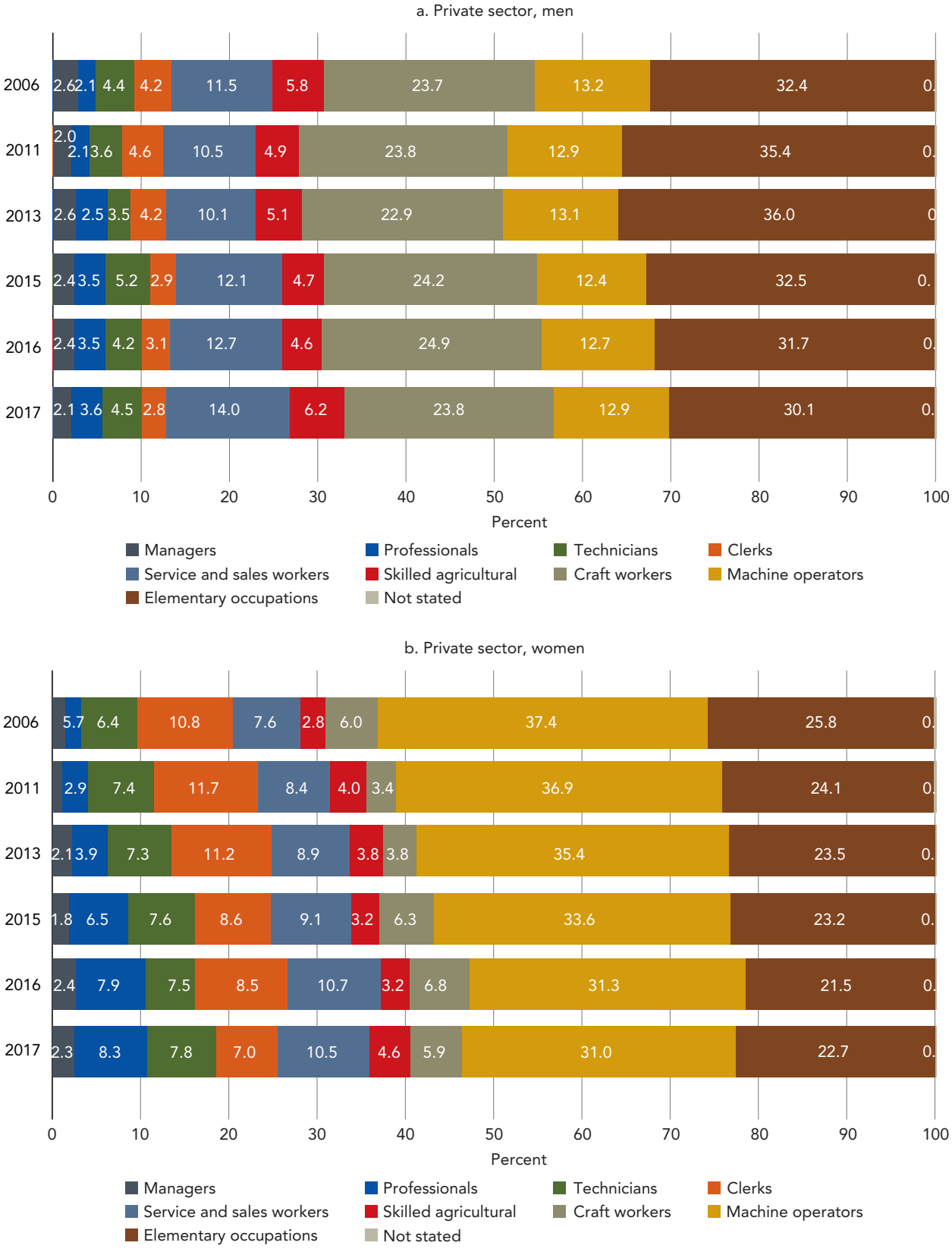
[23] Jobs are classified as high, medium, or low skill based on the occupation, that is, the type of work performed as reported by workers in the labor force survey. High-skill jobs include managers, professionals, technicians; medium-skill jobs cover clerks, service and sales workers, skilled agricultural workers, craft and related trade workers, and plant and machine operators and assemblers; low skill jobs include elementary occupations.

FIGURE 2.36. Sectoral Distribution of Wage Workers, by Sex, 2006–17



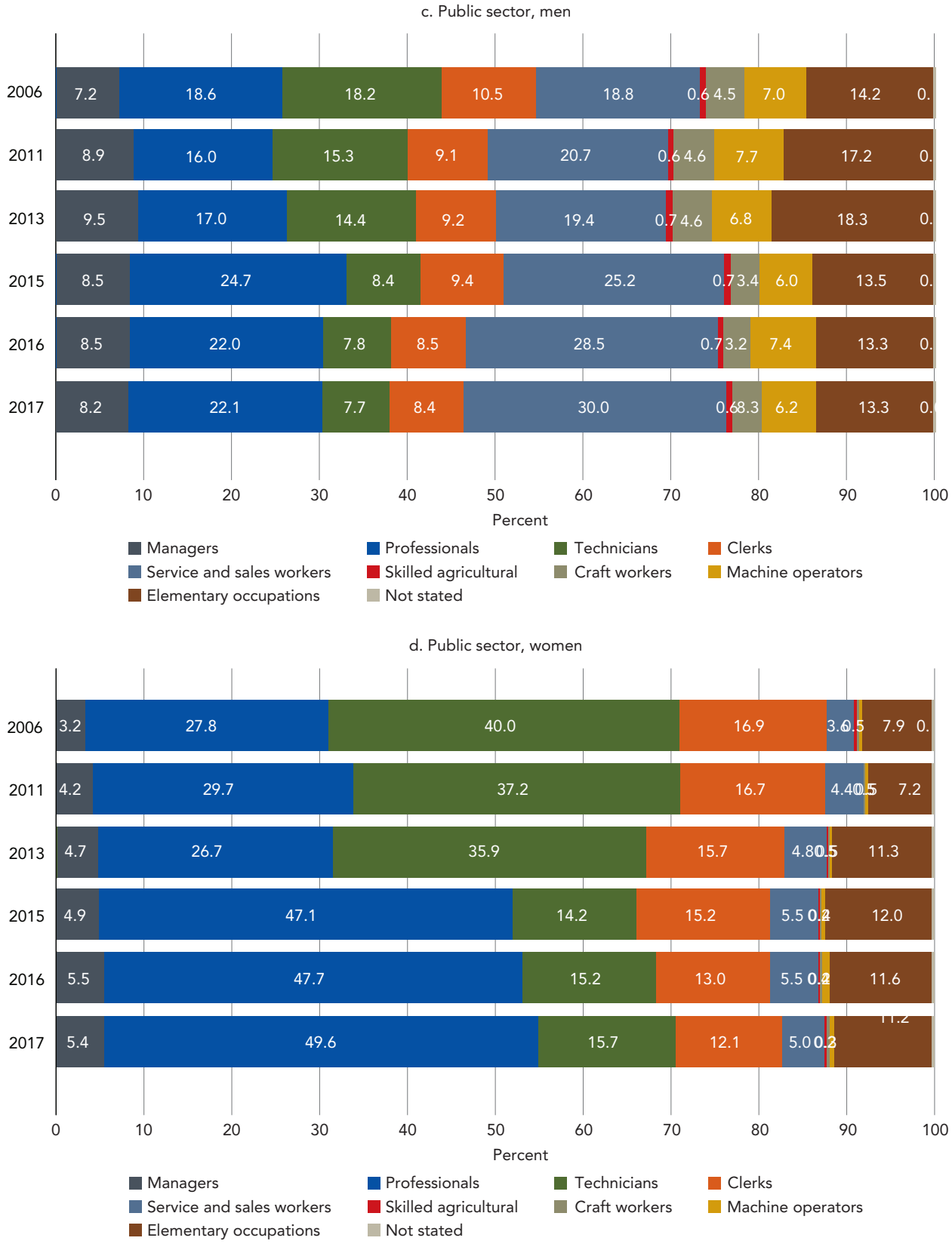
Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 2.37. Occupational Distribution of Wage Workers, by Sector and Sex, 2006–17



(continued)

FIGURE 2.37. Occupational Distribution of Wage Workers, by Sector and Sex, 2006–17 *(continued)*



Source: Based on data from the Labor Force Survey (ENPE), INS.

clerks, craftworkers, and machine operators declined considerably. By contrast, the share of men wage workers in medium-skill jobs rose modestly, from 58.5 percent to 59.7 percent, mainly because of an increase in the numbers of service and sales workers and skilled agricultural workers (Figure 2.37, panel a). The share of women in high-skill jobs, including senior officials, professional staff, and technicians, increased from 10.0 percent in 2006 to 18.4 percent in 2017 and is considerably higher than the share among men working for a wage (at 10.2 percent in 2017, Figure 2.37, panel a).

About 7 in 10 women wage workers employed in the public sector perform high-skill jobs. The share of women working in the public sector and performing high-skill jobs remained constant at about 71 percent in 2006–17, a share that is more than 30 percentage points higher than the share among men (Figure 2.37, panels c and d). Key was the rise in the share of professionals, while the share of technicians declined. Over 2006–17, the share of women in medium-skill jobs fell from 21 percent to 18 percent, and the share of women in low-skill jobs rose from 7.9 percent to 11.2 percent. Similar to the pattern in the private sector, the share of men performing high-skill jobs declined from 44 percent to 38 percent, while medium-skill jobs gained importance thanks to the rise in the share of service and sales workers from 8.8 percent to 30 percent.

Women in both the private sector and the public sector are, on average, more well educated than men. Over time, improvements in the educational level of the population have become reflected in the employed population. Girls are now outstripping boys in educational outcomes, and, on average, working women are more well educated than working men. Restricting the sample to wage workers, the large majority of the employed population, over 20.0 percent of women in the private sector had tertiary education in 2017, up from 7.8 percent in 2006; the share was half as much among men (10.3 percent in 2017) (Figure 2.38, panels a and b). The increase in the share of tertiary educated women corresponded to a decline in the share of working women with primary and secondary education, whereas the share of women with no schooling declined more slowly, from 12.0 percent to 10.7 percent. Relative to the private sector, the share of tertiary educated women in the public sector was much higher, estimated at 63.3 percent in 2017, compared with 53.6 percent in 2007 (Figure 2.38, panels c and d). Among men, the share stayed constant over time and was estimated at 32,1 percent in 2017, over 30 percentage points lower than among women.

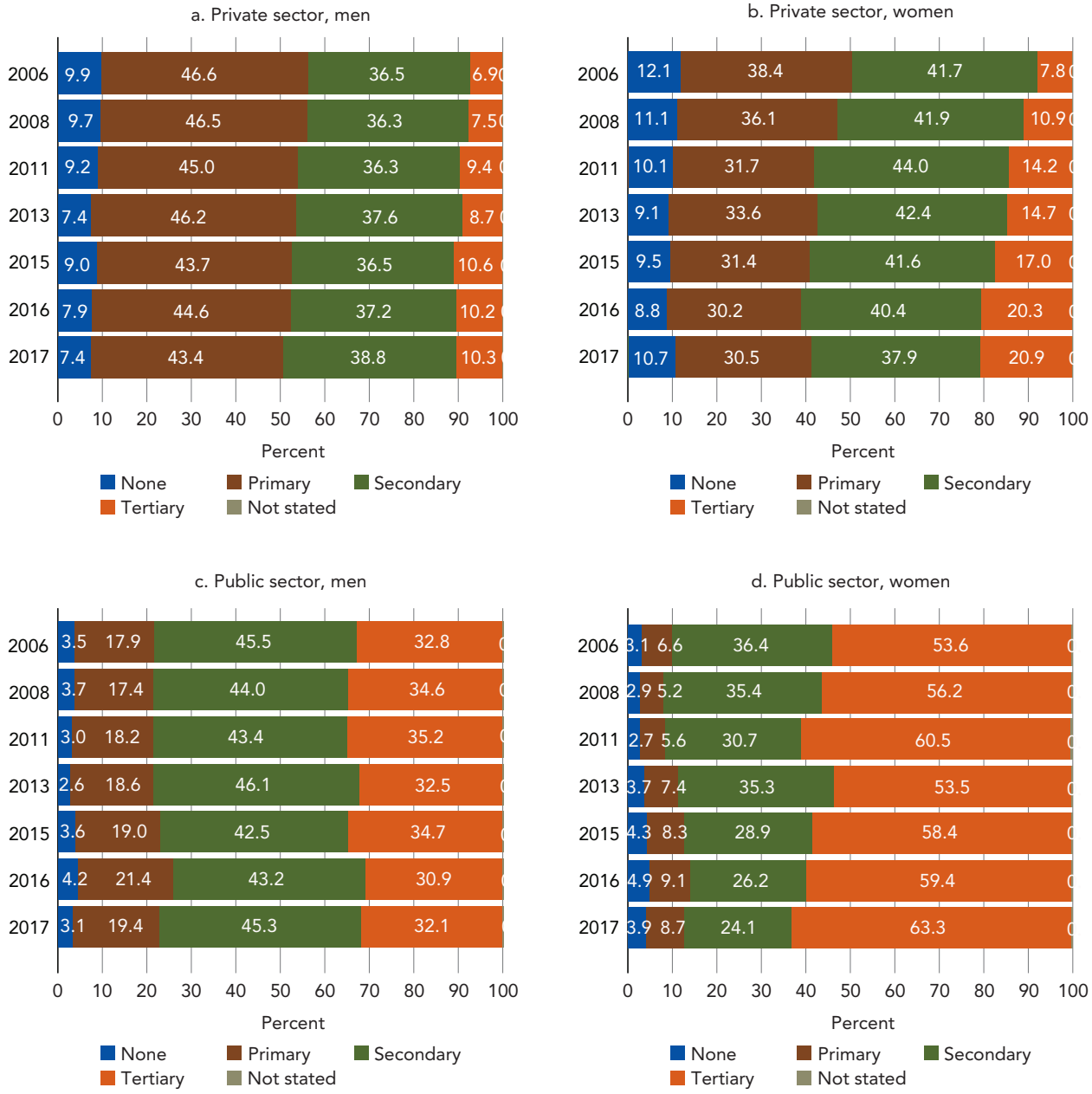
Women work, on average, fewer hours in wage employment compared with men. Women working for wages were employed an average of about 41 hours a week relative to 44 hours a week worked by men wage workers (Figure 2.39, panel a). Similarly, self-employed women work an average of 38 hours a week compared with 46 hours worked by men (Figure 2.39, panel b; Box 2.5). Among the self-employed, contributing family workers work short hours on average; women work 36 hours on average, and men 42.

Wage jobs in the public sector and nonwage jobs provide more flexibility in working hours. Women (and men) working in the private sector work on average longer hours compared to their counterparts in the public sector. Precisely, women wage workers in the public sector work on average 33 hours, where those employed in the private sector are at work for almost 44 hours on average. Further, the public sector provides the possibility of working less than full-time as a large number of women work about 20 hours per week (Figure 2.40). About 32 percent of women work between 40 and 47 hours a week and 22 percent 48 hours a week or more. In the private sector the share of women working 48 hours a week or more is considerably higher, estimated at 52 percent. Nonwage jobs too offer the possibility of working a lower number of hours per week, and almost 1 in 2 women self-employed work less than 40 hours (Figure 2.39-panel b).

Constraints on Women's Participation in the Labor Force

This section summarizes the constraints on women's participation in the labor market in Tunisia based on a desktop review of the available academic and grey literature and the analysis of data, including in databases maintained by the OECD and the World Bank. The starting point is the conceptual framework described by Chakravarty, Das, and Vaillant (2017), which distinguishes between three broad categories of constraints: (1) contextual factors, (2) endowments, and (3) preferences (Figure 2.41). The latter two (endowments and preferences) are constraints to women's labor supply, while the former (contextual factors) includes both demand side and supply side constraints. In the spirit of Pimkina and de la Flor (2020), the discussion of contextual factors is enriched with the inclusion of macroeconomic forces, such as broader economic trends and structural change, which may—in some contexts—pull women into the labor force. Embedded in this conceptual framework is the notion of dynamic feedback loops. For example, changes in cultural traditions

FIGURE 2.38. Educational Level Distribution of Wage Workers, by Sector and Sex, 2006–17



Source: Based on data from the Labor Force Survey (ENPE), INS.

regarding the role of men and women in society can affect women's preferences for time use and family formation. Likewise, structural change (that is, changes in sectoral labor demand) may create incentives to invest in skills or alter cultural traditions about the types of jobs that are appropriate for women.

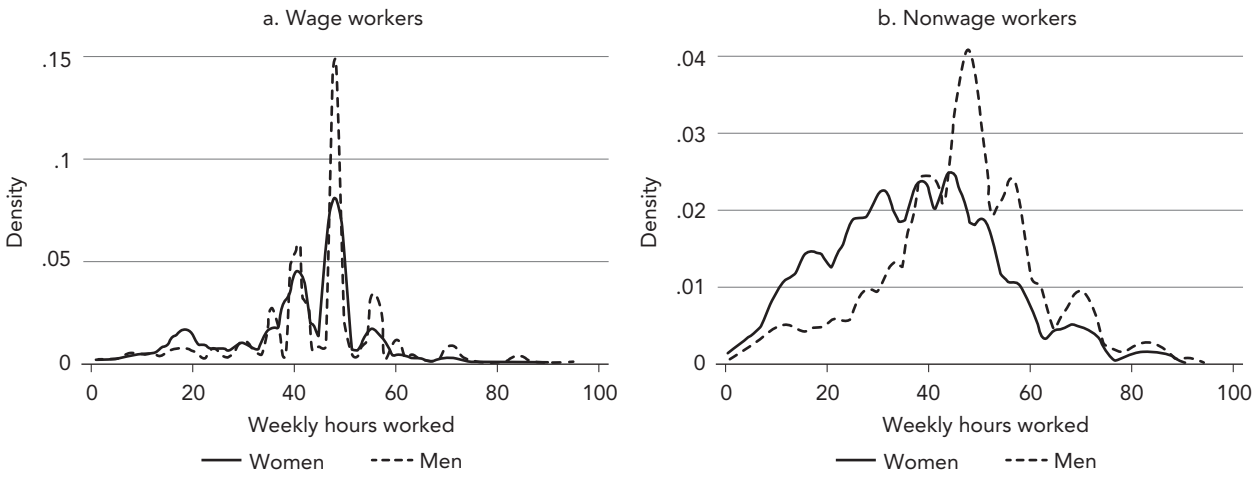
CONTEXTUAL FACTORS

First, a review and discussion of contextual factors, which here includes the legal framework, macroeconomic trends and developments, discrimination, cultural traditions, and public safety considerations., is presented. These factors have in common that, even though they are beyond the control of the individual, they may, by affecting endowments and preferences, have a profound direct or indirect impact on women's decisions to participate in the labor market.

Legal Framework

Tunisia's legislative framework is considered progressive by regional standards. Important principles of gender equality

FIGURE 2.39. Distribution of Wage and Nonwage Workers, by Sex and the Number of Hours Worked per Week, 2015



Source: Based on data from the EBCNV 2015, INS.

BOX 2.5. Gender Gaps in Self-Employment

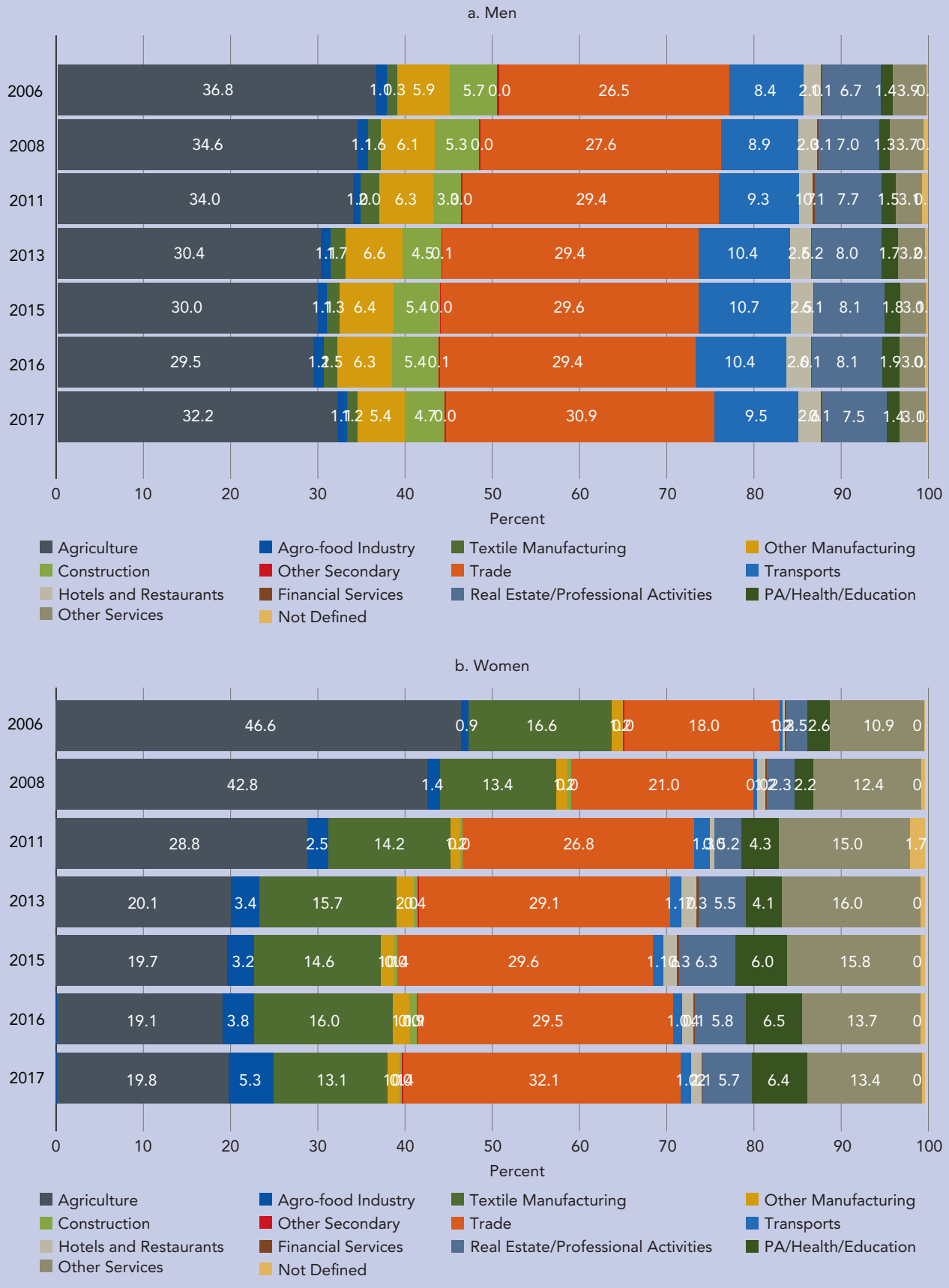
In Tunisia, the share of the self-employed, which includes employers, own-account workers, and unpaid family workers, is declining. Between 2006 and 2017, the share of self-employment in total employment fell by over 20 percent, from 32.0 percent to 24.4 percent. The shift from self-employment to wage-employment was more rapid among women than men. The share of self-employed women fell by half and was estimated at 14 percent of total women's employment in 2017, while the share is twice as large among men. The reduction in self-employment occurred thanks to a sizable reduction in the share of unpaid family workers and own-account workers, whereas the share of employers rose among both men and women. In 2017, about 2.5 (8.0) percent of working women were employers (own-account workers) relative to 7.5 (18.0) percent of men. Despite a substantial drop, the prevalence of unpaid family workers is still higher among women relative to men: 3.7 percent vs 2.5 percent in 2017.

Women working as employers and on their own account have shifted out of agriculture into the services sector (**Figure B 2.5.1**). In 2017, 60 percent of such women were employed in services, especially in trade, 20 percent in agriculture, and 20 percent in the secondary sector, mainly in textiles and agrifood production. The share of men employers and own-account workers in agriculture also declined; the share was estimated at 32 percent in 2017. Although a similar reallocation is observed among unpaid family workers (annex **Figure A 2.2**), unpaid men and women family workers are still largely employed in agriculture: 74.0 percent of women and 59.4 percent of men in 2017. The shift toward the services sector translated mainly into an increase in the share of unpaid workers in trade.

Employers and own-account workers are distributed by educational level similarly to the fully employed population by sex, though there are important differences among unpaid family workers (annex **Figure A 2.3; Figure A 2.4**). Among men, there is a large concentration of workers with primary and secondary education. The share of unpaid men family workers with secondary education rose from about 42 percent to over 57 percent in 2006–17; this compares with 35 percent among the overall employed population. Among women, while the distribution of unpaid family workers by educational level does not differ considerably relative to the general employed population, 19 percent of women in this type of employment hold university degrees. This shows that unpaid family workers are a highly heterogeneous group.

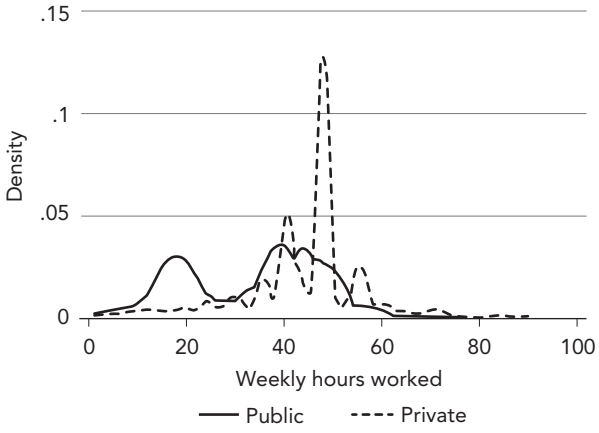
(continued)

FIGURE B 2.2. Sectoral Distribution of Employers and Own-Account Workers, by Sex, 2006–17



Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 2.40. Distribution of Women Wage Workers in the Public and Private Sectors, by the Number of Hours Worked per Week, 2015



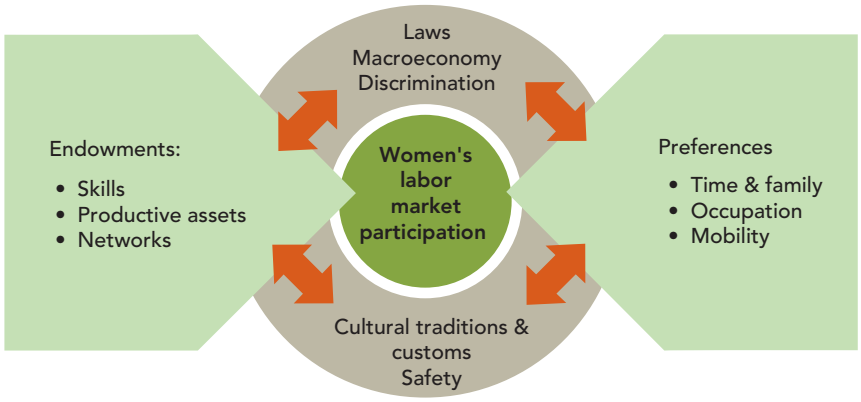
Source: Based on data from the EBCNV 2015, INS.

are enshrined in the country's constitution of 2014 (Chambers and Cummings 2014; Sinha 2011). According to Women, Business, and the Law 2021 data, Tunisia has more gender equitable laws than most other countries in the region (with the exception of Djibouti, Malta, Morocco, Saudi Arabia, and the United Arab Emirates) (Figure 2.42).[24] Tunisia's score improved significantly—from 58.75 to the current 67.5 in 100 in 2018—after the Tunisian parliament had passed landmark legislation (Act No. 2017–58) in 2017 aimed at eliminating violence against women and girls (UN Women 2017).[25] The law, which considers different types of violence (that is, physical, economic, sexual, political, and psychological violence) and provides institutional mechanisms for the protection of victims, has been widely recognized as a milestone, though implementation and enforcement may be less stringent than the law itself (Boukhayatia 2018).

Despite these improvements in the legal framework, there are still several areas of legislation that disadvantage women's economic opportunities relative to those of men. The country performs well on the subscores for mobility, workplace, and pension (100/100), but significantly less well on the indicators pay (25/100), marriage (60/100), parenthood (40/100), entrepreneurship (75/100), and assets (40/100) (Figure 2.43). Below are examples of laws that restrict women's economic opportunities (see annex Table A 2-1):

Restrictions on the type of employment women can perform: Current laws restrict women's work at night (Code

FIGURE 2.41. Framework for the Constraints on Women's Labor Market Participation

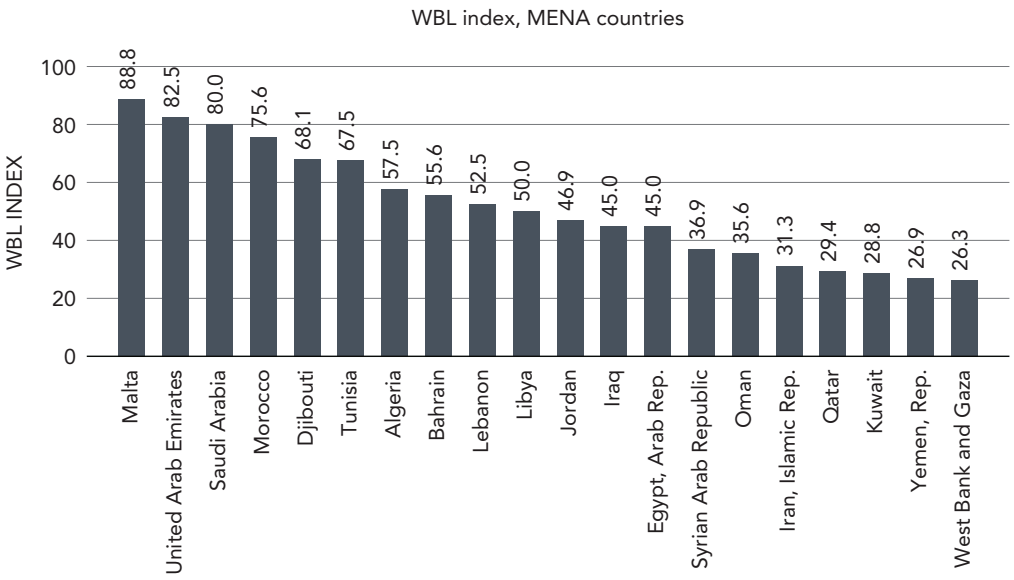


Source: Modified based on Chakravarty, Das, and Vaillant 2017; Pimkina and de la Flor 2020.

[24] The data include an index on 190 economies that is structured around the life cycle of a working woman. In total, 35 questions are scored across eight indicators. Overall scores are then calculated by taking the average of each indicator, with 0 representing the lowest, and 100 the highest possible score. Data refer to the laws and regulations that are applicable to the main city of business (in the case of Tunisia, Tunis) (World Bank 2021c). See WBL (Women, Business, and the Law 2021) (dashboard), World Bank, Washington, DC, https://wbl.worldbank.org/en/wbl.

[25] The reforms led to significant improvements in the indicators developed from the following questions: "Is there legislation on sexual harassment in employment?" "Are the criminal penalties or civil remedies for sexual harassment in employment?" "Is there legislation specifically addressing domestic violence" (see annex Table A1).

FIGURE 2.42. Women, Business, and the Law Ranking, Tunisia and other Middle East and North Africa Countries



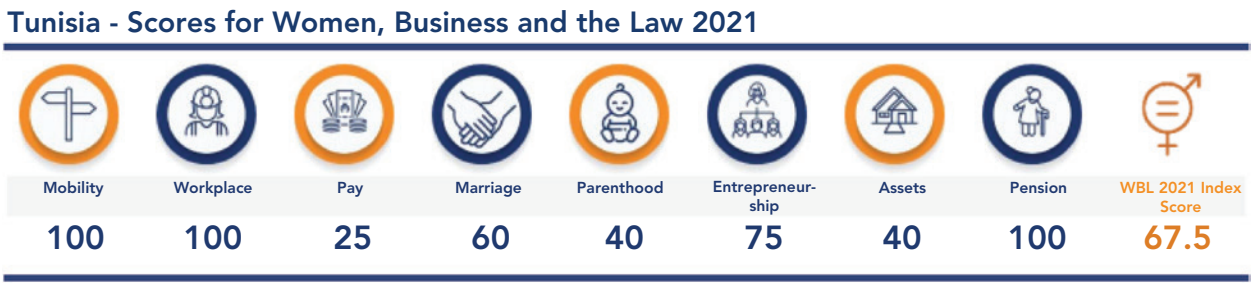
Source: Based on data of World Bank 2021c; WBL (Women, Business, and the Law 2021) (dashboard), World Bank, Washington, DC, https://wbl.worldbank.org/en/wbl.

du Travail, articles 66 and 68-2) and in the primary sector (agriculture, mining) (Code du Travail, articles 77 and 375).[26] While ostensibly geared to protect women, singling out women for special protections is increasingly being viewed as out-of-date and inconsistent with principles of nondiscrimination and equal treatment (OECD 2017; Politakis 2001).

Maternity leave and protection of pregnant workers: Tunisia provides mothers with approximately 30 days of maternity leave, which falls significantly short of the standard of 14 weeks of maternity leave recommended by the International Labour Organization (ILO). Across countries, the length of maternity leave strongly correlates with women's employment in the private sector (see Amin and Islam 2019). Furthermore, there is no legislation in Tunisia prohibiting the dismissal of pregnant workers.

Parental leave: While Tunisian law provides 30 days of maternity leave and one day of paternity leave, there is no

FIGURE 2.43. Women, Business and the Law, by Domain



Source: Based on data of World Bank 2021c; WBL (Women, Business, and the Law 2021) (dashboard), World Bank, Washington, DC, https://wbl.worldbank.org/en/wbl.

[26] "Tunisie: Code du travail, 1996," NATLEX (Database of National Labour, Social Security, and Related Human Rights Legislation), International Labour Organization, Geneva, https://www.ilo.org/dyn/travail/docs/778/Labour%20Code%20Tunisia.pdf.

system of paid parental leave, that is, leave that is either shared between mother and father or an individual entitlement that each parent can take regardless of the other to care for small children. Evidence from other, mostly high-income countries suggests that a well-designed parental leave system, especially if it includes certain elements to incentivize take-up by fathers (for example, bonus months or daddy quotas), can lead to a more equitable sharing of paid and unpaid work between parents (Patnaik 2019).

Property ownership: As in most countries in the region, Tunisia's inheritance laws are based on Islamic Sharia law and do not provide for equal inheritance rights among male and female surviving spouses or sons and daughters. In November 2018, the Tunisian cabinet adopted a draft bill to amend the Personal Status Code to provide for gender equality in inheritance as a default. However, the bill, which was presented to Parliament in February 2019, failed to garner the necessary support (HRW 2018; Tanner 2020). In addition, the default marital regime is separation of property, and there are no laws explicitly recognizing non-monetary contributions to marital property (for instance, the contribution of a stay-at-home spouse taking care of children or the household). Separation of property regimes, where all property is individually owned, are generally less favorable to women than community property regimes whereby most property acquired during the marriage is owned jointly. Community of property, which recognizes women's role in the accumulation of marital property through child-rearing and other unpaid work, is especially important in legal systems that do not provide for equal inheritance rights between males and females, because widows cannot automatically claim ownership of their deceased husband's estate (Deere and Doss 2006). Overall, the international evidence suggests that more gender equitable laws on property ownership strongly correlate with the likelihood of women owning land and housing property (Gaddis, Lahoti, and Swaminathan 2020).

Antidiscrimination laws: While Tunisia's legal code prohibits discrimination in employment based on gender, there are no specific provisions mandating equal work for equal value to protect against wage discrimination. Likewise, there are no laws that prohibit discrimination in access to credit based on gender.

Macroeconomic Factors

A rich academic literature investigates the relationship between economic growth and development, structural change, and female labor force participation (for example, Gaddis and Klasen 2014; Goldin 1990, 1995; Klasen et al. 2021; Mammen and Paxson 2000). It goes beyond the purpose of this chapter to review this literature in detail, but four key insights that have potential relevance for the Tunisian country context are now summarized.

First, there are examples of countries, notably in Asia, where new opportunities in growing sectors of the economy have been associated with increases in female labor force participation (Klasen 2019b). For example, it has been argued that the expansion of light manufacturing (for instance, textiles, clothing, footwear) can be a driving force of rising female labor force participation in parts of East and South Asia (Heath and Mobarak 2015; Seguino 2000). There is likewise some evidence that growth in service sectors and occupations has created employment opportunities for highly educated women in Latin America and India (Gasparini and Marchionni 2015; Klasen and Pieters 2015). If the conditions are favorable, rising female employment because of new economic opportunities may set off a virtuous cycle of incentives to invest in skills and delay age at marriage (for instance, see Heath and Mobarak 2015 on Bangladesh). Moreover, the increase in women's employment may lead to higher levels of women's decision-making within the household, and this could challenge traditional gender roles (Majlesi 2016).

Second, despite these possibilities for positive feedback loops and the positive experiences of a few (mostly Asian) countries, the changes in female labor force participation that can be traced to economic growth and structural change are typically rather small. Gaddis and Klasen (2014) use data on 200 countries to investigate the empirical relationship between sectoral growth and female labor force participation between 1980 and 2005 and simulate the portion of the change in female labor force participation over this period that can be linked to sectoral growth. The results suggest that slightly less than 10 percent (that is, 1 percentage point) of the 11 percentage point increase in female labor force participation among the countries in the sample is linked to structural change. Similarly, changes in overall GDP per capita (even if accounting for a nonlinear relationship) explain little of the variation in female labor force participation at the country level, compared with country fixed effects (Gaddis and Klasen 2014). This suggests there are important historical determinants of female labor force participation that are highly persistent over time and dwarf changes associated with

growth and structural change (Klasen 2019b).[27] Similarly, the World Bank (2020b) shows that sustained increases in female labor force participation from a low base are relatively rare.

Third, some studies document the countercyclicality of female labor force participation (Bhalotra and Umaña-Aponte 2010; Serrano et al. 2019). Similarly, female employment and labor force participation have often been found to increase during times of economic downturn and recession (Sabarwal, Sinha, and Buvinić 2011; Lim 2000).[28] One explanation of this phenomenon is the added worker effect, which refers to a temporary increase in married women's labor supply because of a job or income loss by their husbands (Lundberg 1985). In the context of developing countries, strong added worker effects have been documented in Latin America (for example, Cardona-Sosa, Flórez, and Zurita 2016 on Colombia; Fernandes and de Felicio 2005 on Brazil; Skoufias and Parker 2006 on Mexico). However, there appear to be no studies on the Middle East and North Africa.[29]

Fourth and related to the previous point, labor force participation of women, especially poor women with low levels of education, often declines as the incomes of other household members rise (Klasen et al. 2021). This relationship, which is consistent with standard labor supply theory, seems to be one of the main forces behind the decline in female labor force participation in India (Klasen and Pieters 2015). Overall, these last two points suggest that poor women in many developing countries have a weak attachment to the labor market and often withdraw if it becomes affordable to do so.

What does this imply for Tunisia? Economic growth in Tunisia has been modest recently, and structural change has proceeded slowly. Moreover, employment in the textile and garment sectors, which have been associated with rising female labor force participation in parts of Asia, has declined in recent years because of stiff competition from Asian manufacturers with lower wage costs. The service sector could offer potential opportunities for employment growth, especially in tourism and the care economy, given the county's aging population. Moreover, these sectors could provide employment opportunities for women with low levels of education. However, women's employment growth in tourism has so far been constrained by the sector's negative reputation, restrictions on women's geographic mobility, and limited family support services. Together, this suggests that growth and structural change could contribute to raising labor force participation among women in the near future, particularly if accompanied by an alleviation of some of the other constraints to women's participation. In the medium and long run, the income effect ascribable to rising living standards associated with the higher earnings of men might mitigate such positive impacts on women's labor force participation, particularly among women with little education and weak labor market attachment.

Discrimination

If employers discriminate against women, this could mute the potential for a boost in women's employment because of rising labor demand, especially if the discrimination occurs in the growing sectors. While it is difficult to find direct evidence of discrimination, there are some indications that discriminatory practices exist and may disadvantage women. Kärkkäinen (2011) states that 60 percent of hotels and 40 percent of information and communication technology (ICT) companies interviewed specified the desired sex of the applicants during the process of recruiting staff even though this practice is outlawed. Moreover, many companies apparently expressed a preference for single women rather than married women because married women were considered more costly and less productive, especially during maternity. While the study is somewhat dated, it seems plausible that at least some of these practices have continued. Similarly, World Bank (2014b) shows that more than 60 percent of young women in rural Tunisia expressed the concern that women were discriminated against in seeking work in the private sector; the share is lower in work in the public sector (44 percent), but still high.[30]

Discrimination can be reinforced by lack of legal remedies among victims. Tunisia's legal code does not contain

[27] For example, Alesina, Giuliano, and Nunn (2013) show that traditional agricultural practices are correlated with current differences in traditions and customs related to gender roles, which may explain some of the persistent cross-country differences in female labor force participation.

[28] The COVID-19 pandemic-induced recession is different, however. In many countries, female employment declined disproportionately during the pandemic. A possible explaining factor is that school closures during periods of lockdown raised the demand for caregiving and reinforced traditional gender roles at home (Alon et al. 2020; Kugler et al. 2021).

[29] Ilkkaracan (2012) documents an added worker effect in Turkey.

[30] Among young rural men, 44 (32) percent perceived that there was discrimination against women in the public (private) sector.

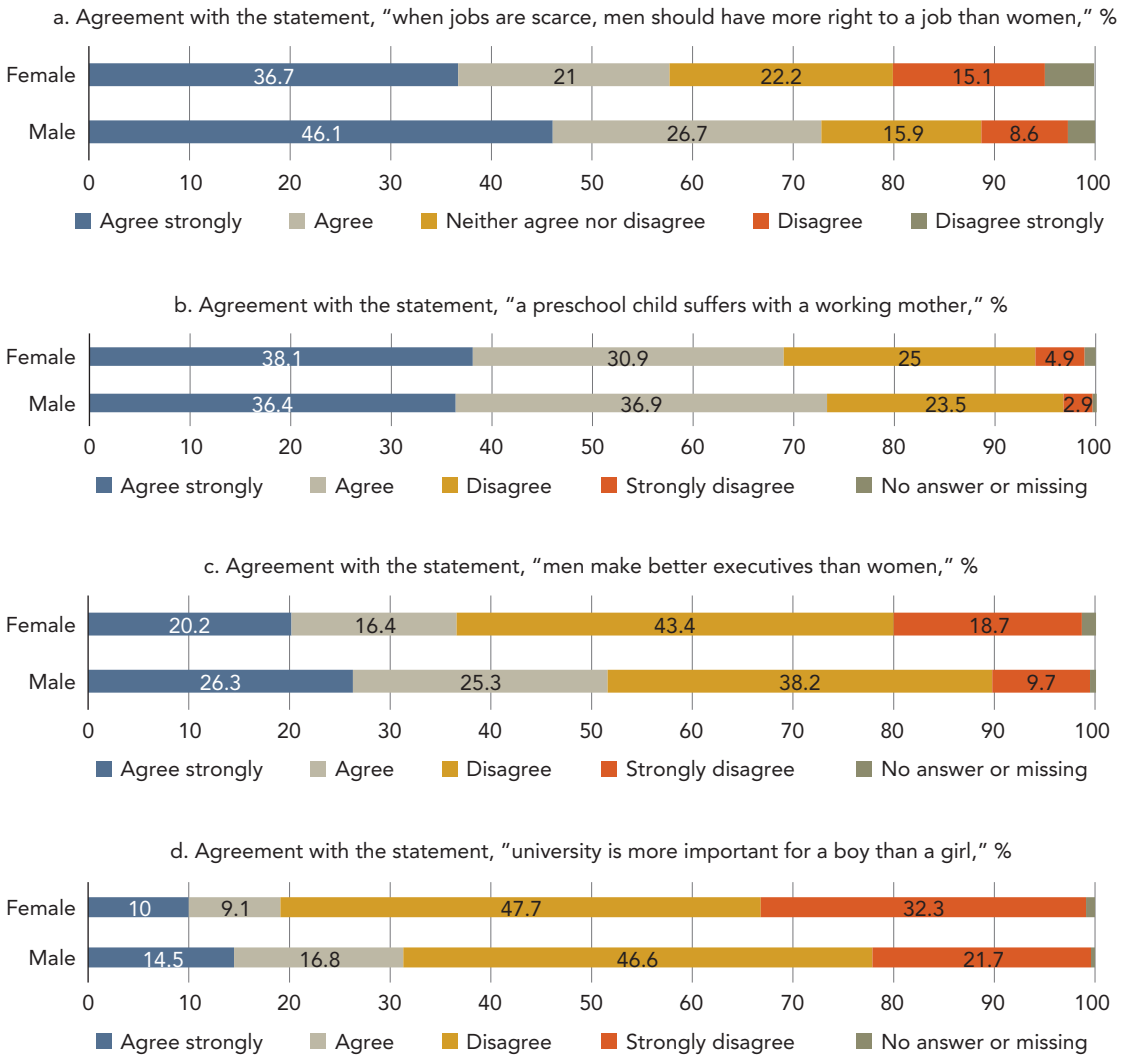
provisions to mandate equal work for equal value or prohibit discrimination in access to credit based on gender (World Bank 2021c).

Cultural Traditions and Customs

Besides gender inequalities in the legal code, cultural traditions and customs assign men the role of the household breadwinner, while women are expected to take care of children and provide other unpaid family work. According to data of the 2019 World Values Survey in Tunisia, 58 percent of women and 73 percent of men agree with the statement, "when jobs are scarce, men should have more right to a job than women" (Figure 2.44, panel a). Similarly, 69 percent of women and 74 percent of men agree with the statement, "a preschool child suffers with a working mother" (Figure 2.44, panel b). Support is somewhat less for the statement, "men make better executives than women," with which 37 percent of women and 52 percent of men agree, and the statement, "university is more important for a boy than a girl," with which 19 percent of women and 31 percent of men agree (Figure 2.44, panels c and d). The shares also show that, even though conservative views are prevalent among both men and women, women espouse relatively more gender egalitarian views.

Disaggregating the results of the World Values Survey further shows that young women, in particular, are less

FIGURE 2.44. Cultural Traditions and Custom Assign Men and Women Traditional Roles



Source: Based on data of WVS (World Values Survey), WVS Wave 7 (2017–2020): Tunisia 2019 (dashboard), King's College, Old Aberdeen, United Kingdom, https://www.worldvaluessurvey.org/WVSDocumentationWV7.jsp.

likely to agree with conservative attitudes about gender roles. Figure 2.45 plots the coefficients of a linear regression analysis, whereby an increase in the dependent variable indicates more gender egalitarian views. Women ages 15–29 are significantly more likely than older women (ages 50+) to disagree with statements that men have more rights to jobs then women, that preschool children suffer with a working mother, and that men make better executives than women. There is no significant relationship between a woman's age and the likelihood of her disagreeing with the statement that university is more important for a boy than for a girl, but support for this statement is generally low, especially among the female population (see Figure 2.44, panel d). Among men, there are no significant age differences in the views, indicating that traditional gender role beliefs remain entrenched among younger men. However, there is evidence from the regressions that the upper levels of educational attainment (at the tertiary level) correlate with less conservative attitudes, an association that is observed among both men and women, though the coefficients are often only slightly below the 5 percent margin of statistical significance. There is no strong relationship between conservative attitudes and the number of children in the household, except for the statement "university is more important for a boy than a girl," with which women with children are more likely than women without children to disagree.

While the World Values Survey data show that there is widespread support for traditional gender role models, they do not necessarily indicate that these beliefs are driven by social norms. Recent research by the World Bank behavioral science team explores whether time allocations of men and women across paid and unpaid work are driven by social norms or cultural traditions and customs (World Bank 2021a). While, colloquially, the term social norm is often used in a way that encompasses individual beliefs and cultural traditions, the strict sense of the term requires evidence of high empirical and normative expectations (Bicchieri 2017). Individual behaviors need to be conditioned by the beliefs and behaviors of others to qualify as a social norm. To understand whether this is the case in Tunisia, the team used vignettes to assess the extent to which individuals might alter their behaviors based on the views and behaviors of other community members. Overall, the results provide little evidence for such conditionality. In particular, both men and women viewed men's participation in housework favorably, which suggests that gender differences in time allocation are not driven by a social norm, but rather by customs and traditions.[31]

Safety

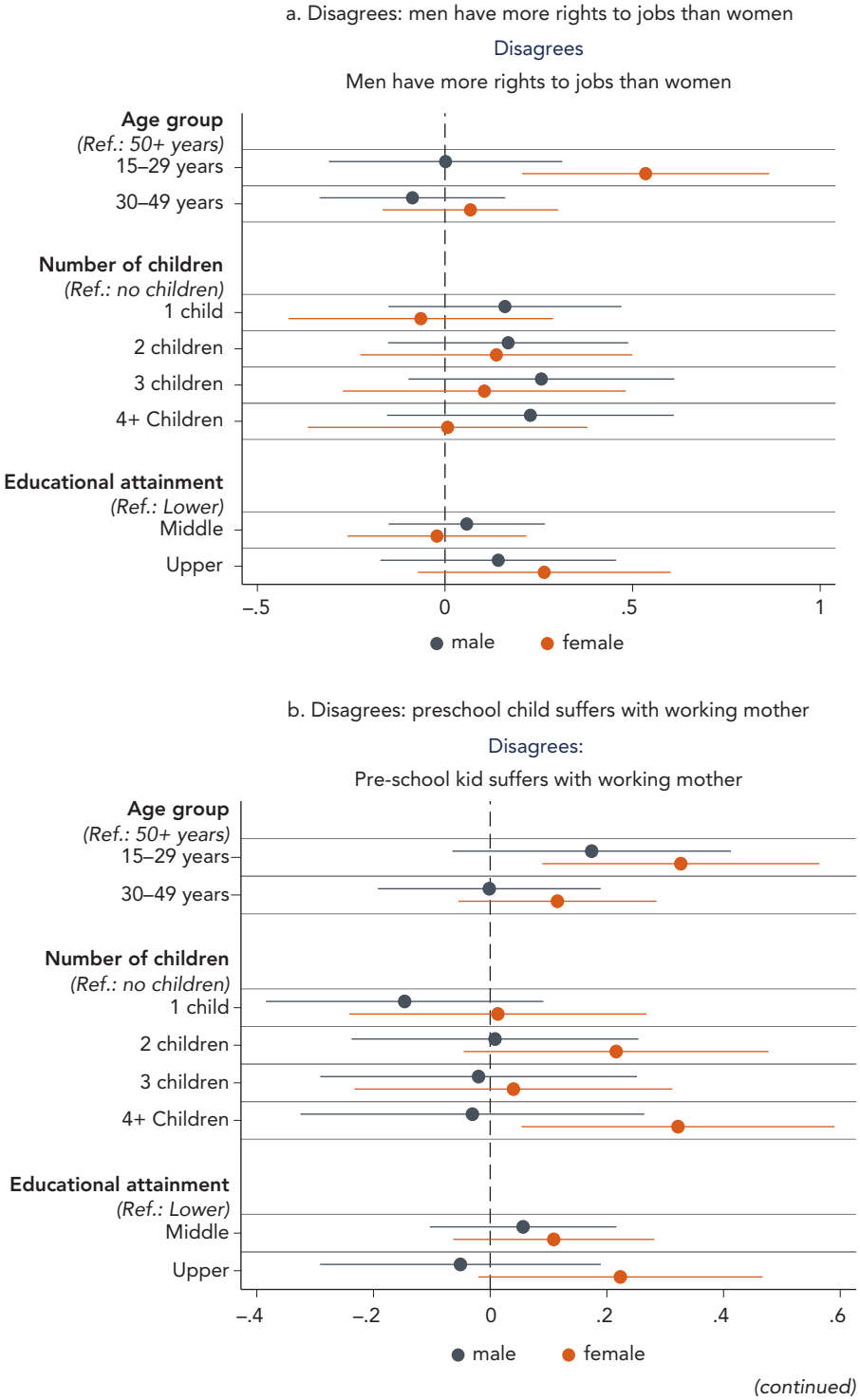
Women's economic activity can be constrained by the risk of harassment and violence or in the public space, which is often exacerbated by a lack of safe public transport (Pimkina and de la Flor 2020). Sexual harassment and safety concerns are sometimes reported as constraints on women's labor force participation (Assaad and Barsoum 2019; World Bank 2014b). However, there are few quantitative data on the prevalence of this association. In terms of perceptions, the 2019 World Values Survey in Tunisia shows that almost 27 percent of women and 30 percent of men report that sexual harassment frequently occurs in their communities (Figure 2.46).

Qualitative data support the notion that public harassment on streets, which may include unwanted yelling or touching, is a significant concern among young women, especially on public transport, and that safety concerns limit young women's mobility after dark (Jesse 2017). Kärkkäinen (2011) documents that concerns over sexual harassment at the workplace constrain the types of jobs for which women apply in the tourism industry; many women, for example, avoid jobs in bars or kitchens. These concerns can be amplified by cultural traditions that consider women as upholders of social propriety, morality, and family honor. For instance, jobs that involve direct contact with male clients, colleagues, or superiors may be regarded, prima facie, as threats to women's reputation (ILO 2018b; Jesse 2017).

As in many countries, violence against women in Tunisia, specifically, abuse of women and domestic violence against women, seems to have increased during the COVID-19 pandemic. According to an online survey conducted in June–July 2020, 37 percent of women and 28 percent of men reported that violence in their communities had increased during COVID-19 (World Bank 2021a). While this trend is deeply concerning, the longer-term consequences, including on women's labor market behavior, are uncertain.

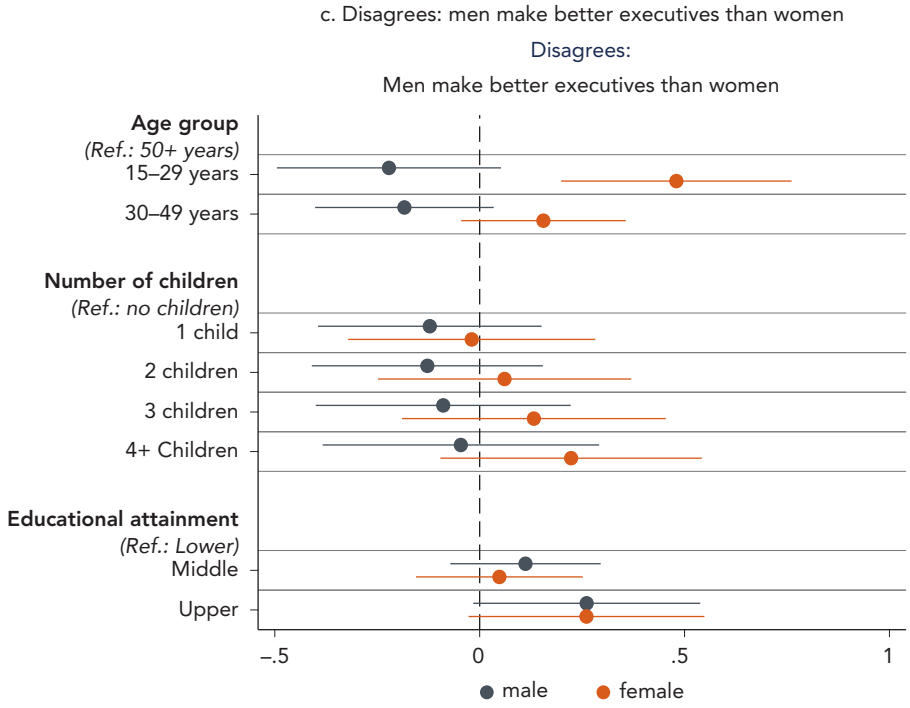
[31] Caution is necessary because the composition of the sample is skewed toward relatively young, well-educated, single women in urban areas. Such women typically exhibit high labor force participation rates and are potentially less affected by social norms and custom in their behavior.

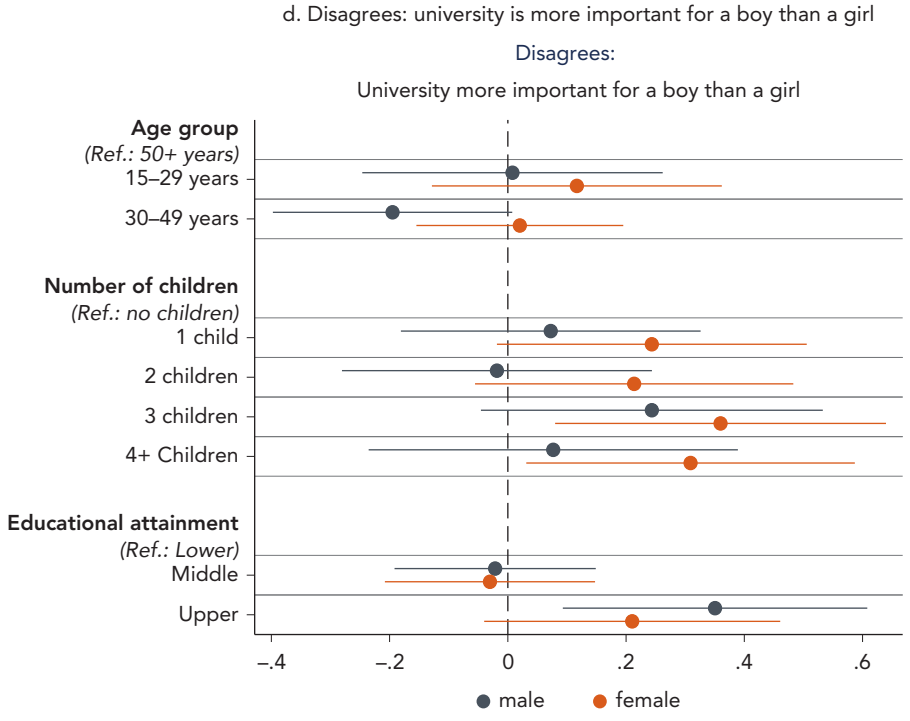
FIGURE 2.45. Correlates of More Gender Egalitarian Views



(continued)

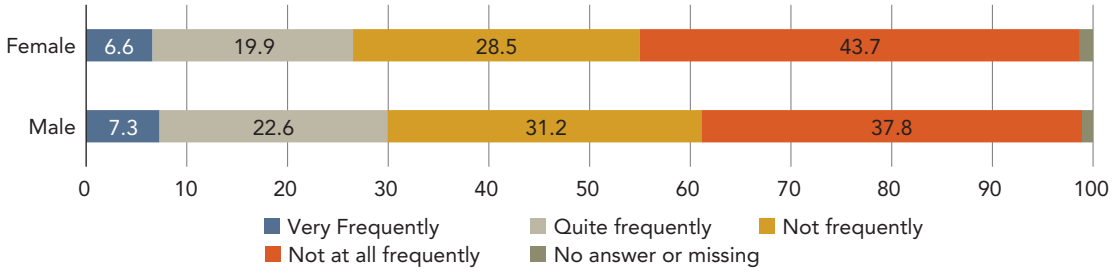
FIGURE 2.45. Correlates of More Gender Egalitarian Views *(continued)*





Source: Based on data of WVS (World Values Survey), WVS Wave 7 (2017–2020): Tunisia 2019 (dashboard), King's College, Old Aberdeen, United Kingdom, https://www.worldvaluessurvey.org/WVSDocumentationWV7.jsp.
Note: Coefficients after OLS estimation. Dependent variable is coded 1-5 (strongly agree, agree, neither agree nor disagree, disagree, strongly disagree) for the question on job scarcity and 1-4 (strongly agree, agree, disagree, strongly disagree) for all other questions. 95 percent confidence interval.

FIGURE 2.46. Self-Reported Frequency of Sexual Harassment in the Neighborhood, % of Adult Men and Women



Source: Based on data of WVS (World Values Survey), WVS Wave 7 (2017–2020): Tunisia 2019 (dashboard), King's College, Old Aberdeen, United Kingdom, https://www.worldvaluessurvey.org/WVSDocumentationWV7.jsp.

ENDOWMENTS

Another potential constraint on women's participation in the labor market is gender differences in human and physical endowments. The term endowments is considered rather broadly as human capital endowments (education and skills), property ownership, control and access to productive resources (assets, credit), and access to networks and information.

Human Capital and Skills

Historically, Tunisia has exhibited large gender gaps in school enrollments and educational attainment. However, because of an impressive expansion in access to basic education in recent decades, gender gaps in enrollments have closed at the primary level and even reversed at the secondary level (Figure 2.47).[32] This implies that more girls than boys are graduating with secondary degrees. Likewise, women significantly outnumber men at the university level; 149 women are enrolled at the tertiary level for every 100 men (World Development Indicators).

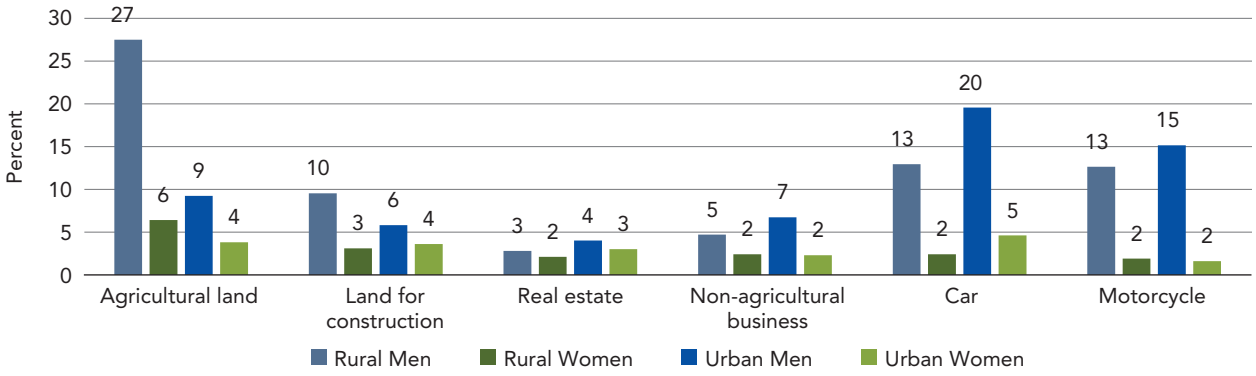
Data from international assessments, though somewhat dated, show that learning outcomes are also better among adolescent girls than among boys. In the 2012 PISA assessment, a significantly smaller share of female than male 15-year-old students achieved scores that classify them as

FIGURE 2.47. Primary and Secondary Gross Enrollment Rates and the Gender Parity Index

Source: Based on data from the World Development Indicators, World Bank.

[32] For individuals born after 1985, basic schooling constitutes primary and preparatory school, for a total of nine years of mandatory education (Assaad, Ghazouani, and Krafft 2017).

FIGURE 2.48. Gender Gaps in the Ownership of Productive Assets, 2017



Source: Based on data from ILO 2018b.
Note: The figure shows the share (%) of adult men and women who report that they own the asset indicated solely or jointly.

low performers (below PISA proficiency level 2) in all three subjects, reading, mathematics, and science (OECD 2015). In the 2012 and 2015 assessments, girls performed significantly better than boys in reading, while boys showed a slightly better performance in mathematics, a pattern that is found in many countries. There was, however, no significant gender gap in the performance in science (Figure 2.9). In the 2015 assessment in Tunisia, more female than male students (40 percent vs 29 percent) reported they had science-related career aspirations (OECD 2018). This is consistent with the observation that, in many Middle East and North African countries, the shares of women in science, technology, engineering, and mathematics is comparatively high, often exceeding OECD averages (OECD 2020; World Bank 2009).

Despite the impressive increase in female school enrollments, low levels of educational attainment may be a significant constraint on the labor force participation of older women, who did not benefit from the expansion in access to basic education over the past two decades. Illiteracy levels are significantly lower among working-age women than among working-age men, especially among older cohorts (see Figure 2.4). Projections suggest it will take approximately two more decades to eliminate gender gaps in educational attainment among the adult population (Evans, Akmal, and Jakiela 2020). Because educational attainment is positively linked to women's labor force participation (see Figure 2.23, panel a), the changes in the educational composition of the female working-age population in the next decades can be expected to raise female labor force participation.

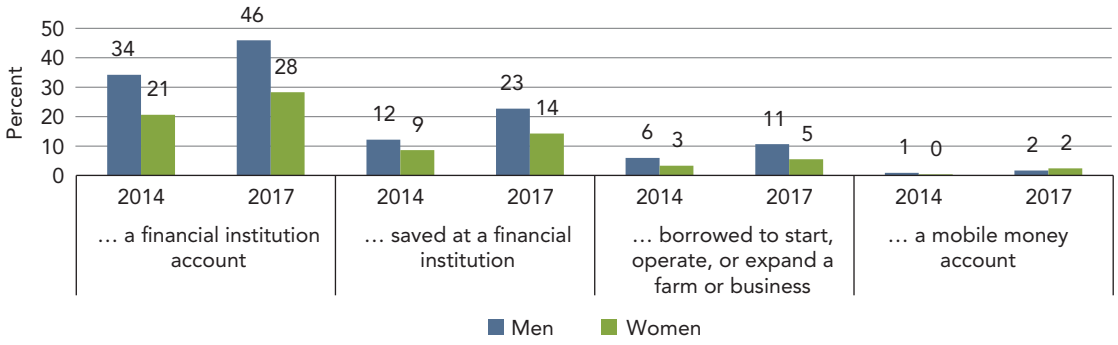
In addition to gender gaps in formal education, there is some evidence that women are disadvantaged relative to men in on-the-job learning. For example, young women interviewed during focus group discussions in 2012 reported that family concerns about women's safety and societal restrictions on female mobility prevented them from taking up the casual, short-term filler jobs that often help young men gain relevant skills and entry-level labor market experience (World Bank 2014b).

Ownership of Property and Other Productive Assets and Access to Capital

There are significant gender gaps in the control over productive resources. Research conducted by the ILO (2018b) in 2017 using the women's empowerment in agriculture index methodology shows that women are much less likely than men to report ownership of productive assets, especially agricultural land and motorized transport.[33] In rural areas, 27 percent of men reported that they owned agricultural land, compared with only 6 percent of women. In transportation, 13 percent of rural men and 20 percent of urban men reported that they owned a car, compared with only 2 percent of rural women and 5 percent of urban women (Figure 2.48). These gaps, which are similar for the ownership of motorcycles, may be a factor explaining why women are typically less geographically mobile than men. The gender gaps in the ownership of land for construction, real estate, and nonagricultural household businesses are smaller, but also favor men. Gender gaps in the ownership of property are partly related to the gender inequalities

[33] Even though the survey is nationally representative at the household level, it oversampled household heads and spouses for individual-level interviews. The survey is therefore not necessarily representative at the population level.

FIGURE 2.49. Gender Gaps in Access to Finance



Source: Based on data of Global Findex (Global Financial Inclusion Database), World Bank, Washington, DC, https://globalfindex.worldbank.org/#data_sec_focus.
Note: The figure shows the share (%) of men and women ages 15+ who report that they participated in the activity indicated.

in the legal system that put women at a disadvantage in accumulating property through marriage and inheritance.

Women are much less likely than men to use financial products, such as savings accounts, credit, and loans. Thus, 46 percent of men reported that they had accounts at financial institutions, compared with only 28 percent of women (Figure 2.49). Likewise, many fewer women than men saved at financial institutions (14 percent vs 23 percent) or borrowed to start, operate, or expand a business (11 percent vs. 5 percent). Mobile money accounts are not commonly used in Tunisia and were reported by only about 2 percent of men and women. There is also no indication that gender gaps in access to finance are declining as overall access increases. While financial inclusion is greater overall in 2017 than in 2014, gender gaps are as large or slightly larger.

Gender gaps in access to finance partly reflect social and cultural attitudes toward women and men's roles in society, which prioritize men's labor market engagement and productive investments over those of women. For example, 18 percent of rural men and 21 percent of urban men report that they are free to borrow from a financial institution, compared with only 8 percent of rural women and 6 percent of urban women. A recent impact evaluation of a cash grant project targeted at poor women in rural Tunisia found that the intervention did not significantly affect women's income, but may have positively affected the income-generating activities of other household members. This suggests that the funds, though ostensibly targeted at women, were primarily used to promote the income-generating activities of the husbands and other household members (Ferrah et al. 2021). These cultural traditions are reinforced by the lack of a robust legal protection for women's rights, for example, a lack of legal provisions that prohibit gender discrimination in access to credit.

Networks

Women are disadvantaged in access to networks and information. The share of rural women who report that they are free to join various groups, such as religious groups, civic groups, cultural associations, sports clubs, and political parties, ranges between 32 percent and 38 percent, compared with 53 percent to 56 percent among men (ILO 2018b).[34] These gender gaps are smaller in urban areas, but still observable. There are almost no gender gaps in the ability to join groups among youth, except in sports clubs, where women continue to be disadvantaged. This indicates that these constraints disproportionately affect older generations of women, especially in rural areas.

Even among younger Tunisians, however, access to networks may disadvantage women job-seekers. Young women graduates report that they have few opportunities to socialize and network outside the household and marketplace, which may put them at a disadvantage in accessing labor market opportunities (World Bank 2014b). Similarly, interviews with young women in the ICT and tourism sectors revealed that many felt disadvantaged by standard recruitment practices, whereby information about vacancies was shared informally or by personal contacts (Kärkkäinen 2011).

[34] Even among men, a significant share reported that they are not free to join groups. More research is needed to clarify the constraints on the choices of men in this context.

Given the cultural restrictions on women's mobility outside the household, women could potentially benefit from ICT access. This would require that access to ICT be relatively gender equitable. The evidence is mixed. A much higher share of young men than women reported that they use the internet regularly (78 percent vs 32 percent, respectively). However, there are no marked gender gaps in participation in online discussions (46 percent among men vs 43 percent among women) or Facebook accounts (99 percent among men vs. 98 percent among women), indicating that most young women do have some access to ICT, though perhaps not as regularly as men.

PREFERENCES AND CHOICES

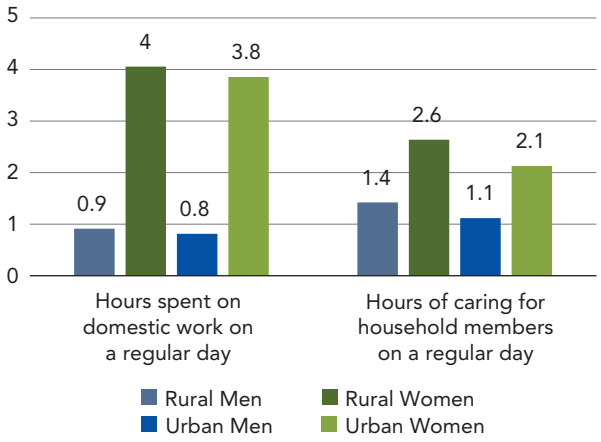
This section discusses gender differences in the types of jobs men and women seem to prefer. These gender differences in preferences and choices are clearly not rooted in biology, but arise from gendered social and cultural traditions.

Time Use and Family Formation

Single women are more likely to be in the labor force than married women, and the gap widens over the life cycle (see Figure 2.24). This suggests that marriage and motherhood are associated with women's decisions to leave or not enter the labor force. Moreover, traditions and customs assign women in Tunisia with broad responsibilities for providing childcare and other unpaid domestic work. Thus, women spend significantly more time than men on unpaid work. Women report that they spend approximately 4 hours a day on domestic work and an additional 2.1 hours (urban areas) to 2.6 hours (rural areas) on care work (Figure 2.52). Over the course of a week, this amounts to more hours than would be required by a full-time job: 42.7 hours in urban areas and 46.2 hours in rural areas. Conversely, men spend less than one hour a day on domestic work and between 1.1 hours (urban) and 1.4 hours (rural) a day on care work (Figure 2.50). This leaves the men with significantly more time to pursue paid work (see Figure 2.39). The gender gap in time spent on unpaid care work observed in Tunisia is large by international standards (ILO 2018a; Samman, Presler-Marshall, and Jones 2016). Women in rural areas are also disproportionately engaged in agricultural production for own consumption (Hanmer, Tebaldi, and Verner 2017).

There is strong evidence that the COVID-19 pandemic exacerbated existing gender differences in time use. In an online survey conducted in June–July 2020, 35 percent of

FIGURE 2.50. Gender Gaps in Unpaid Work, 2017



Source: Based on data from ILO 2018b.
Note: The figure shows the share of hours per day of unpaid work among adult men and women.

married women reported that the time they had spent on domestic chores had risen since the onset of the pandemic, compared with only 14 percent of married men (World Bank 2021a). In childcare, the self-reported increase was even more; 12 percent of married men and women reported that they spent more time on the activity now than before the pandemic.

These gender differences in time allocation reflect cultural traditions that assign women broad responsibilities for unpaid work inside the household. Among women, 2 in 3 believe that a preschool child suffers if a mother works (see Figure 2.44). Similarly, in the 2018 Arab Barometer data, 58 percent of women agree with the statement that it is better for a household if a woman has the main responsibility for taking care of the home and the children rather than a man.[35] This suggests that these norms are often internalized by women themselves. Women's decision to pursue employment opportunities outside the household may be considered subversive, with potentially negative consequences for the households and the women, including because of diminished marriage prospects (World Bank 2014b). In such an environment, gendered cultural traditions and customs are difficult to separate from individual preferences.

Another factor that may influence the amount of time women spend on unpaid activities is the availability and

[35] Arab Barometer Public Opinion Survey Series (database), Inter-university Consortium for Political and Social Research, Institute for Social Research, University of Michigan, Ann Arbor, MI, http://www.icpsr.umich.edu/icpsrweb/ICPSR/series/508.

affordability of childcare services. International evidence strongly suggests that improved access to childcare services (through crèches and preschools, longer elementary school days, and so on) significantly increases women's employment and labor force participation (Buvinić and O'Donnell 2016; De Henau 2019; Halim, Johnson, and Perova 2019; Mateo Díaz and Rodríguez-Chamussy 2013; Padilla-Romo and Cabrera-Hernández 2018). In Tunisia, day-care attendance is rare among children ages 3–36 months (Box 2.6). Among children ages 3–6 years, about one in two attends a day-care center, with significantly higher rates of attendance among more affluent households compared with the poorer quintile (71 percent vs. 17 percent). While this income gradient might reflect a variety of factors, including more conservative gender role attitudes among poorer (often rural) households, it may also signal that cost and affordability constrain the access of poor households to childcare. There is substantial variation in day-care fees across regions and service providers, but the average fee of TD 140 amounts to over 30 percent of the median wage of working women with primary educational attainment. Moreover, in the public sector, workplaces with more than 50 workers are required to have on-site childcare facilities, and this may partly explain women's preference for public sector jobs (Moghadam 2017).

Occupation and Sector

Women's preferences for certain types of jobs and occupations are shaped by societal views of what types of jobs are considered acceptable for women and would allow women to combine employment with household responsibilities. As in many countries in the region, women in Tunisia have a strong preference for public sector employment over the private sector (Mouelhi and Goaied 2018; Stampini and Verdier-Chouchane 2011). Women are significantly overrepresented in the public sector workforce. Employment in the public sector generally offers more favorable working condition, including shorter hours, greater job security, social security coverage, paid annual and sick leave, and better access to childcare services (Moghadam 2018) (see Figure 2.40). These features make it easier for women to balance paid and unpaid work and are therefore relatively more important for women than for men (Assaad and Barsoum 2019).[36]

[36] Feld, Nagy, and Osman (2020) use an experimental design to elicit from job-seekers their valuations of various job attributes in Egypt. They show that women are more sensitive to long commutes and value flexible work schedules more than men do. While these results do not relate specifically to Tunisia, they provide support for the notion that women value the work-life balance more than men in a similar cultural context.

Even among single women, there is a strong preference for public sector jobs because these are seen as a positive signal in the marriage market. Krafft and Assaad (2020) show that public sector employment significantly accelerates marriage among women in Tunisia. Qualitative evidence also shows that households expect young women to take up only employment that is considered appropriate, that is, work that is commensurate with a woman's qualifications and preferably in the public sector to enhance marriage prospects (World Bank 2014b).

However, with rising female education levels, this strategy is coming under pressure because the range of employment opportunities in the public sector is increasingly out of sync with the number of women graduates looking for such jobs. To the extent that formal or informal employment in the private sector and self-employment are not considered acceptable for educated women, unemployment and inactivity may remain the only options.

Geographic Mobility

There is evidence that women are less geographically mobile than men, which further limits their opportunities. For example, the ICT companies interviewed by Kärkkäinen (2011) reported that women's lack of mobility poses a barrier to the recruitment and promotion of women within companies. Similarly, interviews with women themselves reveal regional differences in willingness to travel, particularly over long distances, which may be a factor contributing to differences across regions in women's labor force participation rates (Hanmer, Tebaldi, and Verner 2017).

Several factors may explain differences in women and men's willingness to take up jobs that would require either a move to a different city, or longer commuting times. Many women avoid using public transport, especially at night. In addition, significantly fewer women than men own motorized transport (see Figure 2.48). Qualitative interviews of the World Bank (2014a) show that conservative gender roles may limit young women's ability to take up employment that would require moving out of the household.

Mobility constraints may be particularly severe for women with lower levels of education or from poorer backgrounds. Research in Jordan shows that there is a negative correlation between female labor force participation and commuting times at the district level, but only among women with less than high school education (Kasoolu et al. 2019). The research shows that women with lower

BOX 2.6. Child Day-Care Centers and Preprimary Schools in Tunisia

Overview of Child Day-Care Centers, Kindergartens, and Preprimary Schools

Children ages 3 months–3 years attend day-care centers (or crèches). Children attend preprimary school from age 3 to age 6 (**Table B 2.6.1** and annex **Table A 2.2**). Preprimary education is provided by the following:

- **Preprimary schools and kindergartens: These are socioeducational institutions privately or publicly owned or run by specialized associations. Those publicly owned are municipal institutions under the Ministry of Local Affairs and Environment and the Ministry of Women, Family, Children, and Elderly. Private early childhood education institutions need to register and be approved by the Ministry of Women, Family, Children, and Elderly. Controls are carried out by inspectors to verify compliance with health and safety standards.**
- **Kouttabs: These are religious institutions providing care services for children ages 3–5 years. Kouttabs introduce children to the Koran and teach them how to read, write, and count. They are under the aegis of the Ministry of Religious Affairs.**
- **Primary schools: They offer preparatory courses with a reception class for children ages 5–6. This is an integral part of basic education, but not compulsory. The courses are delivered under the purview of the Ministry of Education, and they are offered in both public and private primary schools.**
- **To date, virtually all day-care centers and kindergartens are privately owned and managed.**

Only about 1 percent of all children ages 3–36 months attend day-care centers.[a] The net attendance rate among children ages 3–6 is 51 percent. The rate is higher in urban areas (63 percent) than in rural areas (28 percent). The rate is also higher among children from affluent households (71 percent), compared with children living in the poorest households (17 percent). Private sector supply accounts for 94.0 percent of the facilities available among the kindergartens, compared with 5.9 percent provided by the public sector.

The net school attendance rate among children ages 5–6 in preparatory primary school (reception class) is 90 percent: 94 percent in urban areas and 83 percent in rural areas.[b]

Access to Public Kindergartens

The cost of public kindergartens is between TD 25 and TD 45 per month. Since 2010, a program run by the Ministry of Women, Family, Children, and Elderly has allowed needy and low-income households to enroll their children in kindergartens for free for two years. The number of beneficiaries is about 6,000 children per year. Access to public kindergartens is based on information about the social status of the household and the pay slips of parents. For nonneedy households, registration is based on available places and the location of residence. Access to public preparatory classes is provided free of charge.

Cost of Private Day-Care Centers

The cost of private day-care centers varies by service provider. To estimate an average cost of private centers, a survey of private day-care centers was conducted across the 24 governorates of Tunisia in April 2021. One center was selected randomly in each governorate, for a total of 21 private crèches.[c] Monthly fees are in the range of TD 40–TD 350 (Table B 2.6.2 and annex Table A 2.3). The average is about TD 140, but considerable variation exists across regions. The northern regions have the highest monthly fees. This was around 27 percent of the median monthly wage in 2019. It was about 35 percent of the median monthly wage of working women with primary education.

TABLE B 2.6.1. Childcare Centers and Preprimary Schools (Public and Private), by Region

Region	Crèche (ages 3–36 months)	Kindergarten (ages 3–5 years)	Preprimary school (ages 3–5 years)	Kouttab (ages 3–6 years)
Greater Tunis	139	1337	579	444
North-East	33	771	0	206
North-West	30	378	22	124
Center-East	105	1322	697	384
Center-West	8	479	37	151
South-East	27	527	306	210
South-West	18	441	0	93
Total	360	5255	1641	1612

Source: Based on data of the Ministry of Women, Family, Children, and Elderly and the Ministry of Religious Affairs.

(continued)

BOX 2.6. Child Day-Care Centers and Preprimary Schools in Tunisia *(continued)*

TABLE B.2 6.2. Monthly Fees at Private Day-Care Centers, by Region, April 2021

Region	Lowest (TD)	Highest (TD)	Average (TD)
Greater Tunis	210	350	263
North-East	130	320	210
North-West	80	140	100
Center-East	90	200	165
Center-West	40	120	80
South-East	70	110	90
South-West	40	90	65

Source: Based on data collected through phone interviews with one random day-care center in each governorate.
a. Data provided by the Ministry of Women, Family, Children, and Elderly.
b. Based on data of the 2018 Multiple Indicator Cluster Surveys, INS. See MICS (Multiple Indicator Cluster Surveys) (dashboard), United Nations Children's Fund, New York, http://mics.unicef.org/.
c. A few centers were not reached by the survey.

levels of education rely disproportionately on public transport, while more well educated women are more likely to use private transport, which allows them to circumvent the lack of safe public transport. Moreover, a comparison of commuting times of single men and women, a segment of the population with comparatively few domestic responsibilities, shows that the commuting times of women are significantly shorter than those of men. A plausible explanation is that concerns over harassment and safety on public transport reduce women's willingness to take up jobs that would involve longer commutes.

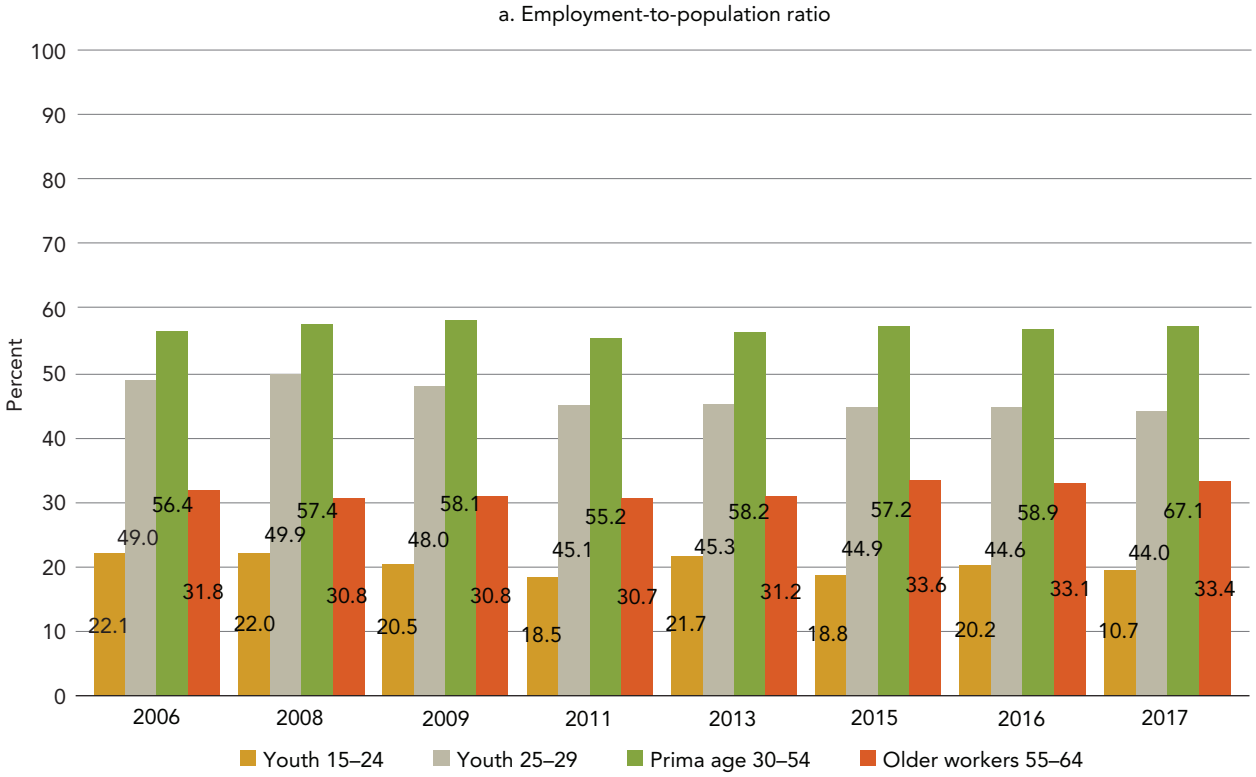
Youth

Youth represent a large share of the Tunisian population of working age. The youth population is expected to hover around 21 percent of the total population and 33 percent of the working-age population (ages 15–64) in the next two decades and decline gradually thereafter.[37] Youth's share in the population in Tunisia is modestly above the average among OECD countries (19.1 percent in 2020) and below regional (24.1 percent) and income group (23.7 percent) comparators. Over the coming 20 years, demographic trends will ease some of the pressure on job creation deriving from a rising share of youth. Yet, such trends make youth employment an extremely relevant challenge, particularly in light of population aging. By 2040, about 16 percent of the Tunisian population will be ages 65 or more. This section provides an overview of the labor market situation of Tunisian youth. It focuses on key labor market indicators and on the difficulty of the school-to-work transition among university graduates, thereby providing evidence on key constraints to the employment of youth.

Youth fare poorly in the labor market relative to prime-age individuals. First, at 29.2 percent, the employment-to-population ratio among youth is over 15 percentage points below the level observed among prime-age workers (ages 30–54). The large gap is driven primarily by the low employment ratios among youth ages 15–24, estimated at 19.7 percent in 2017 (Figure 2.51, panel a). This is ultimately ascribable to increasing school attendance rates. Among youth ages 15–24 and 25–29, an estimated 46.5 percent vs. 5.5 percent, respectively, were attending school in 2019. At 44 percent in 2017, the gap in the employment ratio between youth and adults is also sizable among youth ages 25–29. The employment ratio has been declining among youth, while it has been increasing among prime-age and older workers. Second, youth fare poorly relative to the rest of the working-age population also in unemployment. About 1 in 3 youth ages 15–29 was unemployed in 2017. The share peaked at 38.2 percent in 2011 and has hovered around 33.0 percent ever since. Unemployment rates are higher among younger age-groups. It is estimated at 34.9 percent among youth ages 15–24 and 31.7 percent among youth ages 25–29 (Figure 2.51,

[37] World Population Prospects 2019 (database), Population Division, Department of Economic and Social Affairs, United Nations, New York, https://population.un.org/wpp/.

FIGURE 2.51. Key Labor Market Indicators, by Age-Group, Youth (Ages 15–24 and 25–29) and Adults (Ages 30–64), 2006–17



(continued)

FIGURE 2.51. Key Labor Market Indicators, by Age-Group, Youth (Ages 15–24 and 25–29) and Adults (Ages 30–64), 2006–17 *(continued)*

Source: Based on data from the Labor Force Survey (ENPE), INS.

panel b). This compares with 9.0 percent among prime-age workers and 2.0 percent among older workers. Third, at 70 percent, inactivity is high among youth ages 15–24 because of high attendance rates in school.[38] Among youth ages 25–29, the rate of inactivity is estimated at 35.5 percent (Figure 2.51, panel c), which compares with 37.3 percent and 66.0 percent among prime-age and older workers, respectively.

Youth with tertiary education, young women, and youth living in inland regions and urban areas face more difficulties in accessing jobs. First, the unemployment rate among young women is higher in both age-groups, 15–24 and 25–29, relative to young men. The gender gap expands from 3.4 to over 15.0 percentage points as women grow older (ages 25–29) (Table 2.6). Second, youth unemployment rates rise with educational level from 16.2 percent among youth ages 25–29 with no education to 51.0 percent among youth in the same age-group with tertiary education. Young women ages 25–29 with university degrees face an even greater risk of unemployment than young men (57.5 percent vs. 40.3 percent). Similarly, the unemployment rate among youth ages 15–24 was 15.3 percent if they did not have school certificates, and the rate rose to 32.4 percent and 63.9 percent, respectively, if they have secondary or tertiary education. Third, youth living in the more deprived areas of the country, namely, the North-West, the Center-West, and the southern regions, face a higher probability of unemployment. For example, among youth ages 25–29, the unemployment rate was estimated at 51.3 percent in the South-West region, 45.2 percent in the South-East region, 39.9 percent in the North-West, and 35.7 percent in the Center-West. This compares with 20.9 and 22.5 percent in the Center-East and North-East regions, respectively. A sizable gap is also detected between youth in urban and rural areas. In the 25–29 age-group, urban youth have an unemployment rate of 33.4 percent, compared with 27.3 percent among rural youth. Although indicators have improved since the 2011 revolution, youth with secondary and tertiary education and particularly

[38]The large gap disappears after accounting for the large number of youth who are attending school. In 2019, inactivity rates calculated among youth ages 15–24 not attending school were estimated at 23 percent.

TABLE 2.6. Labor Force Participation Rate and Unemployment Rate of Youth by Age-Group, Sex, Educational Level, Decile of Household per Capita Expenditures, Georgraphical Area, and Profiles of Youth, by Age-Group, 2017

	Youth 15–24			Youth 25–29		
		Profile			Profile	
	Unemployment rate	All	Unemployed	Unemployment rate	All	Unemployed
Sex						
Women	37.2	49.9	33.8	41.2	52.1	49.7
Men	33.8	50.1	66.2	25.9	47.9	50.3
Educational level						
No education	15.3	3.5	0.8	16.2	5	0.9
Primary	26.9	16	18.7	16.1	19.1	8.7
Secondary	32.4	61.8	56.3	23.3	44.5	33.5
Tertiary	63.9	18.5	24.2	51	31.2	56.9
Not stated	12.4	0.2	0	12.1	0.1	0
Decile of household consumption per capita – 2015						
Lowest	54.6	10.1	13.5	42.3	7.7	7.1
2	45.6	10.2	12.1	41.8	9.1	9.5
3	40.9	10.1	10.5	42.4	9.4	10.5
4	43.4	10.6	12.2	39	10.4	10.7
5	41.7	10.1	11.1	36.8	10.2	10.6
6	44.3	10.9	11.9	37.9	10.4	11.3
7	41.5	10.4	9.6	34.2	9.8	9.9
8	36.7	10	8	35	11.3	12
9	35.6	9.8	6.3	31.4	10.9	10.4
Highest	38	7.8	4.9	24.2	10.9	7.9
Region						
Greater Tunis	46.7	23.1	29.8	33.4	26.7	30.6
North-East	23.9	13.5	11.2	22.5	13.5	10.5
North-West	45.8	9.4	12.5	39.9	8.3	10.4
Center-East	20	25.7	15.2	20.9	24.4	15.4
Center-West	36.7	13.6	12.2	35.7	11.8	10.6
South-East	46.9	9.3	12.7	45.2	9.4	12.8
South-West	50.2	5.4	6.6	51.3	5.9	9.6
Location						
Rural	30.1	32.8	31.5	27.3	29.9	23
Urban	37.7	67.2	68.5	33.4	70.1	77

Source: Based on data from the 2017 Labor Force Survey (ENPE) and the 2015 Household Budget Survey (EBCNV), INS.

youth living in inland regions faced higher unemployment rates in 2017 than in 2006 (see annex Figure A 2-5).

However, the majority of unemployed youth are women, have up to secondary education, and live along the coast or in urban areas. A look at the distribution of unemployed youth by characteristics helps clarify the profile of the largest groups. In addition to the incidence of unemployment, this also reflects the profile of the youth population at large (see Table 2.6). The incidence of unemployment is greater among youth with tertiary education—this has doubled over the past decade—and among youth in inland regions. Other groups account for larger shares of unemployed youth. Youth with tertiary education contribute about 41 percent of total youth unemployment: 24.2 percent among youth ages 15–24 and 56.9 percent among youth

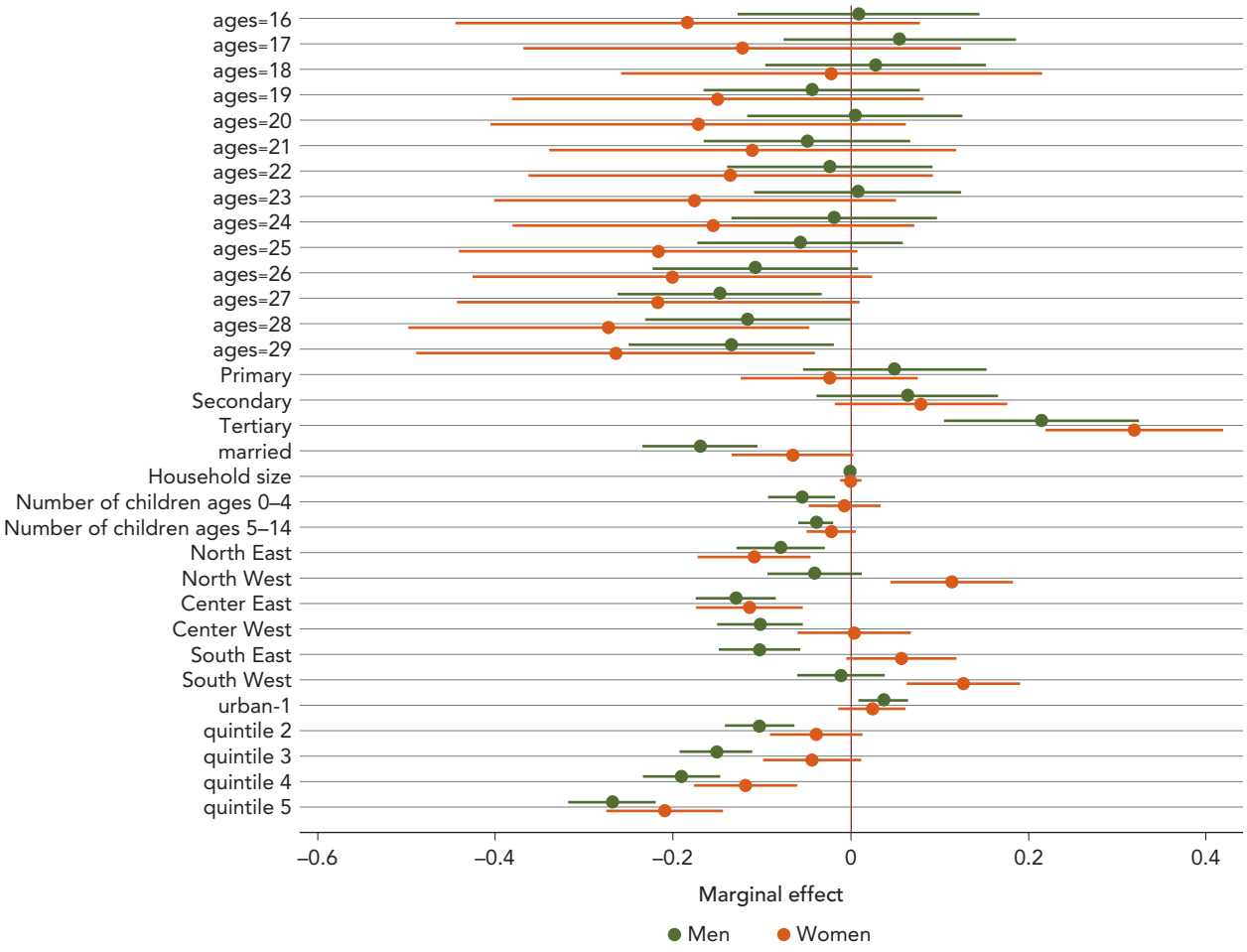
ages 25–29. Youth with up to secondary education make up the remaining 59 percent. Youth with secondary education contribute 44.7 percent (more than 176,000 individuals) of total youth unemployment: 56.3 percent in theyounger age-group and 33.5 percent in the older age-group. Similarly, youth in inland regions contribute about 43.7 percent of total youth unemployment, whereas the largest share is located in Greater Tunis: 30.2 percent or about 120,000 individuals. The second largest group is found in the Center-East (15.3 percent). The profile is similar in the two age-groups. The prevalence of urban unemployed youth is largely driven by the georgraphical distribution of the youth population, although, among youth ages 25–29, the urban concentration of unemployed youth is higher (77 percent of urban unemployed youth, compared with 70 percent of all urban youth).

Almost 6 youth in 10 have been unemployed for a year or longer. The long-term unemployment rate among youth is too high. In 2015, 58 percent of youth ages 15–29 were estimated to be among the long-term unemployed, that is, searching for jobs for at least 12 months. The rate is higher among young women (62.0 percent) and among well-educated youth: 64.0 percent among youth with tertiary education relative to 45.0 percent among youth with primary education. Youth in Tunis (63.0 percent), the North-West (71.0 percent), and in the southern regions (74.0 percent in the South-West and 61.5 percent in the South-East) face higher long-term unemployment rates. A small difference is detected across quintiles of household consumption expenditure. In 2015, the long-term unemployment rate was estimated at 55 percent and 56 percent in the bottom two quintiles and at about 60 percent in the top three quintiles.

Educational attainment, marital status, geographical location, and household welfare are strong correlates of the probability of unemployment. The patterns depicted above are corroborated by a multivariate analysis estimated separately by sex among youth who participate in the labor market, that is, either as employed or as unemployed. Controlling for a set of individual and household characteristics, namely, age, educational attainment, marital status, household size, number of children ages 0–4 and 5–14 in the household, region of residence, urban and rural location, and quintile of household expenditure distribution, a subset of characteristics emerge that are significantly correlated with the probability of unemployment (Figure 2.52; see Figure 2.55). The probability of unemployment is greater among university graduates relative to youth with no schooling (+21.5 percent among young men and +31.9 percent among young women). Once youth are active in the labor market, that is, looking for jobs, they are less likely to be unemployed if they are married. This link is more evident among young men than among young women (–16.9 vs –6.5 percent, respectively). Similarly, the number of children (ages 0–4 and 5–14) in the household is associated with the likelihood that youth household members will be looking for jobs or be employed, especially the young men. The location of residence, too, has a sizable impact. Young men and young women living near Greater Tunis are less likely to be unemployed relative to youth in other regions. Youth in more affluent households are more likely to search for job and, once they search, are more likely to find jobs relative to youth in the poorest households. Statistically, the marginal effect of living in a household in the second or fifth quintile, respectively, relative to living in a household in the bottom quintile of the expenditure distribution rises from –10.2 percent to –26.8 percent among young men and ranges from –3.9 percent to –20.9 percent among young women.

About 4 youth in 10 are NEET: the NEET rate is the highest among young women, youth with little education, youth in inland regions, and youth in poorer households. The share of NEET youth hovered around 40 percent of the population ages 15–29 over the decade, a rate that is above the OECD average (12.9 percent in 2019) and the average among regional and income group comparators. NEET rates differ considerably across groups of youth. The NEET rate among boys and young men peaked at age 24 (44 percent) and then declined to 35 percent by age 29 in 2015. Among young women, the rate increased with age and peaked at 67 percent at age 28 (Figure 2.53). On average, the NEET rate among young women is estimated at 40 percent, almost 10 percentage points higher than among young men (30.7 percent). Among young men, unemployment is the largest component of the NEET group, whereas, among young women, the largest share of NEET is accounted for by young women who are out of school and not engaged in the labor market. Youth ages 25–29 and youth with no schooling (66.0 percent) or primary education (54.7 percent) are more likely to be not in education, not in employment, and not looking for jobs (Figure 2.54, panels a, b, c). NEET rates are higher among youth who reside in the Center-West (44.7 percent), South-West (42.4 percent), and South-East (38.9 percent) (Figure 2.54, panel d). NEET rates are higher at the bottom of the household expenditure distribution. NEET rates decline from 41.2 (63.4) percent in the lowest quintile to 15.6 (36) percent in the highest quintile among youth ages 15–24 (25–29) (Figure 2.54, panel e).

FIGURE 2.52. Correlates of the Probability of Unemployment Among Youth, by Sex, 2015

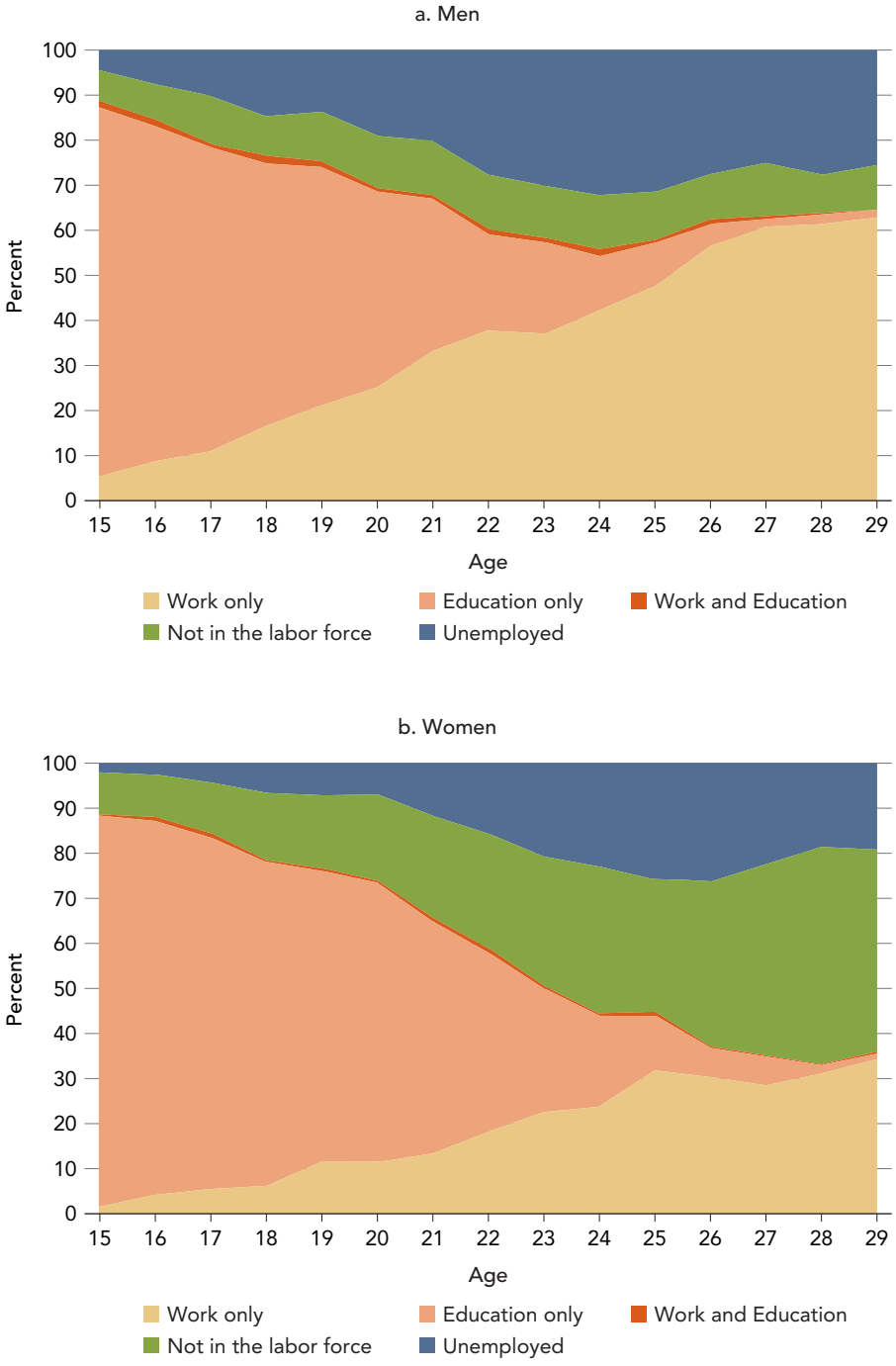


Source: Based on data from the 2015 Household Budget Survey (EBCNV), INS.

Youth living in coastal regions, youth with secondary education, and young women contribute the largest shares to the NEET population. The prevalence of NEET among specific groups of youth does not coincide with the shares in the NEET population. The largest contributor to the NEET population is women (56 percent), youth with secondary education (52 percent), and youth in coastal regions (Greater Tunis, 20 percent; North-East, 12.1 percent; and Center-East, 22 percent).

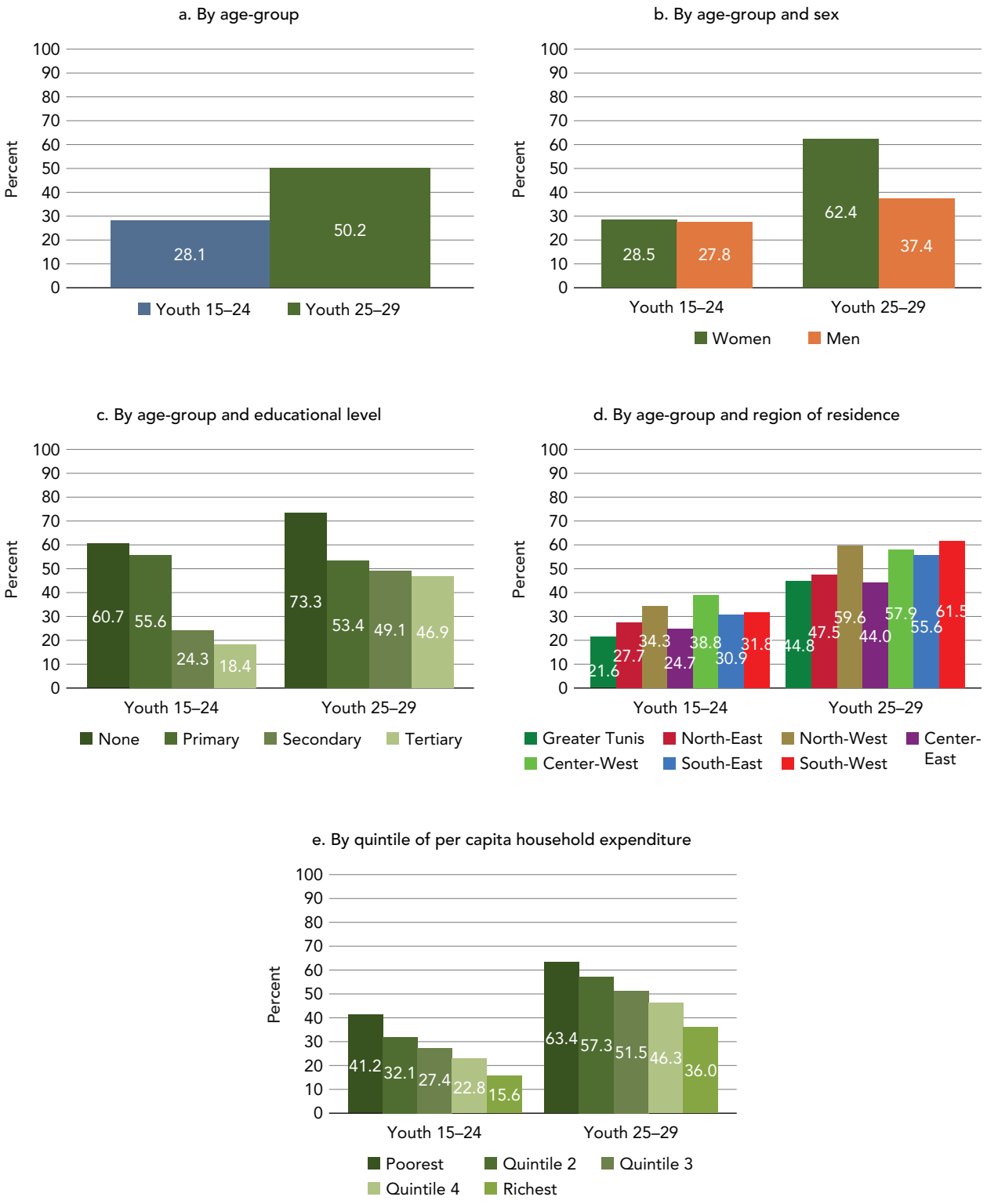
Age, marital status, urban location, and household welfare are strong correlates of the probability of inclusion in NEET. The patterns depicted above are corroborated by a multivariate analysis estimated separately by sex and educational level (up to primary education vs. secondary or tertiary education). The analysis controlled for a set of individual and household characteristics, namely, age, marital status, number of children ages 0–4 and 5–14 in the household, governorate of residence, urban or rural location, and quintile of household expenditure distribution. It found that age, marital status, number of children, and position in the welfare distribution were the most important correlates of the probability of inclusion in NEET, with some distinctions by sex and educational level (Figure 2.55). Among young men with secondary or tertiary education, age is an important correlate of NEET status. The probability of inclusion in NEET increases monotonically with age up to around age 24 (+36 percent relative to a 15-year-old) and then starts to decline a bit. A status as married and living in a household with children ages 5–14 reduces the probability of inclusion in NEET. The same is true of residence in a more affluent household relative to the poorest households (first quintile). By contrast, among young men with no schooling or no primary education, age does not seem to play any role, whereas the negative effects of marital status, number of children, and quintile

FIGURE 2.53. Activity Status of Youth, by Age and Sex, 2015



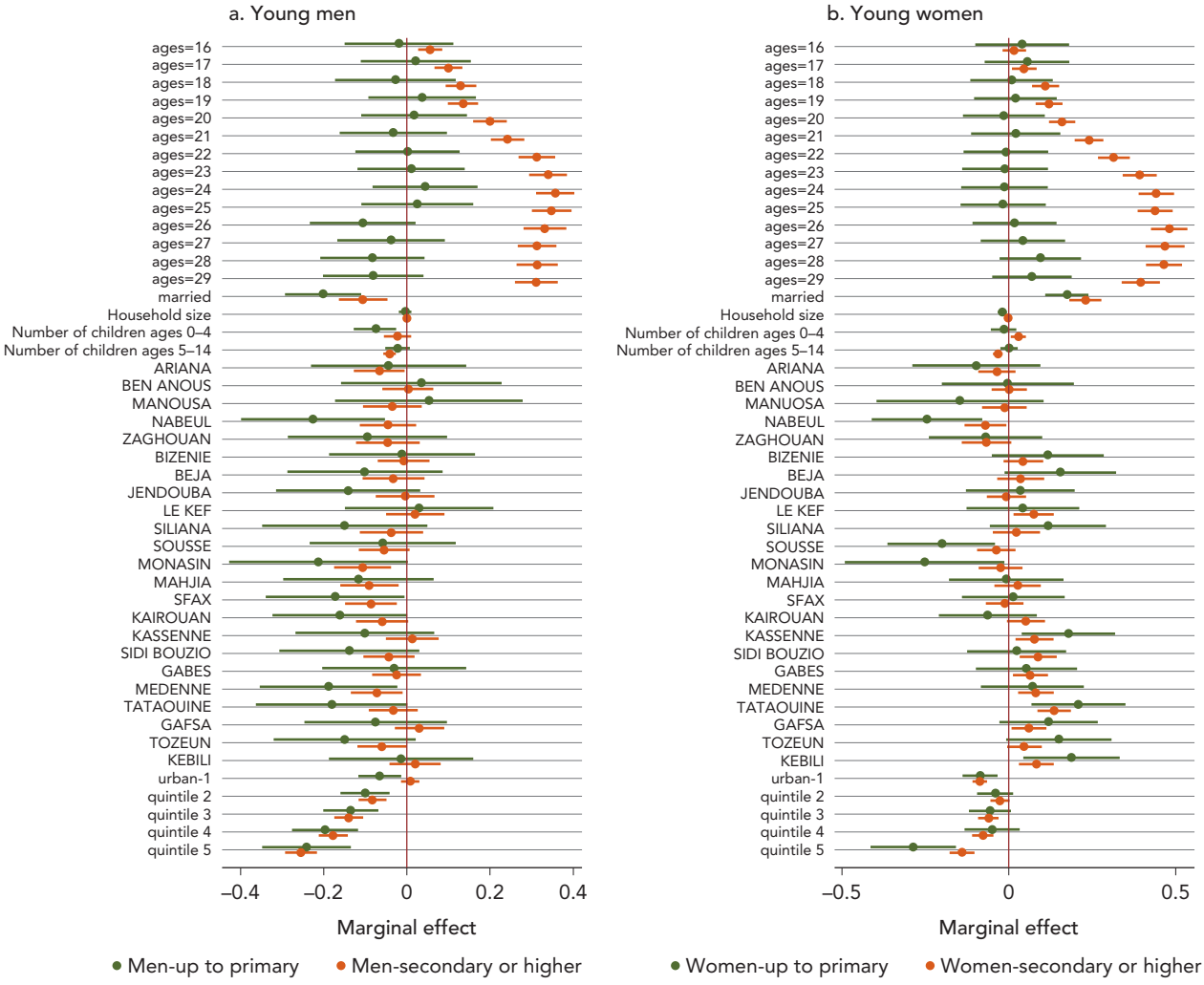
Source: Based on data from the 2015 Household Budget Survey (EBCNV), INS.

FIGURE 2.54. Youth NEET Rates by Age-Group, Sex, Educational Level, Region of Residence, and Quintile of per Capita Household Expenditure, 2015



Source: Based on data from the 2015 Household Budget Survey (EBCNV), INS.

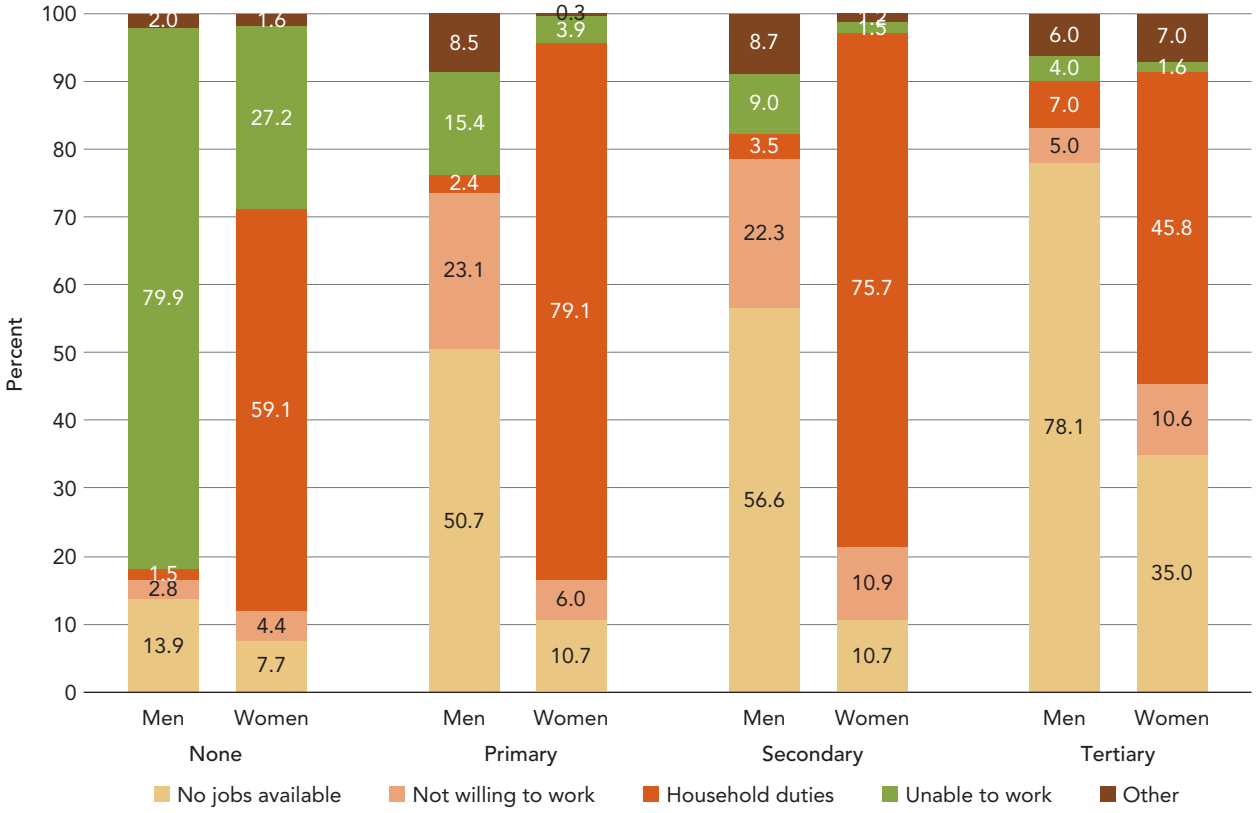
FIGURE 2.55. Correlates of the Probability of Inclusion in NEET Among Youth, by Sex and Educational Level, 2015



Source: Based on data from the 2015 Household Budget Survey (EBCNV), INS.

of household welfare persist. In the case of young women with secondary and tertiary education, the effect of age on the probability of inclusion in NEET is positive and rises up to around age 27. The marginal effects are also larger with respect to young men. Unlike young men, a status as married and living in a household with children ages 0–4 increases the chances of inclusion in NEET, possibly because of the care responsibilities that women typically take on when they marry and have children. The number of children ages 5–14 has a negative effect on the likelihood of inclusion in NEET. Urban residence decreases the chances of inclusion in NEET among young women with higher education. The availability of job opportunities and high-quality childcare services may act as a pull factor toward the labor market. Similar is the effect of residing in a governorate besides the governorate of Tunis. The position in the household welfare distribution retains its negative effect on the chance of inclusion in NEET. However, the magnitude of the effect is considerably smaller except among the highest quintile. Among young women with no schooling or only primary education, the effect of age vanishes, whereas married status preserves its positive effect, together with the dummy for urban residence and its negative effect. The effect of the position in the household expenditure distribution loses its significance except among young women in the top quintile. Among young men, the combined effect of marital status and quintile of household expenditure indicates a negative effect of marriage on the probability of inclusion in NEET at any quintile relative to the status as not married and in the lowest

FIGURE 2.56. The Main Reason for Being Out of the Labor Force and Not Looking for Jobs Among Youth, by Sex and Educational Level, 2015



Source: Based on data from the 2015 Household Budget Survey (EBCNV), INS.

quintile.[39] The magnitude of the effects increases at higher quintiles. A similar negative effect, smaller in magnitude, is estimated for single young men. By contrast, in the case of young women, the estimated effect is negative and increasing in magnitude along the distribution for single women and positive and roughly stable along the distribution for married women.

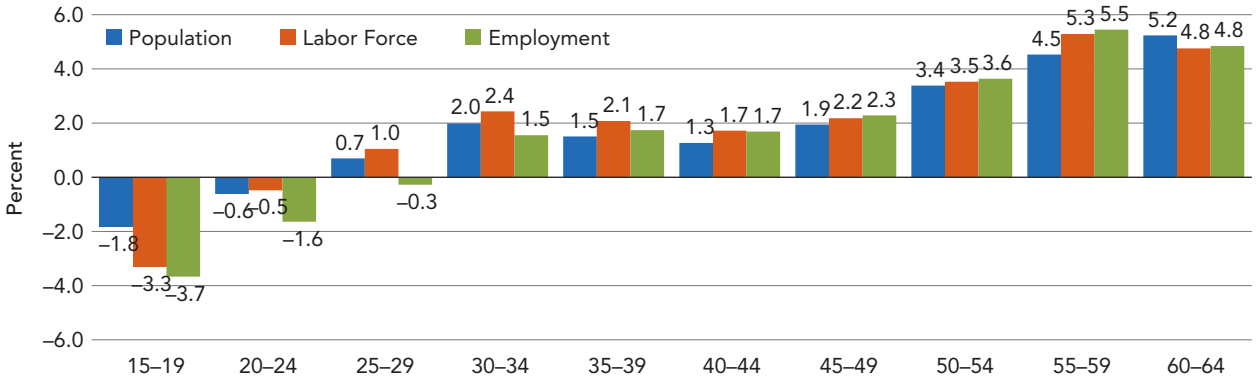
The self-reported reasons for inactivity differ by sex and educational level. About 8 in 10 young men with no schooling report that the main reason they are not looking for jobs is their inability to work. Young men with higher educational attainment mention primarily lack of jobs, and this share rises from 50.7 percent among young men with primary education to more than 78.0 percent among young men with tertiary education (Figure 2.56). Household duties are a key factor among more than 70 percent of young women on average, with peaks at 80 percent among young women with primary and secondary education. Lack of jobs seems to be a constraint only among young women with tertiary education. A stated preference for not engaging in the labor market is rare among young women, at less than 9 percent; the shares are larger, at about 20 percent, among young women with primary and secondary education.[40]

Inactivity seems to be associated with exclusion in the minds of young men with little education. Among young men with tertiary education, a lack of jobs is the main reason for inactivity. Among young women with university degrees, the reason is a combination of lack of jobs and gender roles. Three facts can be derived from the evidence obtained through the multivariate analysis and self-reported reasons for inactivity and not looking for jobs. First, age is key among youth with tertiary education. The probability of inclusion in NEET among this group increases as time

[39] Estimates of the interaction between marital status and quintile of household expenditure are available on request.

[40] Gender identity norms might be so fully internalized that they become part of one's self-conception, thereby shaping preference. Behaviors and choices may be affected by concerns about social image and the reputational consequences of deviating from the prescribed behavior (Bertrand 2020).

FIGURE 2.57. Annualized Change in the Population, Labor Force, and Employment, by Age-Group, 2006–17



Source: Based on data from the Labor Force Survey (ENPE), INS.

passes likely because of the more lengthy school-to-work transition arising from the lack of jobs, particularly among university graduates. Second, household responsibilities act in opposite directions among young men and young women in line with assigned gender roles. In the case of young men, household responsibilities translate into a motive to obtain a job to support household members, whereas, in the case of young women, household duties are the main reason for withdrawing from the labor market and taking on the role of caregiver. Third, inclusion in NEET is not a luxury that only middle-class and affluent youth can afford, but rather an issue of exclusion among young men with little education. If they are married, young women experience a greater probability of inclusion in NEET regardless of their position along the welfare distribution. Young men, by contrast, engage in the labor market to support their newly formed families.

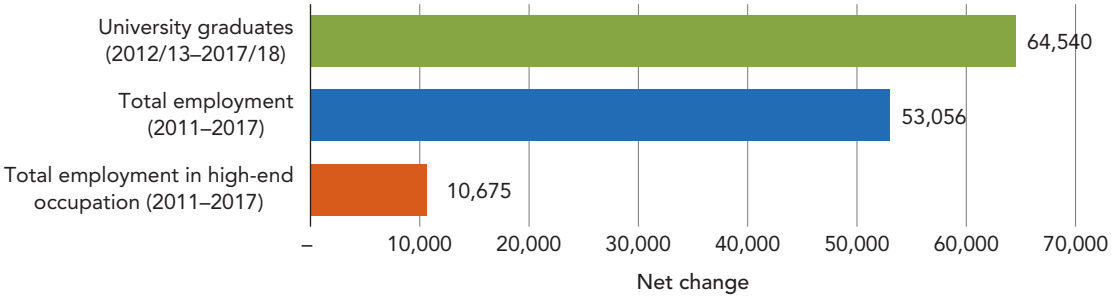
Drivers of youth unemployment and idleness can be classified into three groups: labor demand, labor supply, and institutional factors. Evidence on the first two groups of factors are presented below. On the institutional component, this study is limited to an overview of active labor market policies, whereas other factors such as social insurance and assistance systems, employment protection laws, wage-setting mechanisms, and minimum wages are not examined.

Sluggish employment creation, especially in high-end jobs, is one of the main drivers of unemployment and inactivity among youth, particularly university graduates.[41] In 2006–17, total employment rose at an average annualized rate of 1.4 percent, while the labor force grew at a rate of 1.7 percent a year (Figure 2.57). Youth ages 25–29 were the most affected by the slow employment creation. On average, their total employment declined by –0.3 percent a year (–13,100 overall), while the number of such youth in the labor force increased at an annualized rate of about 1 percent (68,500 overall). The number of youth ages 15–24 in the labor force declined, as did the number of such youth who were employed, thanks to higher enrollment rates and longer attendance in school. By contrast, among older individuals, the economy generated employment at a more rapid average rate than the rate of expansion in the labor force. Although the rate of employment creation accelerated after the revolution, it was not sufficient to absorb the large number of university graduates. As employment increased by about 53,000 jobs a year on average, almost 65,000 additional youth graduated, on average, between academic year 2012/13 and academic year 2017/18 (Figure 2.58). If one takes into account the occupational composition of employment, the deficit is striking. Between 2011 and 2017, the number of high-end jobs, including managers, professionals and technicians, and associate professionals, that university graduates can aspire to obtain, rose by less than 11,000 a year (about 64,000 overall).

On the supply side, the quality of learning may constrain the ability of university graduates to land a job. Considerable progress has been achieved in Tunisia in enrollment and completion at secondary and tertiary level. Girls have outstripped boys in these areas. The quality of learning and the relevance of education are among the main reasons for the lack of capacity of the country to produce employable graduates, that is, individuals with the skills and qualifications needed to find a job regardless of the educational attainment. The quality of learning in Tunisia is below comparators countries, for

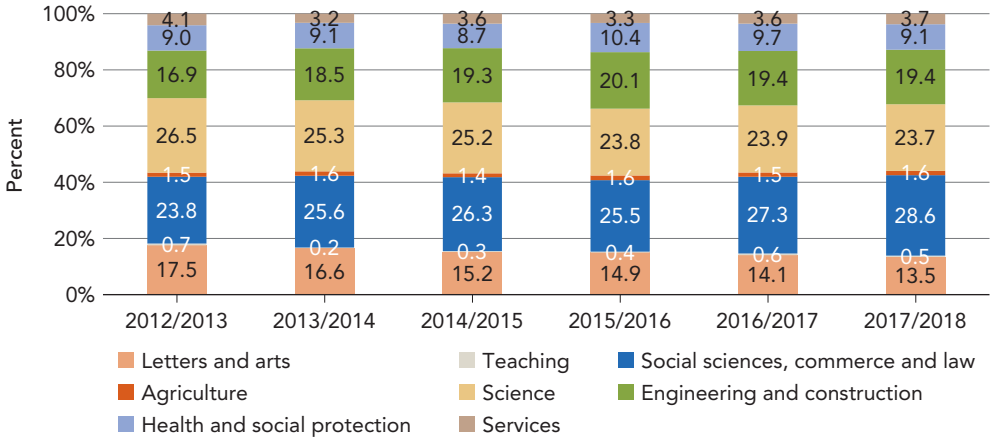
[41] In addition to economic growth, the presence of a well-paying public sector is often mentioned as one of the possible causes of high unemployment rates among university graduates. Chapter 3 provides evidence on wage gaps between private and public sector jobs among university graduates and on the labor market status and household characteristics of university graduates not employed in public administration.

FIGURE 2.58. Change in the Number of University Graduates, the Employed, and the Employed in High-End Jobs, Circa 2011–17



Source: Based on data from the Ministry of Higher Education and Scientific Research; Labor Force Survey (ENPE), INS.

FIGURE 2.59. Distribution of Graduates, by Field of Study and Academic Year, 2012/13–2017/18



Source: Based on data from the Ministry of Higher Education and Scientific Research.

example, in mathematics and science test scores (see Figure 2.7; Figure 2.8).

University graduates tend to select curricula that are not in line with private sector demand. There is an important gap between the competencies required by the labor market and the student demand for higher education. About 35.0 percent of employers in Tunisia identify an inadequately educated workforce as a major constraint to business operation and firm growth. The share had increased from 29.1 percent in 2013 and is above the average in the Middle East and North Africa (20.4 percent).[42] The curricula selected by university graduates are not aligned with the needs of the labor market. About 4 university graduates in 10 obtained a degree in the humanities or social sciences, including business and law, in the 2017/18 academic year (Figure 2.59). While the number of graduates in the humanities declined from over 11,500 in 2012/13 to about 7,800 in 2017/18, the number graduating in the social sciences rose by about 1,000 during the period (about 16,600 in 2017/18). The share of graduates in the sciences declined to 23.7 percent (about 13,800 in 2017/18), and the share in engineering and construction rose from 17 percent to over 19 percent (about 11,300 in 2017/18).[43] In 2012–17, the number of wage workers employed as managers, professionals, and technicians increased by about 110,000 or 21 percent. The number of teachers,

[42] 2020 data of Enterprise Surveys (dashboard), World Bank, Washington, DC, https://www.enterprisesurveys.org/.

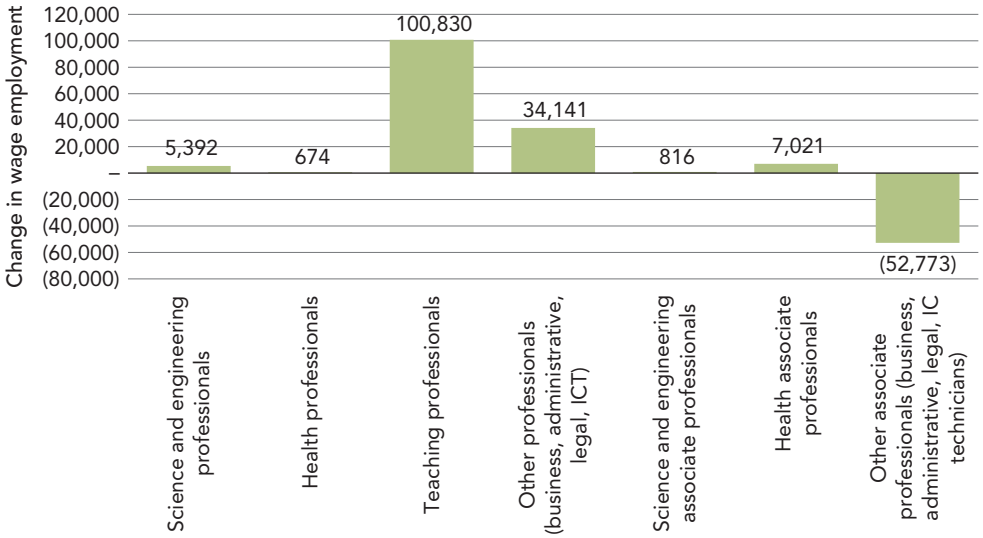
[43] Young women graduated predominantly in the humanities. A smaller share enrolled and graduated in science, technology, engineering, and mathematics, including statistics, construction, and ICT. See TLMPS (Tunisia Labor Market Panel Survey 2014) (dashboard), Economic Research Forum, Gza, Egypt, http://www.erfdataportal.com/index.php/catalog/105/data-dictionary.

particularly primary- and secondary-school teachers, rose by more than 100,000 (more than 90 percent). The number of ICT, legal, social, and cultural professionals increased by 34,000, and science and engineering occupations added 5,000 workers (+20 percent) (Figure 2.60). The number of health professionals and associate professionals expanded by about 5.0 percent and 14.5 percent, respectively. By contrast, the number of business, administration, and legal associate professionals fell by over 50,000 (40 percent). This means the choices of youth are not aligned well with the needs of the private sector. Graduates in the social sciences and law face more challenges in obtaining jobs given the decline in the number of employed associate professionals in these fields. The rise in the number of wage jobs as science, engineering, and health professionals was limited. Graduates in the humanities can reasonably expect to find jobs given the continuous expansion of public sector hiring in this field. However, the rise in public sector hiring is not sustainable, and hiring has recently diminished.

This contributes to lengthy school-to-work transitions, which many youth, particularly young women, do not complete. First, by age 21, 50 percent of youth ages 15–29 leave school in Tunisia. This is similar to the outcome observed in advanced economies and higher than the average age in middle-income countries (OECD 2015). Second, few Tunisian youth combine work and study, less than 1 percent according to 2015 household budget survey data. This may contribute to a less smooth transition from school to work and be positively correlated with a larger share of NEET youth and a longer duration in the transition (Manacorda et al. 2017). Third, Tunisia stands out for markedly long transitions from school to first employment, an average of 35 months and a median of 29 months, below only to Jordan and to West Bank and Gaza) (Figure 2.61, panel a). The transitions are particularly long among women (a median of 41.6 months vs. 21.2 months among men). Fourth, a large share of youth are expected never to transit to first employment: 23 percent on average in Tunisia compared with 17 percent in the Middle East and North Africa; the share is disproportionately larger among women (35 percent vs. 12 percent among men) (Figure 2.61, panel b). This evidence is particularly concerning because the probability of finding a job among youth falls as the duration of the transition rises in both developing and advanced countries. This phenomenon is known as negative duration dependence.

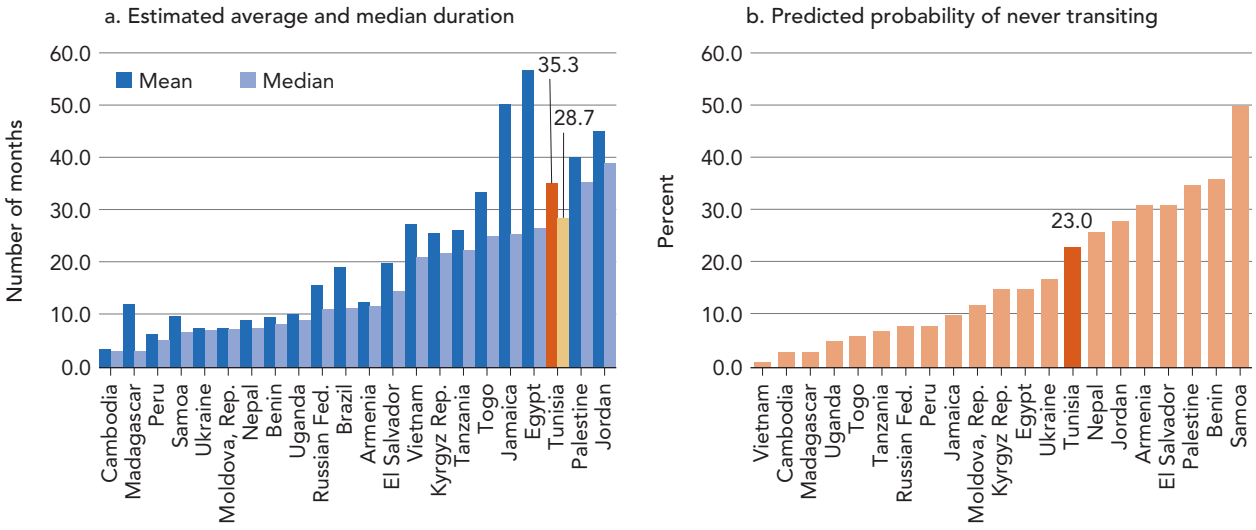
Assigned gender roles constraints the labor market participation of young women after marriage. Recent research by the World Bank's behavioral science team shows that both men and women view men's participation in housework favorably, which suggests that gender differences in time allocation are driven by customs and traditions.

FIGURE 2.60. Change in the Number of Wage Workers Employed in High-End Jobs, by Occupation, 2012–17



Source: Based on data from the Labor Force Survey (ENPE), INS.
Note: High-end jobs include managers, professionals, technicians, and associate professionals. See ISCO-08 classification, ISCO (International Standard Classification of Occupations), International Labour Organization, Geneva, https://www.ilo.org/public/english/bureau/stat/isco/.

FIGURE 2.61. Duration of School-to-Work Transitions and Probability of Never Transiting from School to Work, 2013



Source: Based on data from Manacorda et al. 2017.

Most active labor market policies in Tunisia target youth who have secondary and tertiary education, consist of wage subsidies, and lack monitoring and evaluation. Reviews indicate that the large majority of the government's active labor market policies target university graduates (Boughzala 2019). In 2018, four policies represented the largest component of active labor market policies (see annex Table A 2-4).

- The Stage d'initiation à la vie professionnelle (Initiation into Work Program) was introduced in 1987. It has been renamed Contrat d'initiation à la vie professionnelle (Contract for Integration into Working Life). It is aimed at facilitating job access by helping youth acquire professional experience. It offers university graduates social security coverage, along with a minimum stipend of TD 300 a month, of which 50 percent is paid by the government and 50 percent by participating enterprises that commit to hiring at least 50 percent of the youth they have supported under the program.
- The Contrat d'adaptation et d'insertion professionnelle (Adapting to the Workplace Insertion Contract) is the analogue of the Contract for Integration into Working Life for youth who have not graduated. Target youth receive a lower stipend and cannot participate more than once in the program, unlike the case of the Contract for Integration into Working Life.
- Service civile volontaire (Voluntary Civil Service) was introduced in 2010 to meet the special needs of inland regions, which are less urbanized and have relatively fewer formal firms.
- The Programme d'accompagnment des promoteures des petites enterprises (Programme for Mentoring Promoters of Small Enterprises) promotes entrepreneurship among youth. Participants may benefit from free training, orientation and coaching services, and financing. The Agence Nationale pour l'Emploi et le Travail Independant (National Agency for Employment and Independent Work, ANETI) and the Tunisian Bank of Solidarity participate in the program. The latter is the main provider of financing. The program is relative small compared with the others. It covers fewer than 4,000 youth a year.

Wage subsidies provide temporary employment opportunities to beneficiaries and labor to firms at lower cost, often at the expense of significant deadweight loss and substitution effects. The goal of wage subsidies is to stimulate the demand for labor by subsidizing the associated cost among firms. This can support young workers, whose productivity may be low initially. Because the cost of hiring is reduced, employers may become more keen to employ the target groups. In Tunisia, given the abundant supply of university graduates, the relative price of their labor should be adjusted downward. However, the existence of collective wage agreements limits the potential for such adjustments, thus incentivizing hiring youth informally. Wage subsidies can play a role by making formal employment of youth more attractive to employers. Wage subsidies take several forms depending on how they are set (for example, a reduction in social security contributions or payments of a fraction of the wage), who receives them

(workers or employers), who is eligible (all workers, new hires, first-time job-seekers, and so on), and the type of conditionalities on employers (Angel-Ardinola, Nucifora, and Robalino 2015). Recent evaluations indicate that, in general, wage subsidies are an effective tool for raising employment rates among eligible individuals, but mainly as a way to provide work experience in the short term as opposed to permanent employment, particularly among the long-term unemployed (Card, Kluve, and Weber 2018; McKenzie 2017). In addition, wage subsidies seem to succeed in providing support to firms and preventing them from shedding workers in the event of temporary shocks. There are two key issues with wage subsidies: deadweight losses, that is, the risk of subsidizing jobs that would have been created anyway, and substitution effects, that is, the possibility that employers substitute nonsubsidized workers with subsidized workers. Evaluations in Europe indicate that deadweight and substitution effects can affect around 90 percent of the jobs (Martin 2000).

The degree of targeting, the extent to which the subsidies affect new hires, whether they are standalone or part of a comprehensive package, and the existence of effective monitoring and evaluation are crucial to the success of wage subsidies. In Tunisia, the various wage subsidies introduced in recent decades have helped youth land a first job and gain work experience. This might have helped mitigate the increase in the youth unemployment rate, which might have been higher without the wage subsidies for youth. Difficulties in defining and enforcing the targeting, the assignment of trainees to the relevant tasks within firms, and enforcing the conditionalities to retain trainees and workers after the end of the subsidy cast doubt on the efficacy of the wage subsidies. An evaluation of the Contract for Integration into Working Life Program, based on a graduate tracer study with a sample of 4,700 youth who had graduated in 2004 and were interviewed in 2005 and 2007, finds that the program reduced the joblessness rate of university graduates by 8 percentage points, assuming no deadweight or substitution effects, with an estimated unitary cost of about TD 18,000 (Broecke 2013). However, self-selection into the program, with subsidies allocated on a first-come first-served basis, and a lack of combination with other services, such as training, counselling, and job search assistance, raise questions about the efficacy of the program in the medium term (Broecke 2013). Going forward, it is critical that the program target graduates with the highest risk of unemployment, the eligibility criteria are accurately met, and adequate monitoring of conditionalities is implemented, together with ex post evaluations through the use of administrative data. Well-designed, monitored, and evaluated wage subsidies for private sector employment have the potential to support temporary employment among youth and allow youth to acquire work experience, thus playing the role of stepping stone to more permanent employment. This can also help contain the negative effects associated with deadweight losses and substitution effects and mitigate the fiscal cost of public sector recruitment.

In general, active labor market policies have modest positive effects that are smaller than those typically expected by beneficiaries and policy makers. Active labor market policies are an instrument governments have long adopted to intervene in the labor market with the goal of generating more and better employment opportunities for workers, often workers with little other opportunities. In addition to wage subsidies and public works that share the same objective, the policies typically operate on the labor supply side by increasing the employability of workers (training programs, including business training to foster self-employment), and on matching between labor demand and labor supply though job search and matching programs (job search assistance and matching). A review of recent evaluations of active labor market policies in developing countries finds that skill training, wage subsidies, and job search assistance programs have modest impacts in most cases (McKenzie 2017). By contrast, expectations of the impact of such programs among participants and policy makers are typically overoptimistic. While the small effects of most of the programs might be ascribable to the fact that labor markets ultimately function relatively well, particularly in urban areas, it is also possible that other constraints limit job creation (McKenzie 2017). If this is so, then nontraditional active labor market policies that address, for example, sectoral and spatial mismatches whereby workers are stuck in occupations or locations that do not meet demand may be more effective at tackling unemployment.

Encouraging technical and vocational education and training (TVET) may be a promising avenue for boosting youth employment in the long term. Because the creation of high-end jobs has been weak and the number of university graduates is well above the capacity of the economy, TVET could be a viable avenue to boost employment growth in Tunisia. The number of TVET graduates is considerably below the number of university graduates. In 2017, about 27,500 individuals graduated from TVET, and over twice as many (56,279) graduated from university, even though the enrollment numbers are quite similar (52,075 enrolled in public TVET institutes and 57,503

in universities).[44] According to the World Bank (2020a), TVET is perceived as an unattractive option given the low status of technical schools (collèges techniques) at the lower-secondary level and the lack of high-quality alternatives at the upper-secondary level (OECD 2015). At the same time, a study conducted by the National Observatory for Employment and Skills (ONEQ 2017) finds that, four years after their graduation, about 65 percent of TVET graduates were employed, though with a gender gap that favors men because only 20 percent of the employed men graduates were looking for a job compared with 41 percent of the women graduates. In addition, the study finds that TVET graduates in mechanic arts, construction, transport, electricity, and fish and aquaculture had a higher likelihood of getting a job.

[44] For TVET graduates, see ONEQ (2019); the information on university graduates is taken from data of the Ministry of Higher Education and Scientific Research.

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ANNEX CHAPTER 2

TABLE A 2.1. Tunisia Snapshot, Women, Business and the Law 2021

	Question	Answer	Legal Basis
Mobility	Can a woman choose where to live in the same way as a man?	Yes	No restrictions could be located
	Can a woman travel outside her home in the same way as a man?	Yes	No restrictions could be located
	Can a woman apply for passport in the same way as a man?	Yes	Loi No. 1975-40, Arts. 8 et 13; Passport application procedures
	Can a woman travel outside the country in the same way as a man?	Yes	No restrictions could be located
Workplace	Can a woman get a job in the same way as a man?	Yes	No restrictions could be located
	Does the law prohibit discrimination in employment based on gender?	Yes	Code du Travail, Art. 5 bis
	Is there legislation on sexual harassment in employment?	Yes	Loi organique No. 2017-58 du 11 août 2017, relative à l'élimination de la violence à l'égard des femmes, Art. 15(Art. 226 ter)
	Are there criminal penalties or civil remedies for sexual harassment in employment?	Yes	*Criminal:* Loi organique No. 2017-58 du 11 août 2017, relative à l'élimination de la violence à l'égard des femmes, Art. 15 (Art. 226 ter) *Civil:* No applicable provisions cold be located
Pay	Does the law mandate equal remuneration for work at equal value?	No	No applicable provisions could be located
	Can a woman work at night in the same way as a man?	No	Code du Travail, Arts. 66 et 68-2
	Can a woman work in a job deemed dangerous in the same way as a man?	Yes	No restrictions could be located
	Can a woman in an industrial job in the same way as a man?	No	Code du Travail, Art. 77, 375
Marriage	Is there no legal provision that requires a married woman to obey her husband?	Yes	No applicable provisions could be located
	Can a woman be head of household n the same way as a man?	No	Code du Statut Personnel, Art. 23
	Is there legislation specifically addressing domestic violence?	Yes	Loi organque No. 2017-58 du 11 août 2017, relative à l'élimination de la violence à l'égard des femmes
	Can a woman obtain a judgment of divorce in the same way as a man?	Yes	No restrictions could be located
	Does a woman have the same rights to remarry as a man?	No	Code du Statut Personnel, Arts. 34 and 35
Parenthood	Is paid leave of at least 14 weeks available to mothers?	No	Code du Travail, Art. 64
	Does the government pay 100% of maternity leave benefits?	Yes	Loi No. 196-3 du 14 décembre 196, Arts. 78, 82 et 88
	Is paid leave available to fathers?	Yes	Code du Travail, Art. 122
	Is there paid parental leave?	No	No applicable provisions could be located
	Is dismissal of pregnant workers prohibited?	No	No applicable provisions could be located

(continued)

TABLE A 2.1. Tunisia Snapshot, Women, Business and the Law 2021 *(continued)*

	Question	Answer	Legal Basis
Entrepren.	Does the law prohibit discrimination in access to credit based on gender?	No	No applicable provisions could be located
	Can a woman sign a contract in the same way as a man?	Yes	No restrictions could be located
	Can a woman register a business in the same way as a man?	Yes	No restrictions could be located
	Can a woman open a bank account in the same way as man?	Yes	No restrictions could be located
Assets	Do men and woman have equal ownership rights to immovable property?	Yes	Code du Statut Personnel, Arts. 23 et 24
	Do sons and daughters have equal rights to inherit assets from their parents?	No	Code du Statut Personnel, Arts. 92, 96, 98, 103 et 104
	Do female and male surviving spouses have equal rights to inherit assets?	No	Code du Statut Personnel, Arts. 101 et 102
	Does the law grant spouses equal administrative authority over assets during marriage?	Yes	Code du Statut Personnel, Arts. 23 et 24
	Does the law provide for the valuation of non-monetary contributions?	No	No applicable provisions could be located
Pension	Is the age at which men and women can retire with full pension benefits the same?	Yes	Women: Décret No. 74-499 du 27 Avril 1974, Art. 15 Men: Décret No. 74-499 du 27 Avril 1974, Art. 15
	Is the age at which men and women can retire with partial pension benefits the same?	Yes	Women: No applicable provisions could be located Man: No applicable provisions could be located
	Is the mandatory retirement age for men and women the same?	Yes	Women: No applicable provisions could be located Man: No applicable provisions could be located
	Are periods of absence due to child care accounted for in pension benefits?	Yes	Décret No. 74-499 du 27 Avril 1974, Art. 2(c)

Source: World Bank (2021b).

TABLE A 2.2. Childcare Centers and Preprimary Schools (Public and Private), by Governorate

Region	Governorate	Kindergarten (3–5 years old)	Preprimary school (3–5 years old)	Nursery (starting 3 months)	*Kouttab* (3–6 years old)
Greater Tunis	Tunis	485	422	69	186
	Ariana	299	NA	29	58
	Ben Arous	372	NA	35	113
	Manouba	181	157	6	87
Total		**1337**	**579**	**139**	**444**
North-East	Nabeul	409	NA	18	118
	Zaghouan	101	NA	NA	40
	Bizerte	261	NA	15	48
Total		**771**	**0**	**33**	**206**
North-West	Béja	101	NA	24	30
	Jendouba	99	NA	NA	20
	El Kef	97	6	6	34
	Seliana	81	16	NA	40
Total		**378**	**22**	**30**	**124**
Center-East	Sousse	352	229	45	96
	Monastir	381	163	25	106
	Mahdia	147	26	3	86
	Sfax	442	279	32	96
Total		**1322**	**697**	**105**	**384**
Center-West	Kairouan	177	37	NA	68
	Kasserine	139	NA	3	47
	Sidi Bouzid	163	NA	5	36
Total		**479**	**37**	**8**	**151**
South-East	Gabes	212	124	14	45
	Mednine	293	169	13	119
	Tataouine	22	13	NA	46
Total		**527**	**306**	**27**	**210**
South-West	Gafsa	187	NA	8	44
	Tozeur	110	NA	5	24
	Kebili	144	NA	5	25
Total		**441**	**0**	**18**	**93**
Grand Total		**5255**	**1641**	**360**	**1612**

Source: Based on data from the Ministry of Ministry of Women, Family, Children, and Elderly and the Ministry of religious Affairs.

TABLE A 2.3. Monthly and Registration Fees and Opening Days/Hours of Surveyed Private Day-Care Centers, by Governorate, April 2021

Region	Location	Monthly fee + registration fee	Opening days/hours
Greater Tunis	TUNIS	TD 230/month + TD 180	Monday to Friday 7:00AM–6:00PM & Saturday 7AM–1PM
	TUNIS	TD 350/month + TD 350	Monday to Friday 7:30AM–6:30PM & Saturday 7AM–1PM
	TUNIS	TD 210/month + TD 270	Monday to Friday 7:00AM–6:00PM & Saturday 7AM–1PM
North-East	BIZERTE	TD 130/month +TD 100	Monday to Friday 6:30AM–4:30PM & Saturday 8AM–1PM
	NABEUL	TD 180/month+TD 300	Monday to Friday 7AM–6PM
	ZAGHOUAN	TD 320/month + TD 200	Monday to Friday 7AM–7PM
North-West	JENDOUBA	TD 80/month + TD 150	Monday to Friday 7AM–5PM
	SILIANA	TD 80/month + TD 80	Monday to Friday 8AM–5PM
	KEF	TD 140/month + TD 80	Monday to Friday 7:30 AM–6:30PM
	BEJA	TD 100/month + TD 50	Monday to Friday 7AM–6PM
Center-East	SOUSSE	TD 170/month + TD 100	Monday to Friday 7AM–6PM
	MONASTIR	TD 200/month + TD 120	Monday to Friday 7AM–6PM & Saturday 7AM–1PM
	MAHDIA	TD 90/month + TD 40	Monday to Friday 8AM–5PM & Saturday 8AM–1PM
	SFAX	TD 200/month + TD 450	Monday to Friday 7AM–6PM & Saturday 7AM–2PM
Center-West	KAIROUAN	TD 40/month	Monday to Friday 7AM–5PM & Saturday 7AM–1PM
	KASSERINE	TD 80/month + TD 60	Monday to Friday 8AM–6PM
	SIDI BOUZID	TD 120/month + TD 100	Monday to Friday 7AM–5PM & Saturday 7AM–1PM
South-East	MEDININE	TD 70/month + TD 100	Monday to Friday 8AM–5PM
	GABES	TD 110/month + TD 210	Monday to Friday 7AM–6PM & Saturday 7AM–1PM
	TATAOUINE	NA	NA
South-West	KEBILI	NA	NA
	GAFSA	TD 40/month + TD 30	Monday to Friday 7AM–5PM
	TOZEUR	TD 90/month	Monday to Friday 7AM–5:30PM

Source: Based on data collected through phone interviews to one random day-care centers in each governorate.

TABLE A 2.4. Main Active Labor Market Policies for Youth

Program name	Responsible agency	Program description	Target population
Contrat d'initiation à la vie professionnelle (contract for integration into working life. (Named until 2019 Stage d'initiation à la vie professionnelle)	Agence Nationale pour l'Emploi et le Travail Indépendant (ANETI) - National Agency for Employment and Self-Employment	The contract for integration into working life aims to meet the needs of private sector companies and to help job-seekers acquire professional skills in order to facilitate their integration into working life. The duration of the contract is 12 months. However, ANETI may extend the duration of the contract for an additional maximum period of 12 months. ANETI pays: • a monthly allowance of TD 200 for holders of a higher education diploma or a BTS, • a monthly allowance of TD 150 for other diplomas, • an additional monthly grant of TD 50 in case of disabled persons, • social coverage of trainees, • employer's contribution to social security. In addition, the host company is exempted from the payment of social security contributions and must grant the beneficiary a monthly allowance of: • TD 200 for the holder of a higher education diploma or a BTS • TD 150 for the other levels. The company can only take on new trainees under this contract if it has previously recruited at least 50% of all the trainees who have completed their work experience during the last three years preceding the year in which the new application is submitted. If the company does not achieve the above-mentioned rate, it can only take on new trainees after at least one year has elapsed since the end of the last contract.	First-time job-seekers with a university degree or BTS (Brevet technicien supérieur) OR Job-seekers with disabilities with a university degree or BTS (Brevet technicien supérieur) OR Young people with a minimum of 7 years of basic education (second year of secondary school)
Contrat d'insertion des diplômés de l'enseignement supérieur (CIDES) - Insertion contract for higher education graduates		The purpose of the Contrat d'Insertion des Diplômés de l'Enseignement Supérieur (Contract for the Integration of Higher Graduates) is to allow the beneficiary to acquire professional qualifications by alternating between a private company and a public or private training structure, in accordance with the requirements of a job position. ANETI covers the cost of: • the training of trainees up to a of 400 hours • a monthly allowance of TD 150 served to the trainee + an additional allowance of TD 50 to the trainee who resides outside the governorate of the company • social security coverage of the trainee • a recruitment bonus fixed at TD 1,000 to the company after one year of work • employer's contribution to social security in case of recruitment of the trainee for the first 7 years (at a declining rate) The company commits to • pay the trainee an additional monthly allowance of TD 150 • hire the trainee who has completed the internship contract	Job-seekers with a university degree who have been unemployed for over three years from the date of graduation.

(continued)

TABLE A 2.4. Main Active Labor Market Policies for Youth *(continued)*

Program name	Responsible agency	Program description	Target population
Contrat d'adaptation et d'insertion professionnelle (CAIP)	ANETI	The objective is to allow the beneficiary to acquire professional qualifications in line with the requirements of a job offer presented by a private company and which has not been fulfilled due to the unavailability of manpower. ANETI covers: • a monthly allowance of TD 100 to the trainee, • social coverage of the trainee, • the cost of the training within a limit of 400 hours. The company: • pays the trainee a monthly allowance of TD 50, • recruit the beneficiary who has completed the training contract.	Job-seekers without a university degree
Service civil volontaire (SCV)	ANETI	The Civil Service Contract aims to enable graduates of higher education, who are first-time job-seekers, to carry out an activity within associations and professional organizations to develop their skills and competences and to acquire practical abilities. The duration of the contract is 12 months. The association can exceptionally extend the duration of the contract for an additional maximum period of 12 months. ANETI covers: • a monthly allowance of TD 200, • an additional monthly grant of TD 50 in case of disabled persons, • social coverage of the trainees, • cost of the training within the limit of 400 hours, • employer's contribution to social security.	First-time job-seekers who hold a University degree or an equivalent diploma and who have been unemployed over 12 months from the date of the diploma.
Programme d'accompagnement des promoteurs des petites entreprises (PAPPE)	ANETI and Banque tunisienne de solidarité	This program allows the promoter to identify a project idea, to develop the project study and related business plan and to ensure the necessary support to the entrepreneur to succeed in the project. ANETI covers: • a scholarship up to TD 200 for internship in a company (for a period of 3 months, renewable once), • the cost of adaptation sessions of up to 200 hours, • the cost of management sessions up to a maximum of 120 hours, • the costs of technical adaptation sessions up to a maximum of 400 hours, • the costs of technical assistance up to a maximum of 12 days.	Any entrepreneur

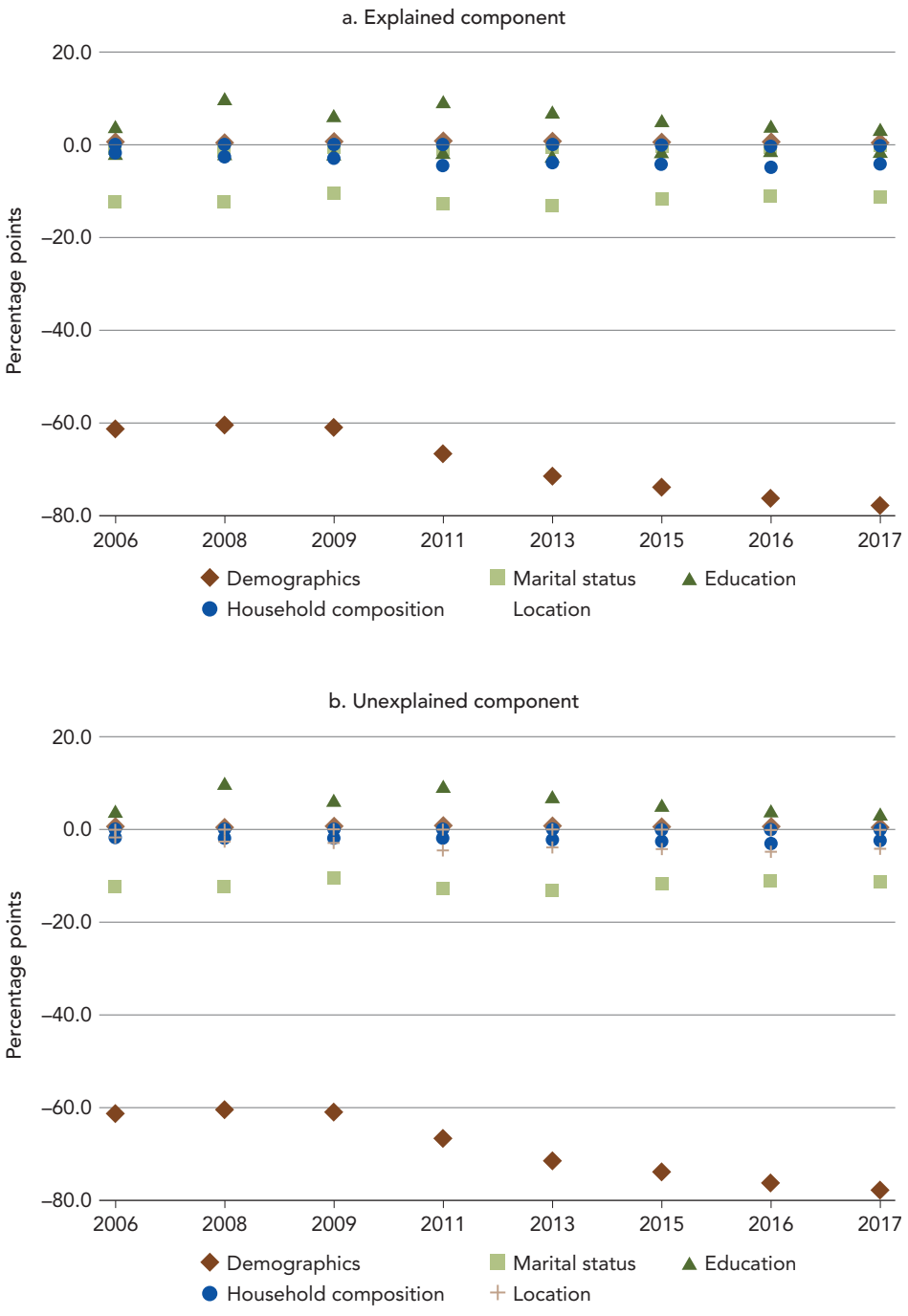
(continued)

TABLE A 2.4. Main Active Labor Market Policies for Youth *(continued)*

Program name	Responsible agency	Program description	Target population
Le programme « contrat-dignité », KARAMA	ANETI	The KARAMA program aims to encourage private sector companies to recruit first-time job-seekers with higher education degrees and to improve the supervision. The job-seeker benefit from a minimum monthly salary of TD 600 paid by the company for maximum 24 months. The company benefits from: • financial support by the national fund of employment, for two years from the date of recruitment, in the amount of 50% of the net salary and within the limit of TD 400 per month. • financial support by the national fund of employment, for two years from the date of recruitment, of the employer's share of contributions to social security.	First-time job-seekers with a university degree or technician diploma (BTS – Brevet technicien supérieur) OR Job-seekers with disabilities with a university degree or BTS (Brevet technicien supérieur)
Programme d'action d'adaptation pour l'amélioration de l'employabilité - Employability Adjustment Action Program	ANETI	This program consists in organizing training sessions to the benefit of job-seekers in order to improve their employability and facilitate their integration in companies where work requires additional training or adaptation. • To the beneficiary: ANETI pays during the training period a monthly allowance of: • TD 200 for graduates of higher education or equivalent diplomas or holders of a technician diploma (BTS), • TD 150 for all other levels, • TD 50 in case of disabled persons, • social security contributions. • To the company: ANETI pays for: • the cost of training or additional adaptation for a maximum of 6 months and up to 600 hours per beneficiary, • the cost of soft-skills training up to 60 hours per beneficiary, • the cost of language certification for each beneficiary up to TD 400, • the cost of certification in the field of ICT or other technical specializations capped at TD 1,000.	Job-seekers with a minimum of 7 years of basic education (second year of secondary school)

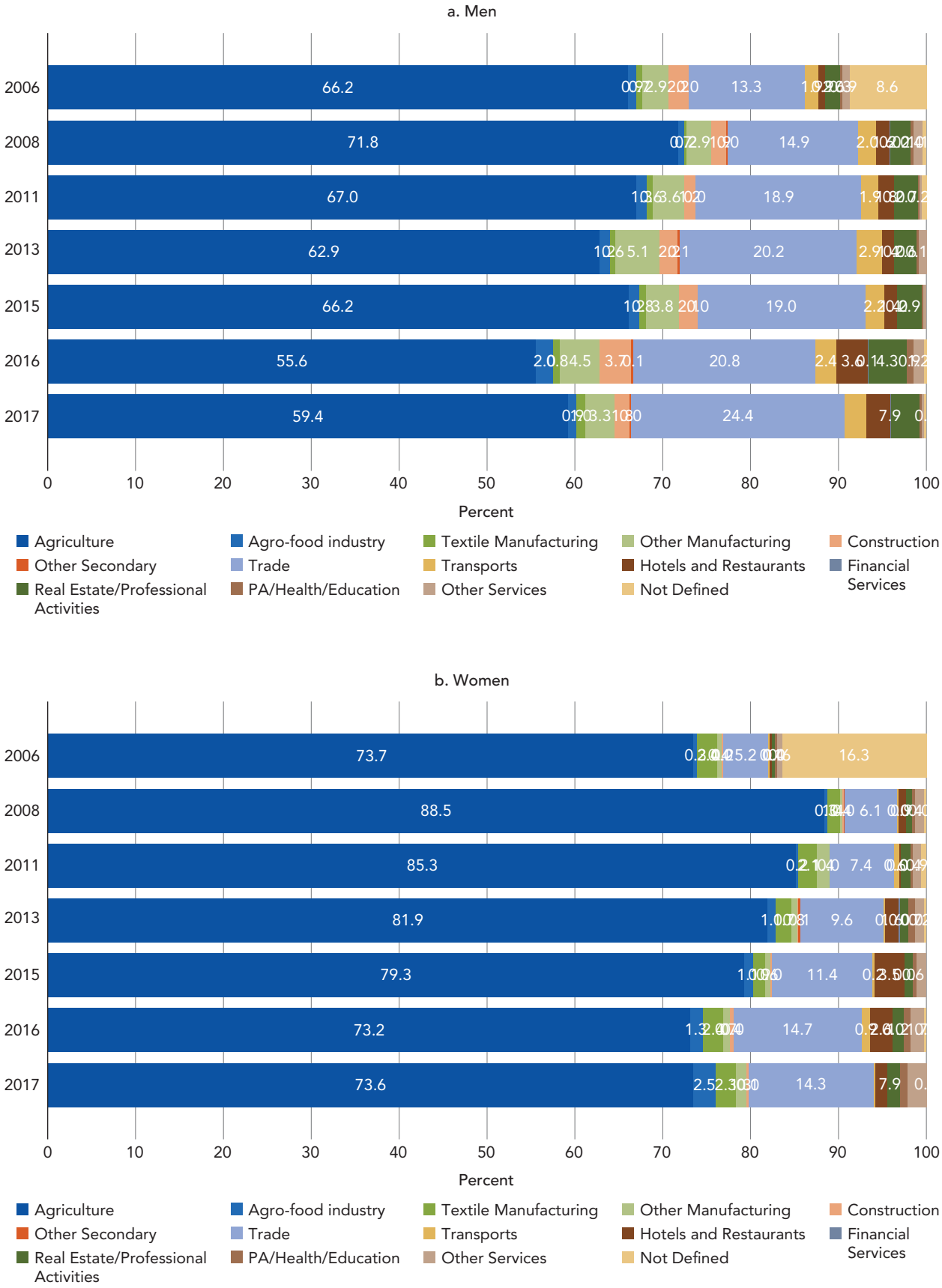
Note: A first-time job-seeker is defined as (a) an individual who has not been in employment for a continuous period of over 24 months after obtaining the last diploma; (b) an individual who has not been in employment for over 36 months in a discontinuous way after obtaining the last diploma.

FIGURE A 2.1. Detailed Oaxaca-Blinder Decomposition of the Gender Gap in Labor Force Participation, by Year, 2006–17



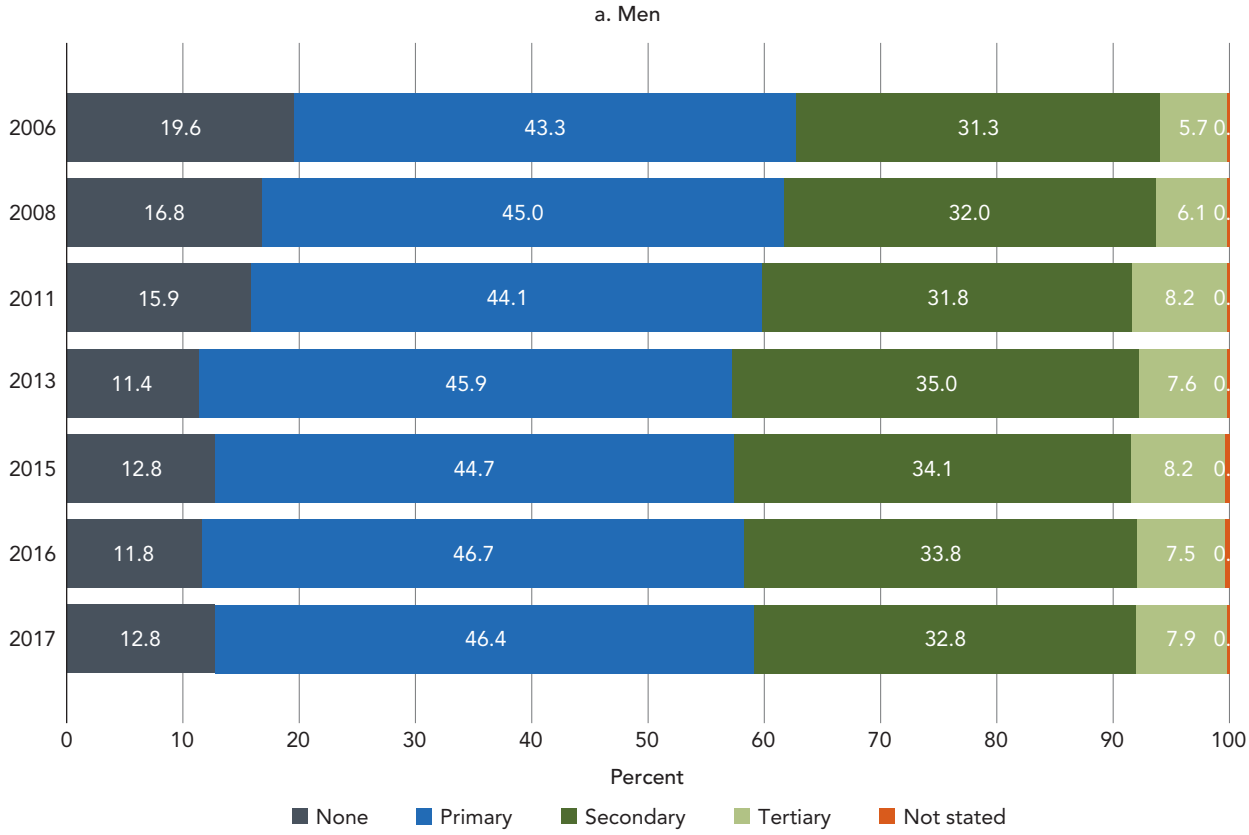
Source: Based on data from the Labor Force Survey (ENPE), INS.

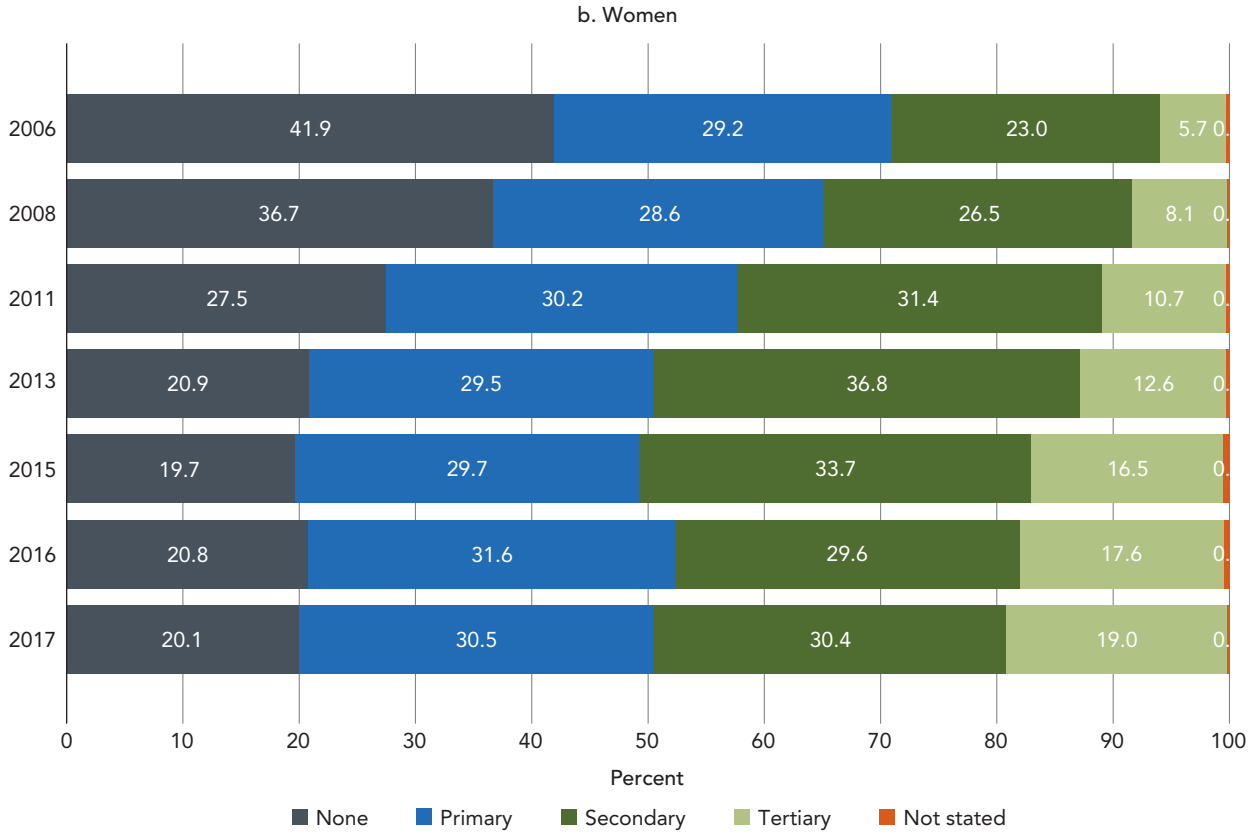
FIGURE A 2.2. Sectoral Distribution of Unpaid Family Workers, by Sex, 2006–17



Source: Based on data from the Labor Force Survey (ENPE), INS.

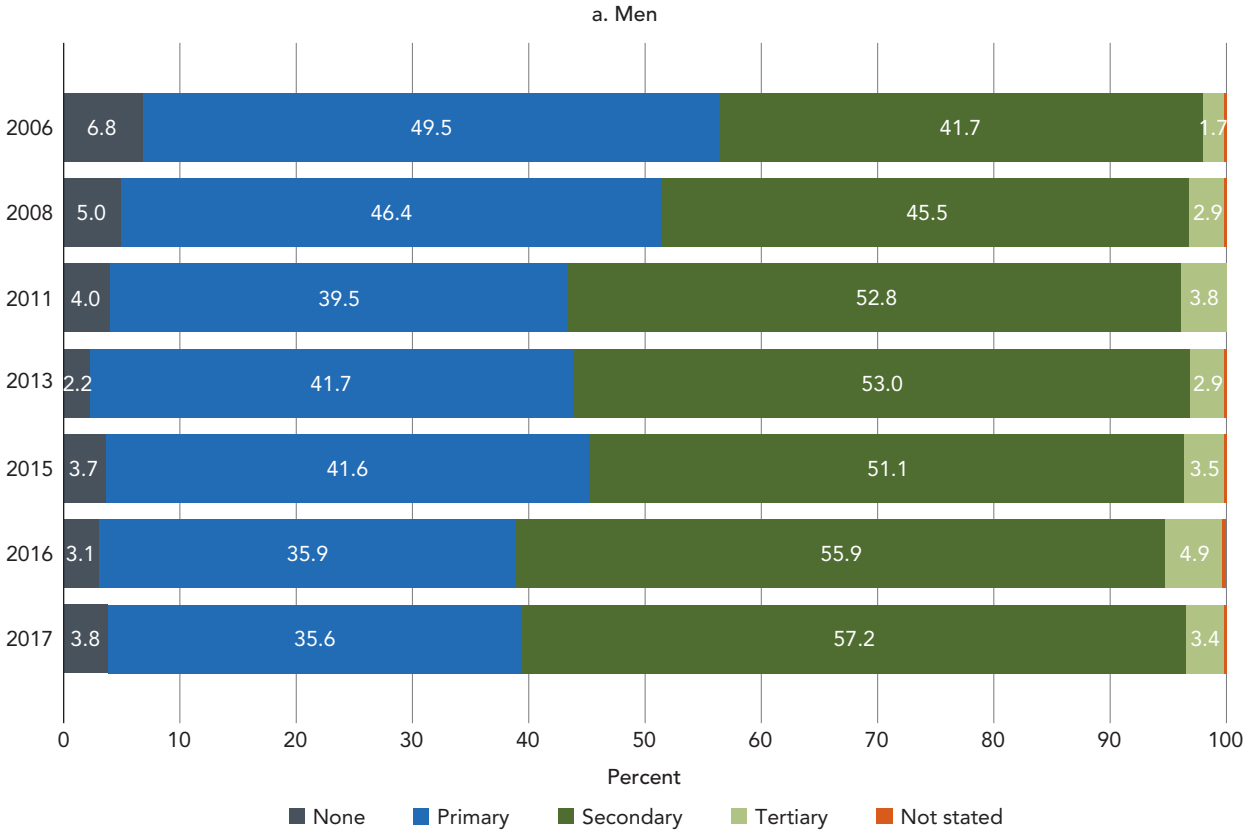
FIGURE A 2.3. Educational Level Distribution of Employers and Own-Account Workers, by Sex, 2006–17

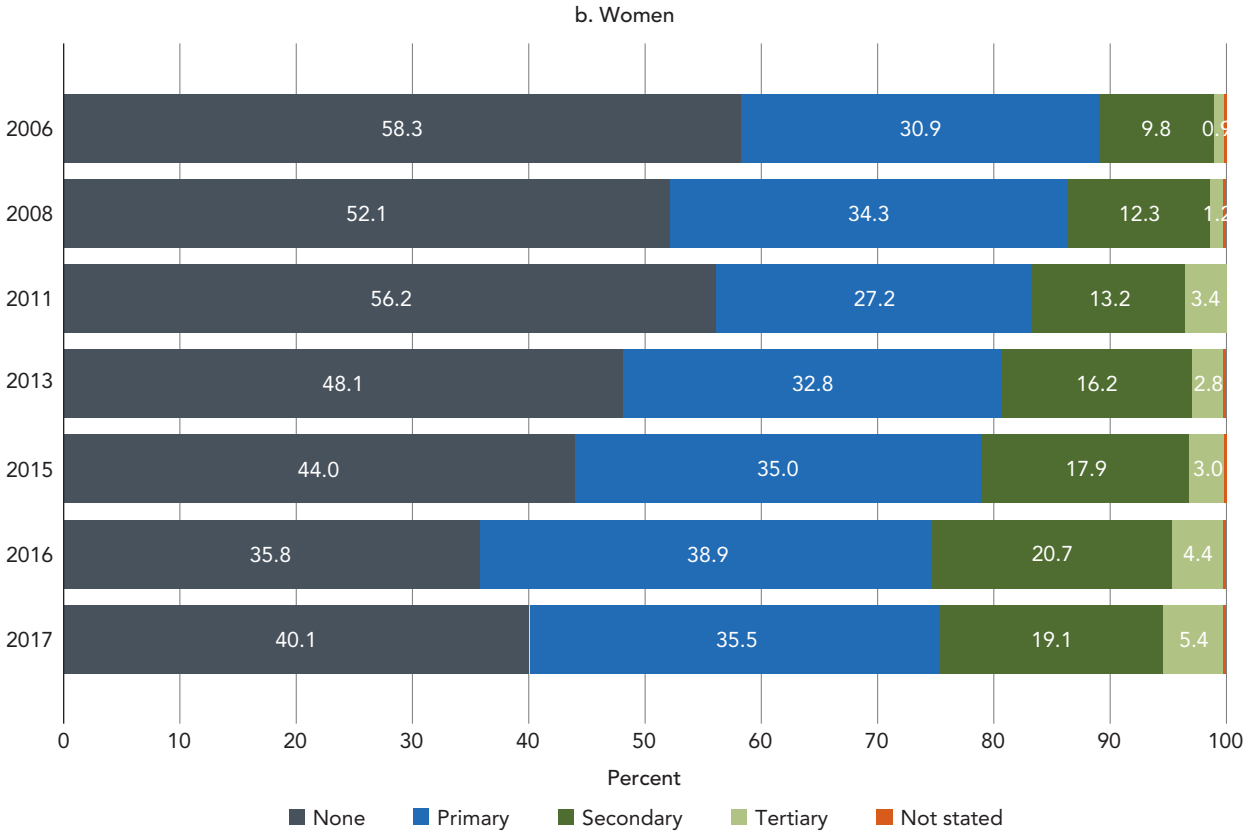




Source: Based on data from the Labor Force Survey (ENPE), INS.

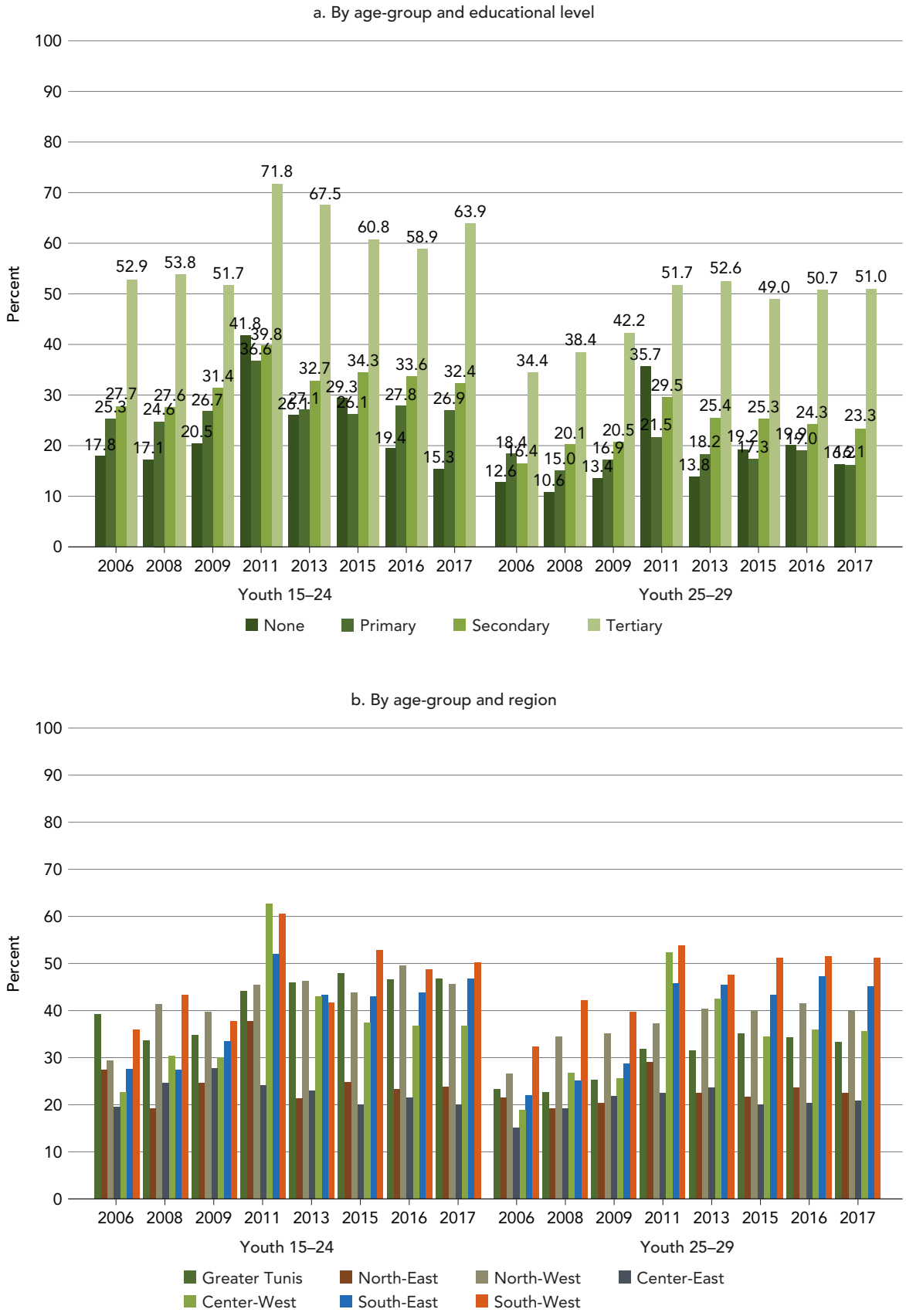
FIGURE A 2.4. Educational Level Distribution of Unpaid Family Workers, by Sex, 2006–17





Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE A 2.5. Unemployment Rates Among Youth, by Year, Age-Group, Educational Level, and Region, 2006–17



Source: Based on data from the Labor Force Survey (ENPE), INS.

CHAPTER

3

Employment and Wage Outcomes

HIGHLIGHTS

- An important divide exists between public sector workers and formal and informal workers in the private sector.
- Over 1.5 million workers are employed informally, and the informality rate is estimated at about 44 percent.
- The profiles of public, formal, and informal workers point to significant selection into the three segments; vulnerable workers are more exposed to informality.
- In addition to a number of benefits, the public sector pays, on average, twice the hourly wage paid by the private sector, and a sizable part of the gap derives from differences in observable characteristics.
- Informal workers are paid on average about 16 percent less per hour worked than their formal counterparts, and the gap is largely ascribable to differences in observable characteristics.
- More than 50 percent of university graduates not employed in public administration are either unemployed or inactive. Most of the inactive are young married women in affluent households, whereas the majority of the unemployed are young men living with their parents.
- The nonmonetary benefits and job security provided by public sector jobs may contribute to the high rates of nonemployment (unemployment and inactivity) observed among university graduates.
- Assigned gender roles are strengthened by a sizable gender wage gap in the private sector. Women are paid, on average, $0.82 for every $1.00 paid to men per hour worked, and most of the wage gap arises because of a different wage structure or to unobserved characteristics that would, on average, make men more productive than women.
- In the public sector, by contrast, women make, on average, about one-third more than men per hour worked, and a large part of the wage premium is ascribable to more productive characteristics of women.
- Returns to education are sizable: tertiary education yields a premium of about 26 percent per hour worked relative to secondary education among wage workers.
- Returns to tertiary education in the private sector have started to decline because the demand for well-educated workers has been sluggish. By contrast, returns to tertiary education are considerably higher and on the rise in the public sector.

Chapter 2 offers an overview of trends in demographics and shows that Tunisia's demographic window is narrow, but still open, and that the quality of learning still lags comparator countries despite significant progress in school enrollments. The chapter describes recent trends in labor market indicators and highlights the underutilization of human capital; only 50 percent of Tunisians of working age are participating in the labor market. It focuses on two groups that face particular difficulties in accessing the labor market, namely, women and youth. It documents the modest improvements over the past decade, which are mainly ascribable to young cohorts of women and progress in educational attainment among the working-age population. Weak labor demand, traditional behaviors, and the limited availability of childcare are among the barriers to the greater engagement of women in the labor market. About 4 youth ages 15–29 in 10 are NEET, and 1 youth in 3 is unemployed. While inactivity rates are higher among young men and women with little education and seems to be ascribable to exclusion, unemployment rates are high among university graduates and seem to be largely ascribable to sluggish job creation.

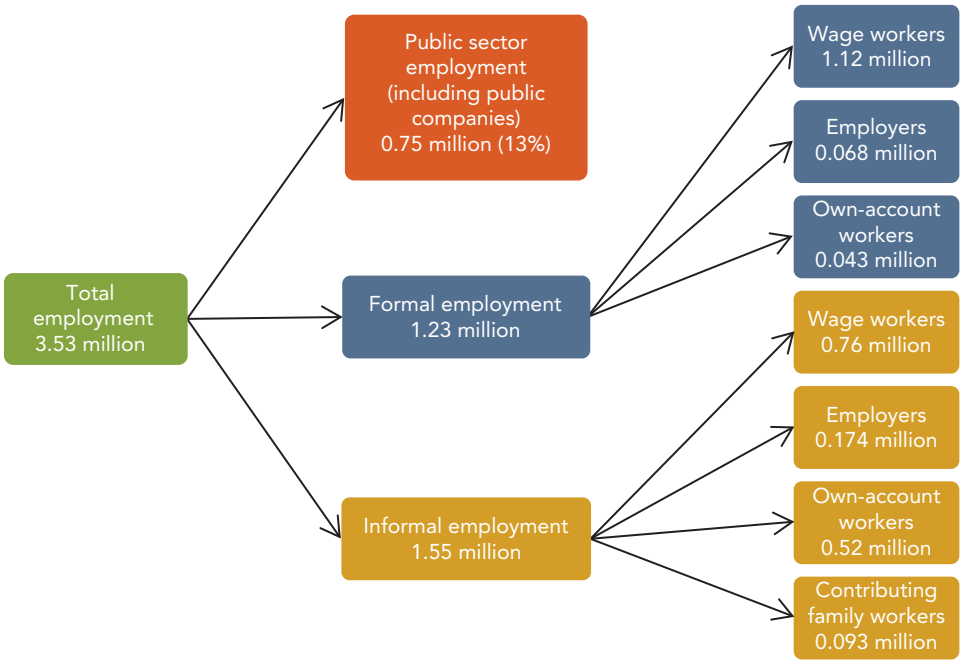
This chapter shifts the focus to one of the most relevant dimensions that characterizes the Tunisian labor market, namely, the distinction among public sector, formal, and informal employment. The chapter (1) investigates how individual characteristics are correlated with the probability of different types of employment, (2) provides an overview of recent trends in wages and of conditional wage gaps along a number of dimensions (men/women, public/private, formal/informal employment), and (3) illustrates how wage workers with different characteristics, in particular different educational endowments, benefit from the labor market.

Public Sector, Formal, and Informal Employment

About 21 percent of the employed population work in public administration or in a public company. In 2019, about 750,000 workers were employed in public administration or in state-owned enterprises (SOEs) according to labor force survey data (Figure 3.1). In 2019, over 650,000 people were employed in public administration, and about 95,000 in SOEs. This represented about 21 percent of total employment.

Public sector hiring increased in the aftermath of the 2011 revolution and, together with wage increases, absorbs a large share of tax revenues. To address the challenge of insecurity and social demands that followed the 2011 revolution, public sector hiring rose considerably with the 2012 law promoting access to public administration among people injured during the revolution and covered by the amnesty

FIGURE 3.1. The Composition of Employment, 2019



Source: Based on data from the Labor Force Survey (ENPE), INS.

of 2011 (Brockmeyer, Khatrouch, and Raballand 2015; INS 2017; OECD 2018) (Box 3.1). In 2012, the number of civil servants increased by over 88,000 (almost 20 percent) compared with 2011, and, between 2011 and 2017, the number of civil servants rose by almost 200,000 (45 percent over the entire period and an average of 1.9 percent per year) (INS 2017, 2019). The expansion in the number of civil servants, together with wage increases, led to growth in the wage bill from about 11.9 percent of gross domestic product (GDP) in 2011 to 14.6 percent in 2019 and an estimated

BOX 3.1. Civil Service: Hiring and Compensation Mechanisms

The public sector in Tunisia comprises central and regional administrations, local authorities, and state-owned enterprises (SOEs). Public sector employees are governed by one of seven employment regimes: the general regime for public employees in central and local state institutions of administrative nature (**le Statut Général de la Fonction Publique**) and six distinct regimes for the judiciary, members of the administrative court, members of the court of auditors, internal security forces, the military, and customs agents (Brockmeyer, Khatrouch, and Raballand 2015). In addition, a separate regime governs employment in SOEs.

The general civil service includes public employees in central and local state institutions of an administrative nature. It covers most civil service employees. Civil servants are divided into officials (**fonctionnaires**), workers (**ouvriers**), and temporary staff (**personnel temporaire**).

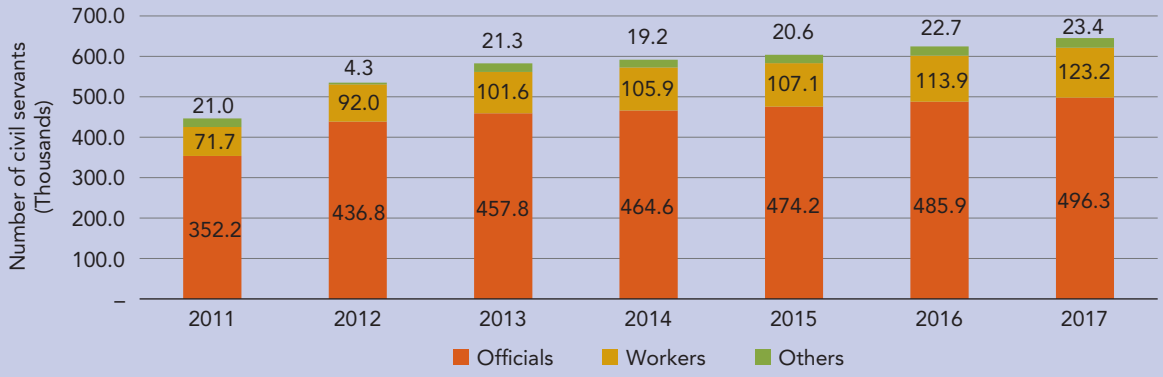
Hiring Procedures

The seven regimes are divided into approximately 130 professional groups or corps (for example, teachers, financial inspectors, engineers, and so on). Within each group, employees are classified according to level of education and are recruited under one of four categories, A, B, C, or D. Category A is the highest and includes three subcategories (A1, A2, A3). Category A requires at least some university (category A1, a master's degree; category A2, a bachelor's degree; and category A3, two years of university). Category B requires a high school diploma. Category C requires some high school (four years after elementary school). Category D requires elementary school. Workers (**ouvriers**) are classified into units ranging from 1 to 3 according to their level of education. The system is career based. An employee is recruited at a specific grade that corresponds to the worker's education. The worker receives seniority-based pay increases, and is tenured within a short time (Boutar 2018).

Officials are recruited through competitive recruitment procedures (**concours**) that are based on tests or on background (application-based selection).[a] The details of each procedure are determined by specific statute and eligibility criteria and typically include the exact degree required rather than the minimum education degree. About half the positions in categories A, B, and C are filled through external recruitment, and the other half is filled through internal promotions. The number of positions is negotiated between each ministry and the Ministry of Finance based on the annually allocated budget.[b] Workers (**ouvriers**) are recruited using a simplified version of the recruitment system for officials. Workers are hired to permanent positions through tests or professional examinations. Temporary workers are recruited by direct appointment on a revocable basis for a determined period either to fill a vacancy caused by a lack of permanent staff or to replace a staff member. Contract workers are recruited by contract for specific projects for a limited period.

The 2011 general amnesty and several exceptional provisions in 2012 were approved to allow for direct recruitment, in addition to the regularization of contract and temporary workers in 2012 and 2013 (Brockmeyer, Khatrouch, and Raballand 2015). The provisions led to a sizable increase in recruitment, which more than doubled between 2010 and 2011 and remained at a high level until 2013 (**Figure B 3.1.1**).

FIGURE B 3.1.1. Trends in the Number of Civil Servants, by Category, 2011–17



Source: Based on data from INS 2017, 2019.

(continued)

BOX 3.1. Civil Service: Hiring and Compensation Mechanisms *(continued)*

Promotions

There are three ways civil servants may obtain a promotion (Boutar 2018). The first consists of the successful completion of a continuous training cycle. The second is an internal competitive recruitment procedure (**concours interne**); only employees with five years of seniority in their current grade are eligible for this type of promotion. The third relies a point-based system and is used for 10 percent of civil servants with a minimum of 10 years of seniority in their current grade; it is a last resort option for promotion and is offered once in an employee's career.

Evaluation

Civil servants are evaluated using a double rating system that comprises an annual professional rating and a quarterly performance rating linked to a bonus paid, in addition to the salary (Brockmeyer, Khatrouch, and Raballand 2015). The professional rating is the sum of 5 grades out of 20 for the following criteria: work quality, work quantity, interpersonal relationships and conduct, attendance, and perseverance. The employee's immediate supervisor is responsible for making the assessment. The professional rating is typically not transparent or objective because no goals or objectives exist on which the rating might be based, and no benchmarks for evaluating the quantity and quality of work are set. In addition, the majority of civil servants receive ratings between 95 and 100, thus making the distinction between high and low performers impossible. Similarly, under the performance bonus rating, most employees receive the highest possible grade unless they have been absent, arrive late to work, or take sick leave. The performance bonus is considered an additional fixed compensation because supervisors do not want to risk queries, grievances, and internal conflicts by differentiating grades. The compensation policy has therefore been revised to include a two-thirds share of the performance bonus as a fixed part of the monthly salaries of a number of professional groups.

Supervisors also have the possibility to sanction nonperforming employees. First-degree sanctions include blaming and reprimanding. Second-degree sanctions, which must be handed down by a disciplinary committee, include a one-year delay in advancement, temporary suspension, transfer with change of residence, or dismissal. Brockmeyer, Khatrouch, and Raballand (2015) show that, besides warning and rebuke, second-degree sanctions are rare.

Compensation and Benefits

The compensation of civil servants includes a base salary and a number of allowances, comprising common allowances, corps-specific allowances, and special allowances, in addition to a quarterly performance bonus. Employees with managerial positions receive managerial allowances. The performance bonus is a small fraction of the total compensation and is affected only by attendance and not by the quality of work. Each corps has a salary grid, consisting of two types of base salary increases: a seniority-based increase and a promotion-based increase. The seniority-based increase is automatic, and the increase rate and frequency are determined by statute. In general, there is an increase every year for the first four years and every two years thereafter. Specific allowances by professional group are large and make staff reassignment across professional groups or ministries complicated because this might imply a sizable monetary loss for the employee. A promotion comes with a promotion-based increase, but resets the seniority-based level to the first level.

Civil servants are entitled to a wide range of annual leave options, including administrative leave, leave for health reasons, training leave, unpaid leave, and leave to create a business. In addition, women benefit from two-month maternity leave at full pay and can be granted a postnatal leave at half-pay for up to four months. Women with a dependent children ages under 16 can request a special part-time work regime at two-thirds of full-time wage. The duration of the regime is set at three years as long as the conditions are met and may be renewable twice during the administrative career of the agent and under the same conditions. Civil servants benefiting from the special part-time work regime retain full rights for advancement, promotion, leave, and social security. Civil servants also benefit from flexible working hours, up to a half-hour before or after the scheduled entry time, and employees with one or more dependent children ages under 16 benefit from the flexibility of up to an hour and a half, subject to compensation on the same day.

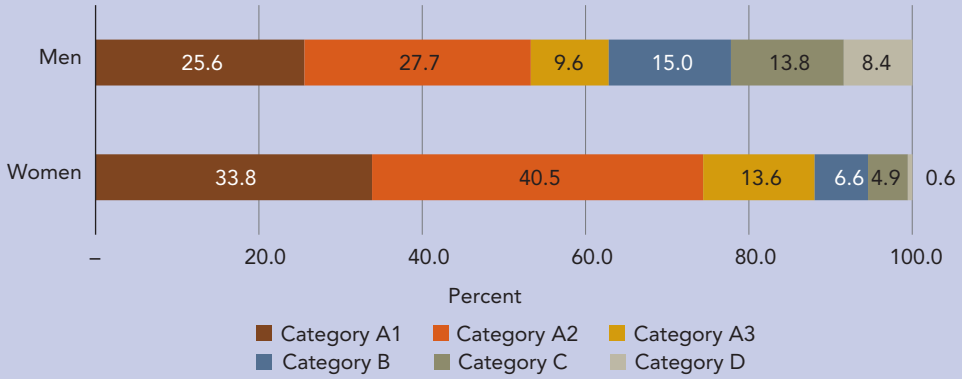
Data from the 2019 labor force survey confirm that public sector workers enjoy nonmonetary benefits that are not available to most workers in the private sector. Almost 88 percent of public sector workers had open-ended contracts, compared with 61 percent of formal wage workers and 22 percent of informal workers. Almost 1 in 2 (45.6 percent) of the latter did not have any contracts. Similarly, virtually all workers in the public sector had regular permanent jobs in 2019 compared with about 87.0 percent of formal wage workers and 55.0 percent of informal wage workers. Among the latter, about 4 workers in 10 had temporary or casual jobs, and about 5 percent had seasonal jobs.

(continued)

BOX 3.1. Civil Service: Hiring and Compensation Mechanisms *(continued)*

Compared with the private sector, the civil service is a more favorable employer for women. In 2017, the share of women in the private sector was about 24 percent compared with 36 percent in the civil service. Although the overall share of women in the civil service declined by about 3.5 percentage points between 2011 and 2017, their share in the top three categories (A1, A2, and A3) remained constant or increased (at about 50 percent) in 2017. Within the group of officials, women were largely employed in the top two categories (A1 and A2) in 2017; almost 75 percent of women were in category A1 and A2, compared with about 53 percent of men (**Figure B 3.1.2**).

FIGURE B 3.1.2. Distribution of Civil Servants, by Sex and Category, 2017



Source: Based on data of INS 2019.

Source: The box draws on Boutar 2018; Brockmeyer, Khatrouch, and Raballand 2015; UN Women 2017.
a. The selection procedure applies to positions in categories A, B, and C, whereas recruitment for category D positions takes place only externally.
b. Direct recruitment is allowed only among students from approved schools, such as l'Ecole National d'Administration.

17.6 percent in 2020. According to the International Monetary Fund (IMF 2021), most of the enlargement in the wage bill is ascribable to salary increases, including wage boosts in 2016–18, an additional wage increase agreed in 2019 and delivered in three tranches in 2019–20 for a total of 1.5 percent of GDP, and an additional jump equivalent to 0.3 percent of GDP agreed in 2020. This bloated wage bill crowds out other public expenditures. In 2020, it consumed about 75 percent of tax revenues, and it was almost three times the size of public investment and almost six times the amount of public spending on social programs (IMF 2021).

About 44 percent of the employed are in informal jobs. In 2019, almost 2.8 million workers were employed in the private sector, and, among these, about 1.6 million were informal workers (see Figure 3.1). In 2019, the informality rate was estimated at 43.9 percent overall and 55.7 percent among private sector workers. At 87.7 percent, the rate is considerably higher among nonwage workers relative to wage workers (29.0 percent). In 2019, 1 informal worker in 2 was a wage worker (49 percent), followed by own-account workers (33 percent), employers (11 percent), and unpaid family workers (6 percent) (see Figure 3.1).

Vulnerable groups are more highly exposed to informality and less likely to be employed in the public sector or formal private sector jobs. To clarify whether formal and informal workers, both wage workers and nonwage workers, differ in observable characteristics, a profile of the employed population along demographic, household-level, geographical, and job-related characteristics is provided as of 2019 (Table 3.1). Separate profiles are presented for the public sector, formal and informal wage workers, and formal and informal nonwage workers, including employers, own-account workers, and unpaid family workers.

- **Sex.** Relative to the overall distribution of the employed population by sex (26.4 percent women), a larger share of women are employed as public sector (32.4 percent) and private sector formal (33.6 percent) workers. This compares with 23.0 percent among informal wage workers and even lower shares among formal and informal nonwage workers (17.7 percent and 15.7 percent, respectively). Among nonwage workers, the gender gap

TABLE 3.1. Distribution of Public Sector, Formal and Informal Workers by Individual and Household Characteristics, 2019

Indicator	Public wage workers	Formal wage workers	Informal wage workers	Formal nonwage workers	Informal nonwage workers
Sex					
Women	32.4	33.6	23.0	17.7	15.7
Men	67.6	66.4	77.0	82.3	84.3
	100.0	100.0	100.0	100.0	100.0
Age-group					
15–24	3.1	10.0	21.1	2.4	8.3
25–34	21.0	28.8	29.2	17.1	17.7
35–44	34.1	31.3	24.6	33.5	25.9
45–54	29.0	20.1	15.2	24.3	23.6
55–64	12.1	8.7	8.5	16.8	17.7
65+	0.8	1.1	1.5	5.9	6.8
	100.0	100.0	100.0	100.0	100.0
Relation to head					
Head	56.3	51.7	43.8	72.0	65.7
Spouse	24.0	17.8	8.1	11.9	9.4
Children	18.1	26.9	44.2	14.8	23.3
Grandchildren	0.1	0.3	0.5	0.1	0.2
Daughter-/son-in-law	0.3	0.5	0.3	0.2	0.3
Parents/parents-in-law	0.1	0.0	0.0	0.0	0.1
Other relatives	0.8	1.6	2.0	0.7	1.0
Other nonrelatives	0.2	1.2	1.1	0.2	0.2
	100.0	100.0	100.0	100.0	100.0
Marital status					
Single	20.6	31.3	48.7	18.1	25.3
Married	76.5	66.5	48.8	79.2	71.5
Widowed	1.2	0.9	1.2	1.4	1.8
Divorced	1.8	1.4	1.3	1.3	1.4
	100.0	100.0	100.0	100.0	100.0
Educational level					
No education	4.6	5.6	11.5	3.4	14.3
Primary	15.6	34.3	43.0	29.1	45.5
Secondary	34.4	38.5	38.5	36.8	33.7
Tertiary	45.4	21.6	7.0	30.7	6.5
Not stated	0.1	0.1	0.0	0.1	0.1
	100.0	100.0	100.0	100.0	100.0

(continued)

TABLE 3.1. Distribution of Public Sector, Formal and Informal Workers by Individual and Household Characteristics, 2019 *(continued)*

Indicator	Public wage workers	Formal wage workers	Informal wage workers	Formal nonwage workers	Informal nonwage workers
Decile of household consumption per capita, 2015					
Lowest decile	3.1	4.3	12.8	2.9	10.1
2	4.7	7.3	12.0	5.8	11.1
3	5.6	8.4	13.1	7.3	11.1
4	7.1	9.1	11.4	7.7	11.9
5	8.4	9.8	11.6	9.5	10.0
6	9.5	10.7	10.4	10.3	10.1
7	11.3	11.7	8.5	11.2	11.0
8	12.8	12.1	8.7	12.9	9.5
9	16.6	12.9	6.9	14.5	8.7
Highest decile	21.0	13.7	4.8	17.8	6.6
	100.0	100.0	100.0	100.0	100.0

Source: Based on data from the Labor Force Survey (ENPE) 2019 and Household Budget Survey (HBS) 2015, INS.
Note: Statistics are based on data from the second quarter of the Labor Force Survey (ENPE) 2019. Statistics by decile of per capita household consumption are based on the Household Budget Survey (HBS) 2015 and refer to the employed population ages 18 and above because of an age-based skip pattern in the question about affiliation with social security.

is considerably smaller in formality status and more driven by the smaller share of women in charge of their own business rather than working for a wage.

- **Age.** Youth ages 15–24 are more likely to work informally for a wage relative to prime-age workers, but less likely to be formal or informal nonwage workers. The share of youth among wage workers in the public sector is smaller than other age-groups, except for workers ages 65 or more, who, by that age, are retired from the civil service. Older workers ages 65 or more contribute to nonwage employment, particularly informal employment, more than to wage employment. About 6.0 percent and 6.8 percent of formal and informal nonwage workers, respectively, are ages 65 or more relative to about 1 percent of wage workers (0.8 percent of public sector wage workers and 1.1 percent and 1.5 percent among private sector formal and informal wage workers, respectively). Workers ages 25–64 account for the overwhelming majority of public sector employment (96.1 percent), formal wage employment (88.9 percent), and informal wage employment (about 77.4 percent). The shares reach 91.6 percent and 84.9 percent among formal and informal nonwage employment, respectively. This life-cycle pattern is partly ascribable to the composition of employment by type over the life cycle and to variation in the incidence of informality across employment types. Informality rates in Tunisia are higher among nonwage workers, which include employers, own-account workers, and unpaid family workers. Both youth and older workers are overrepresented in employment types at higher risk of informality; thus, greater shares of unpaid family workers are young, while many employers and own-account workers are ages 65 or more.
- **Education.** Educational level is key to accessing public sector jobs. Almost 1 worker in 2 (45.4 percent) employed in the public sector has tertiary education, compared with 21.6 percent of formal wage workers and 7.0 percent of informal wage workers. Workers with tertiary education also contribute a large share of formal nonwage employment (30.7 percent), but only 6.5 percent of informal nonwage employment. Over 1 worker in 2 in informal employment has no schooling or only primary education: 54.6 percent in the case of wage employment and 59.8 percent in the case of nonwage employment. The share of workers with secondary education does not differ substantially across groups.
- **Marital status.** The differences in the composition of employment across groups by marital status is largely attributable to the age distribution of employment. The share of single workers is larger in informal wage employment (48.7 percent) than in formal (31.3 percent) and public sector (20.6 percent) wage employment or in formal nonwage employment (18,1 percent), reflecting the younger ages of workers in these employment types. By contrast, the share of single workers in

formal nonwage employment is the lowest, at 18.1 percent, mirroring the small share of youth ages 15–24 in that group.

- **Relation to the head of household.** The composition of employment by relation to the household head across groups largely reflects the sex and age structure of each group. In particular, the share of spouses, virtually all women, is smaller among informal wage (8.1 percent) and nonwage (9.4 percent) workers, compared with formal wage (17.8 percent), formal nonwage (11.9 percent), and public sector (24 percent) workers. Youth ages 15–24 contribute 44.2 percent to informal wage employment relative to 26.9 percent, 18.1 percent, and 14.8 percent of formal wage, formal nonwage, and public sector employment, respectively.
- **Household welfare.** Over 1 public sector worker in 2 and 1 formal wage or nonwage worker in 2 is in a household in the top four deciles (61.7 percent, 50.4 percent, and 56.5 percent, respectively).[45] Only about 20.5 percent of wage workers in the public sector, 29.0 percent of formal wage workers, and 23.7 percent of formal nonwage workers live in households in the bottom 40. Informal workers are not all less well off, however, particularly in the case of informal nonwage workers. The distribution of informal nonwage workers across deciles is roughly even up to the 8th decile; then the share declines modestly to reach a minimum of 6.6 percent in the highest decile. However, to capture the welfare implications of work in formal and informal jobs, the household dimension is revealing. Besides households with no working members, which, in Tunisia, represented about 22 percent of all households in 2015, households may have members employed formally or informally, and households with more than one working member may exhibit a degree of formality or informality. Excluding households with no employed members, households have therefore been classified as completely formal, completely informal, or mixed. About 56 percent of households were completely formal; 26.8 percent completely informal; and 16.8 percent mixed. Relative to a poverty rate of 15.1 percent at the national level, the poverty rate among fully formal households was considerably lower, at 9.5 percent, and the rate among mixed households was estimated at 12.4 percent. Completely informal households were significantly more likely to be poor (26.7 percent).

PUBLIC SECTOR, FORMAL, AND INFORMAL JOBS HAVE DISTINCT CHARACTERISTICS

- **Geographical location.** About 72 percent of the employed population is located in urban areas (Table 3.2). This compares with 82.3 percent of public sector workers, about 80 percent of formal wage workers and 85.8 percent of formal nonwage workers. By contrast, informal employment is more equally distributed between urban and rural areas; rural shares reach 62.5 percent and 58.5 percent of wage and nonwage informal employment, respectively. The regional distribution of employment indicates that about 1 public sector wage workers in 3, 1 formal private sector wage worker in 3, and about 45 percent of formal nonwage workers are in Greater Tunis. The corresponding share is around 20 percent in the case of informal wage and nonwage workers. Formal wage workers are located largely in the most highly developed areas of the country (over 84 percent), namely, the North-East and the Center-East, including Greater Tunis. By contrast, the share of informal workers located in these areas is around 60 percent (62.5 percent among informal wage workers and 58.5 percent among informal nonwage workers), and their presence is sizable in the western and southern regions of Tunisia.
- **Industry**. Most workers in the public sector are civil servants employed in public administration or in health care, education, and social services (77.2 percent). Some are employed in SOEs in transport, utilities, manufacturing, agriculture, and mining. There are differences in the contribution to formal and informal employment in the various industrial sectors. Agriculture, construction, and trade are the largest contributors to informal employment. Manufacturing contributes over 40 percent of formal wage employment, while trade contributes over one-third to formal nonwage employment. Construction and agriculture contribute the largest share to informal employment. Construction dominates informal wage employment with a share of 39.4 percent. Agriculture, at 36.2 percent, and trade, at 29.5 percent, are the largest contributors to informal nonwage employment. The contribution of sectors, such as

[45] The distribution of workers along the distribution of per capita consumption is based on data from the 2015 household budget survey, as opposed to the rest of the analysis, which relies on the 2019 labor force survey. Moreover, because of a lack of information in the household budget survey, the definition of informal employment only accounts for workers who are affiliated with social security rather than the official definition introduced by INS in the 2019 labor force survey that accounts for access to paid and sick leave in cases in which access to social scurity is not reported by respondents.

TABLE 3.2. Distribution of Public Sector, Formal, and Informal Workers, by Job Characteristics, 2019

Indicator	Public wage workers	Formal wage workers	Informal wage workers	Formal nonwage workers	Informal nonwage workers
Region					
Greater Tunis	31.9	33.2	19.8	45.1	19.5
North-East	11.5	20.0	16.1	9.1	14.4
North-West	11.4	4.8	9.9	7.3	14.3
Center-East	18.9	31.2	26.6	25.7	24.4
Center-West	10.3	4.0	13.0	4.6	15.3
South-East	8.4	5.1	10.1	6.0	7.1
South-West	7.7	1.8	4.6	2.2	5.1
	100.0	100.0	100.0	100.0	100.0
Location					
Rural	17.7	20.6	37.5	14.2	41.5
Urban	82.3	79.4	62.5	85.8	58.5
	100.0	100.0	100.0	100.0	100.0
Industry					
Agriculture	1.5	5.1	16.5	4.7	36.2
Mining	0.9	0.8	0.1	0.2	0.0
Manufacturing	2.4	40.5	12.5	14.0	9.2
Utilities	3.4	0.4	0.2	0.4	0.6
Construction	0.6	13.9	39.4	5.8	6.8
Trade/repair	1.3	11.3	11.6	33.8	29.5
Transportation and storage	6.0	3.8	2.4	8.0	7.3
Accommodation and food service activities	0.5	6.9	6.6	5.0	2.4
Information and communication	1.4	2.7	0.5	1.4	0.6
Financial, insurance and real estate activities	1.7	2.1	0.3	1.2	0.3
Professional, scientific and technical activities	0.5	1.9	0.6	8.7	1.0
Administrative and support service activities	0.9	2.8	1.2	2.1	0.4
Public administration and defense, social security	36.9	1.0	0.3	0.4	0.2
Education, health, and social work activities	40.3	4.3	2.6	8.9	1.2
Activities of households as employers	0.0	0.9	2.7	0.2	0.2
Other services	1.7	1.7	2.6	5.2	4.1
	100.0	100.0	100.0	100.0	100.0

(continued)

TABLE 3.2. Distribution of Public Sector, Formal, and Informal Workers, by Job Characteristics, 2019 *(continued)*

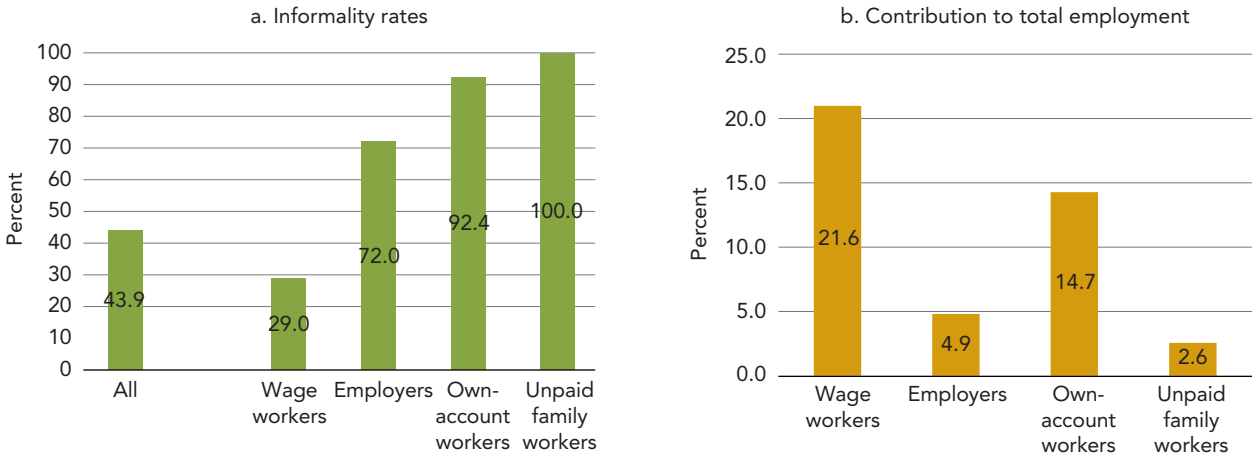
Indicator	Public wage workers	Formal wage workers	Informal wage workers	Formal nonwage workers	Informal nonwage workers
Occupation					
Managers	7.3	3.7	0.3	22.7	4.4
Professionals	32.2	7.7	1.9	14.2	1.7
Technicians and associate professionals	9.6	8.0	1.9	4.2	1.2
Clerical support workers	10.5	6.3	1.8	0.5	0.2
Service and sales workers	22.0	11.8	15.0	28.9	26.0
Skilled agricultural workers	0.8	2.7	9.0	4.1	32.7
Craft and related trades workers	2.1	15.6	21.2	15.3	17.8
Plant and machine operators, and assemblers	4.6	25.9	7.6	8.6	8.4
Elementary occupations	11.0	18.2	41.3	1.5	7.5
	100.0	100.0	100.0	100.0	100.0
Type of contract					
Fixed-term contract	7.7	24.8	26.1		
Open-ended contract	85.7	57.5	20.1		
No contract	5.8	17.2	52.7		
Not stated	0.8	0.4	1.2		
	100.0	100.0	100.0		
Firm size					
1–5	5.7	24.9	64.8	75.7	89.0
6–9	3.2	6.5	10.4	5.7	3.5
10–49	37.5	21.1	12.0	9.2	2.2
50+	44.6	38.6	7.1	3.6	0.5
Not stated	9.0	8.9	5.8	5.8	4.8
	100.0	100.0	100.0	100.0	100.0

Source: Based on data from the Labor Force Survey (ENPE) 2019, INS.
Note: Statistics are based on data from the second quarter of the Labor Force Survey (ENPE) 2019.

ICT services, finance, insurance and real estate activities, professional, scientific, and technical activities, and administrative and support services is about twice as large in formal employment compared with informal employment.

- **Occupation.** In line with their educational level, the large majority of informal workers are active in medium and low-end occupations, which also account for about 51.0 percent of public sector workers, 58.9 percent of formal nonwage workers, and 80.0 percent of informal wage workers. More than 4 informal wage workers in 10 are employed in elementary occupations; 21.2 percent are employed as craft and trade workers; and 15.0 percent as services and sales workers. In the case of informal nonwage workers, the largest share is made up of skilled agricultural workers, followed by service and sales workers and craft and trades workers. About 7.0 (4.1) percent of informal nonwage (wage) workers are managers, professionals, or technicians, which compares with 49.0 percent of public sector workers, 41.0 percent of formal nonwage workers, and 19.4 percent of formal wage workers. The relatively large share of plant and machine operators and assemblers among formal workers (25.9 percent) is largely ascribable to the sizable number of formal workers employed in manufacturing.
- **Contract type.** The share of workers with open-ended contracts is significantly larger among public sector workers (over 85.0 percent) compared with formal wage workers (57.5 percent) and informal wage workers (20.1 percent). Fixed-term contracts are more common among formal wage workers (24.8 percent) and informal workers (26.1 percent) relative to workers in the public sector (7.7 percent). Informal workers are more

FIGURE 3.2. Informality Rates and the Contribution to Total Employment, by Type of Employment, 2019



Source: Based on data from the Labor Force Survey (ENPE), INS.

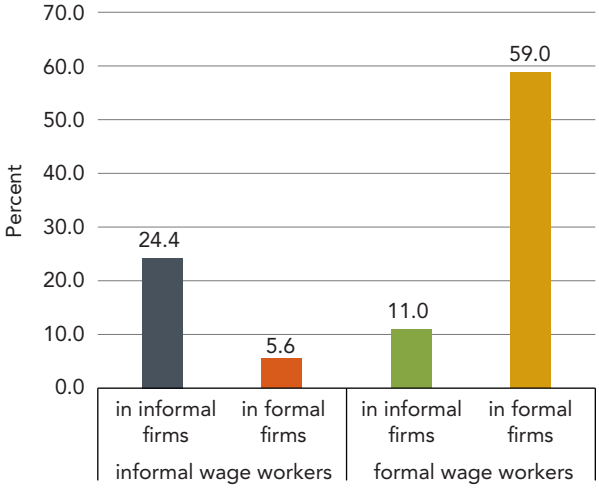
exposed to the threat of job loss. More than 1 in 2 does not have a contract. The corresponding share is estimated at 17.2 percent among formal workers and 5.8 percent among public sector workers.

- **Enterprise size.** Informal wage and nonwage workers are typically employed in microenterprises. Almost 65.0 percent of informal wage workers and 89.0 percent of informal nonwage workers are employed in enterprises with fewer than six employees, compared with 24.9 percent of formal wage workers and fewer than 6 percent of public sector workers. Most formal nonwage workers are active in microbusinesses, which is partly a consequence of the large share of own-account workers in this group. The share of wage workers in small firms (six–nine employees) is slightly larger in the case of informal workers relative to formal workers (10.4 percent vs 6.5 percent). About 19.0 percent of informal wage workers are employed in firms each with more than nine employees, whereas the shares are 59.7 percent and 82.1 percent among formal and public sector wage workers, respectively.

Own-account workers exhibit the highest informality rate; yet, informal wage employment is the largest contributor to total employment. At 29.0 percent, informality rates are considerably lower than the average (43.9 percent) among wage workers, and they are much higher among employers and own-account workers (Figure 3.2, panel a).[46] However, because of the large number of wage workers in Tunisia, the contribution of informal employees to total employment is the largest, at 21.6 percent, followed by 14.7 percent of own-account workers, 4.9 percent of employers, and 2.6 percent of unpaid family workers (Figure 3.2, panel b).

Most formal employees work in formal production units. Combining the concept of formality at the worker level among wage workers with that of formality among the economic units that employ them reveals that the overlap between the formality status of wage workers and firms is high. Overall, 59.0 percent of formal wage workers are active in formal enterprises; only 11.0 percent of formal wage workers are employed in informal firms (Figure 3.3). Informal wage workers in informal firms contribute about

FIGURE 3.3. The Distribution of Wage Employment, by the Formality Status of Workers and Firms, 2019



Source: Based on data from the Labor Force Survey (ENPE), INS.

[46] The informality rate among unpaid family workers if, by definition, 100 percent.

24.0 percent to total wage employment, while informal wage workers in formal firms contribute only about 5.6 percent.

Informality rates are heterogenous across worker characteristics and types of employment. Among wage workers, informality rates are higher among men than women (32.9 percent vs. 22.8 percent), among youth ages 15–25 (55.6 percent), among workers with no schooling (48.8 percent) or with primary education (40.7 percent), and among workers who live in households in the bottom three deciles of the consumption distribution (68.7 percent, 53.8 percent, and 51.8 percent, respectively) (Table 3.3). Informality rates are typically higher in nonwage employment than among wage workers. There are some important differences by worker characteristics. First, women and men employed as nonwage workers do not show considerably different informality rates (84 percent vs. 82 percent). Second, young nonwage workers have higher informality rates than other age-groups, though the gap is smaller relative to wage employment. Third, virtually all nonwage workers with no schooling are informal (95.5 percent), and the informality rates are also high among workers with primary (88.9 percent) and secondary education (82.4 percent). The difference is great in the informality rate between wage

TABLE 3.3. Informal Employment, by Type and Contribution and by Individual and Household Characteristics, 2019

Indicator	Wage workers		Nonwage workers	
	Informality rate	Contribution to total employment	Informality rate	Contribution to total employment
Sex				
Women	22.8	30.1	82.0	16.0
Men	32.9	69.9	84.0	84.0
Age-group				
15–24	55.6	11.3	94.6	7.3
25–34	32.7	26.7	84.2	17.6
35–44	24.4	30.1	79.9	27.1
45–54	21.5	21.2	83.3	23.7
55–64	26.3	9.6	84.4	17.5
65+	38.8	1.1	85.5	6.7
Educational level				
No education	48.8	7.1	95.5	12.5
Primary	40.7	31.5	88.9	42.8
Secondary	30.8	37.3	82.4	34.2
Tertiary	8.6	24.0	52.1	10.4
Not stated	18.5	0.1	88.4	0.1
Decile of household consumption per capita, 2015				
Lowest decile	68.7	3.2	77.8	1.4
2	53.8	3.0	67.2	1.5
3	51.8	3.3	61.3	1.5
4	44.5	2.8	61.9	1.6
5	41.6	2.9	52.6	1.4
6	36.5	2.6	50.5	1.4
7	29.0	2.1	50.2	1.5
8	28.2	2.2	42.9	1.3
9	21.4	1.7	38.8	1.2
Highest decile	13.7	1.2	27.5	0.9

Source: Based on data from the Labor Force Survey (ENPE) 2019 and Household Budget Survey (HBS) 2015, INS.
Note: Statistics are based on data from the second quarter of the Labor Force Survey (ENPE) 2019. Statistics by decile of per capita household consumption based on the Household Budget Survey (HBS) 2015 refer to the employed population ages 18 and above due to an age-based skip pattern concerning the question about affiliation to social security.

and nonwage workers with tertiary education (8.6 percent vs. 52.1 percent). Informality rates are the highest at the bottom of the welfare distribution, but, unlike in the case of wage employment, nonwage workers at the top of the distribution show high informality rates, estimated at 42.9 percent, 38.8 percent, and 27.5 percent in the 8th, 9th, and 10th deciles. Such a pattern might indicate that informality among nonwage workers, particularly employers and own-account workers, may be more a choice than a last resort option.

Informality rates differ across job characteristics, particularly in wage employment. Informality rates among wage workers are higher in the North-West, Center-West, and South-East (from 35.9 percent to 45.8 percent) and in rural areas (45.2 percent), agriculture (66.0 percent), construction (66.5 percent), and household services (68.6 percent) (Table 3.4). This is reflected in the informality rates by occupation. Skilled agricultural workers, workers employed in elementary occupations, and craft and trade workers display the highest rates of informality among wage workers. Wage workers with no contracts (64.1 percent), and workers in microenterprises (61.8 percent) and small (46.3 percent) firms exhibit informality rates that are considerably higher than the average (43.9 percent) among wage workers. Nonwage workers show higher informality rates than wage workers, and the rates are particularly high in rural areas, in agriculture, construction, household services, trade, and transport, and among workers employed in medium and low-end occupations and in microenterprises and small businesses.

The microdeterminants of the probability of employment in specific categories suggest uneven access to quality jobs in the public sector and to formal jobs by age, sex, educational level, and geographical location. Figure 3.4, panels a–f, illustrates the marginal effects of a number of covariates derived from estimating a multinomial logit regression on the determinants of working in one of eight categories, namely, public sector wage work, formal wage work, informal wage work, formal or informal employer, formal or informal own-account worker, and unpaid family worker. Age is a strong correlate of working as a wage worker in the public sector and in the formal or informal private sector. For example, workers ages 25–29 exhibit a 4.2 percent greater likelihood of working in the public sector relative to youth ages 15–24 and a 1.3 percent greater probability of working as formal wage workers in the private sector. The chances turn negative, however, among older workers in the case of formal employees. Women have a higher probability of working in the public sector (3.2 percent) and the private sector as formal wage workers (9.2 percent) or unpaid family workers (1.2 percent) compared with men, whereas women have a smaller chance of working as a nonwage workers or as informal wage workers (–1.7 percent). Higher educational attainment is positively correlated with the probability of employment as public or private formal wage workers and negatively with the probability of employment as informal wage workers. Workers with tertiary education show a 39.0 percent greater probability of working in the public sector relative to workers with no schooling. The correlation with the probability of working in nonwage employment is economically insignificant. Geographical location in terms of region or urban or rural area matters. Residing in an urban area raises the probability of working as a public (4.6 percent) or private formal (3.8 percent) wage worker and is associated with a lower probability of employment as an informal own-account worker (–4 percent) or an unpaid family worker (–2.5 percent). The likelihood of employment as a formal wage worker in the private sector is negatively associated with all regions, except for the North-East compared with Greater Tunis. The opposite holds in the case of informal wage workers in Greater Tunis relative to all other regions. The regression also controls for household demographics, namely, marital status and number of children ages 0–4 and 5–14 in the household, with the aim of capturing the effect of more household-friendly and flexible working arrangements in the case of formal wage jobs in the public and private sectors. Marital status seems to be positively associated with formal wage employment in the public and private sectors.

Wage Trends, Wage Gaps, and Returns to Education

This section takes advantage of wage data collected by the National Institute of Statistics (INS) with the labor force survey and illustrates how workers benefit from the labor market and which individual characteristics are correlated with wages. Although no information on labor income is available for workers employed as own-account workers and employers, wages are the main source of income from labor for the majority of the population because more than 3 workers in 4 in Tunisia work for wages. This section (1) presents recent trends in wages at the aggregate level and by worker and job characteristics; (2) investigates the existence and correlates of gender wage gaps in the private and public sectors, wage gaps among wage workers in the public and private sectors, and wage gaps

TABLE 3.4. Share of Informal Employment, by Type and Contribution and by Job Characteristics, 2019

Indicator	Wage workers		Nonwage workers	
	Informality rate	Contribution to wage employment	Informality rate	Contribution to nonwage employment
Region				
Greater Tunis	20.5	28.8	68.9	23.7
North-East	29.3	16.4	89.0	13.5
North-West	35.9	8.2	91.0	13.1
Center-East	30.2	26.3	83.0	24.6
Center-West	45.8	8.5	94.4	13.6
South-East	40.0	7.6	86.0	6.9
South-West	31.8	4.3	92.1	4.6
Location				
Rural	45.2	24.8	93.7	37.1
Urban	24.8	75.2	77.8	62.9
Industry				
Agriculture	66.0	7.4	97.6	31.0
Mining	5.8	0.7	57.4	0.1
Manufacturing	17.7	21.2	77.2	10.0
Utilities	4.9	1.2	88.2	0.6
Construction	66.5	17.7	85.7	6.7
Trade/repair	40.5	8.5	81.7	30.2
Transportation and storage	17.7	4.0	82.3	7.4
Accommodation and food service activities	39.7	4.9	71.2	2.8
Information and communication	9.0	1.6	68.3	0.7
Financial, insurance and real estate activities	5.8	1.4	55.7	0.5
Professional, scientific and technical activities	16.0	1.1	37.2	2.2
Administrative and support service activities	20.6	1.8	50.0	0.7
Public administration and defense, social security	0.9	11.1	65.6	0.2
Education, health, and social work activities	5.5	14.2	41.0	2.5
Activities of households as employers	68.6	1.2	85.7	0.2
Other services	39.0	2.0	80.3	4.3
Occupation				
Managers	2.2	3.7	49.9	7.4
Professionals	4.4	13.0	38.1	3.7
Technicians and associate professionals	8.4	6.6	59.8	1.7
Clerical support workers	8.6	6.1	65.2	0.2
Service and sales workers	28.5	15.7	82.2	26.5
Skilled agricultural workers	67.1	4.0	97.6	28.1
Craft and related trades workers	47.3	13.4	85.7	17.4
Plant and machine operators, and assemblers	15.8	14.3	83.4	8.4
Elementary occupations	53.6	23.0	96.2	6.5

(continued)

TABLE 3.4. Share of Informal Employment, by Type and Contribution and by Job Characteristics, 2019 *(continued)*

Indicator	Wage workers		Nonwage workers	
	Informality rate	Contribution to wage employment	Informality rate	Contribution to nonwage employment
Type of contract				
Fixed-term contract	38.4	20.3		
Open-ended contract	11.0	54.4		
No contract	64.1	24.5		
Not stated	46.3	0.8		
Firm size				
1–5	61.8	31.3	85.8	86.9
6–9	46.3	6.7	75.7	3.9
10–49	15.5	23.1	55.4	3.4
50+	6.8	30.9	39.8	1.0
Not stated	21.6	8.0	80.9	5.0

Source: Based on data from the Labor Force Survey (ENPE) 2019, INS.
Note: Statistics are based on data from the second quarter of the Labor Force Survey (ENPE) 2019.

FIGURE 3.4. Marginal Effect of Selected Covariates on the Probability of a Specific Type of Employment, 2019

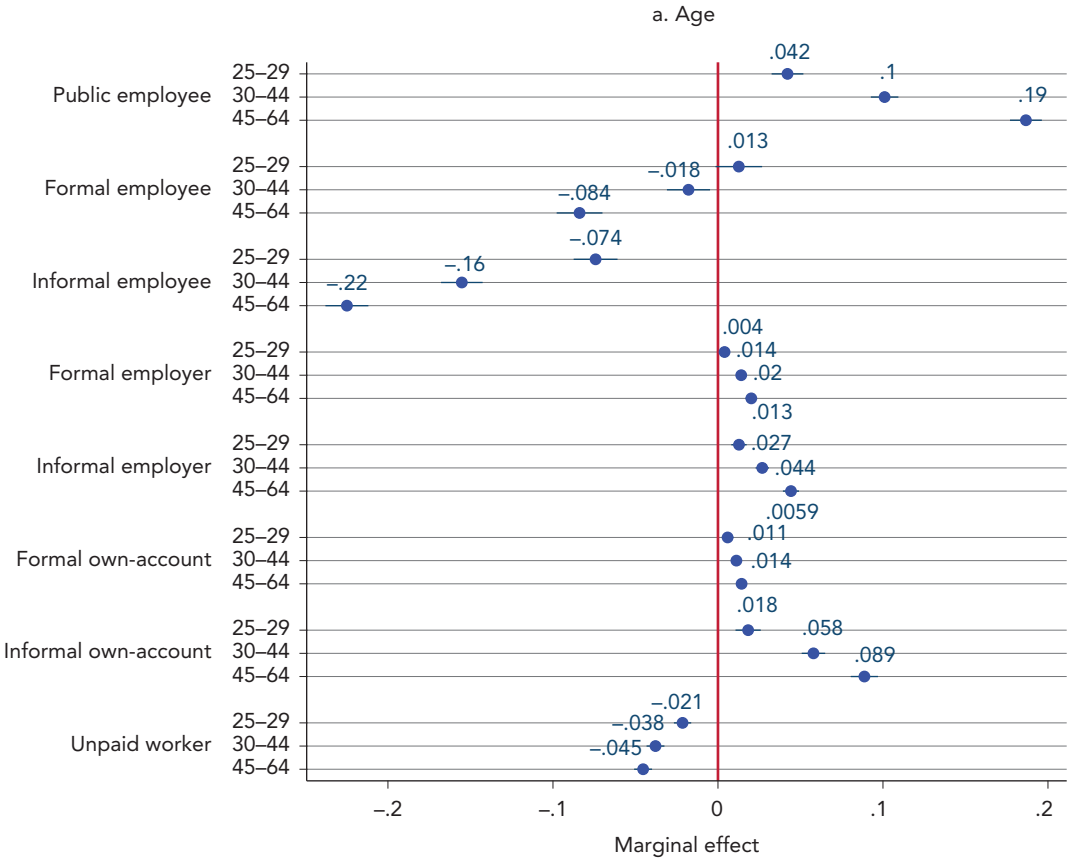


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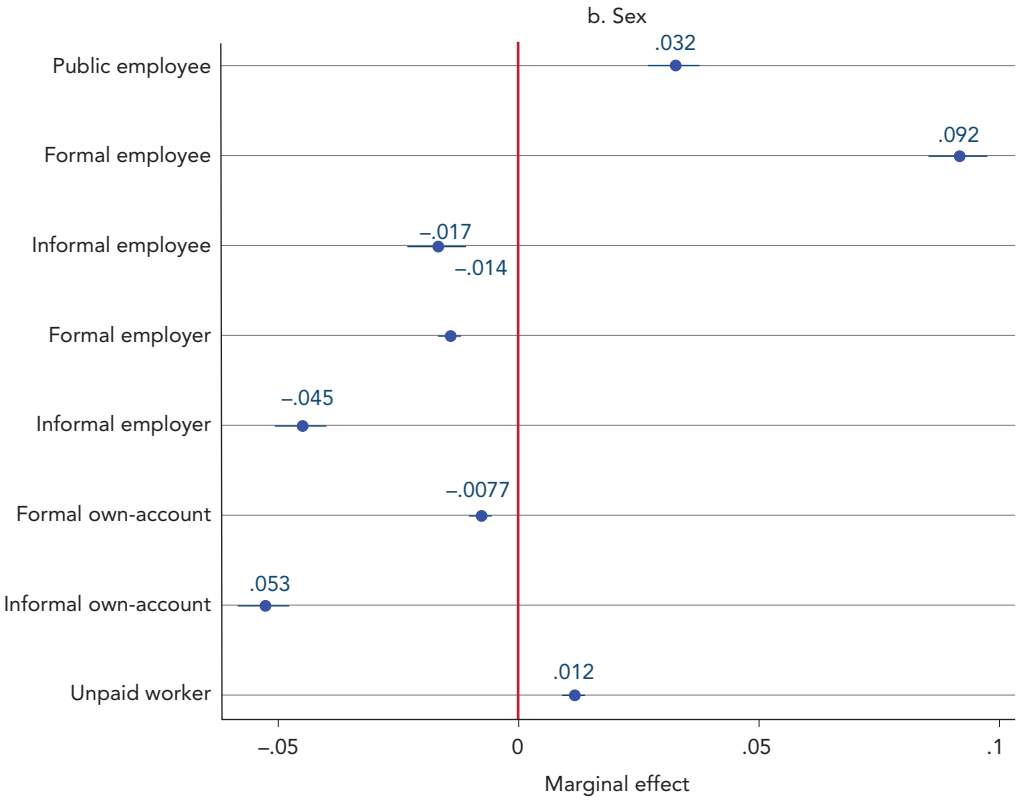
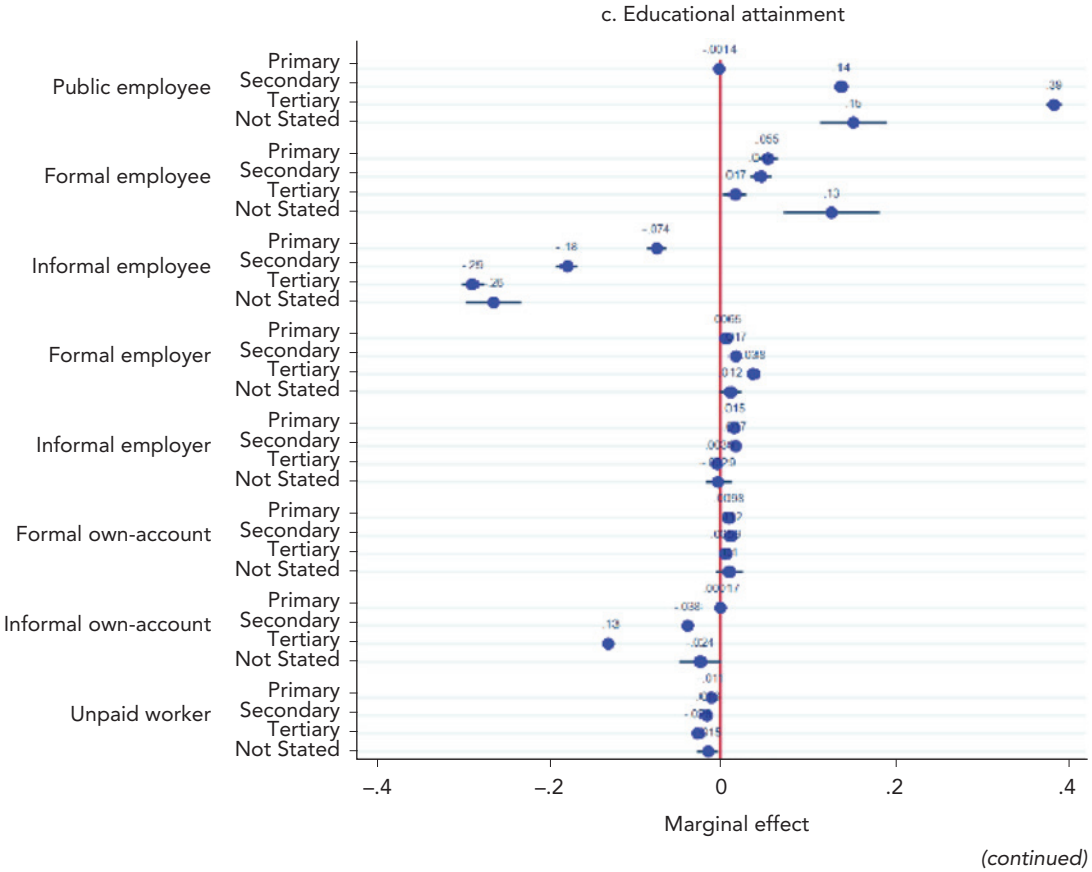
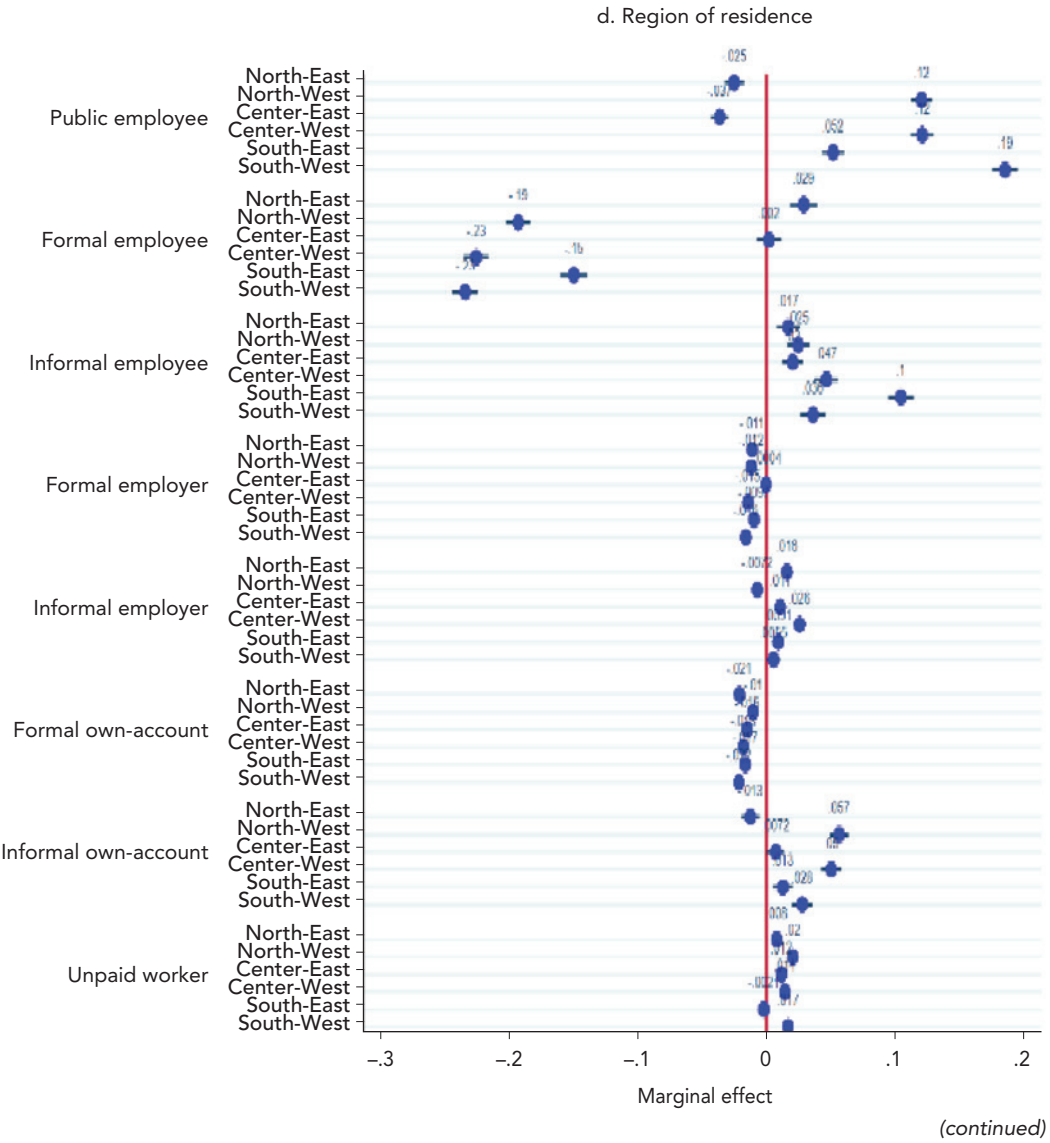
FIGURE 3.4. Marginal Effect of Selected Covariates on the Probability of a Specific Type of Employment, 2019 *(continued)*





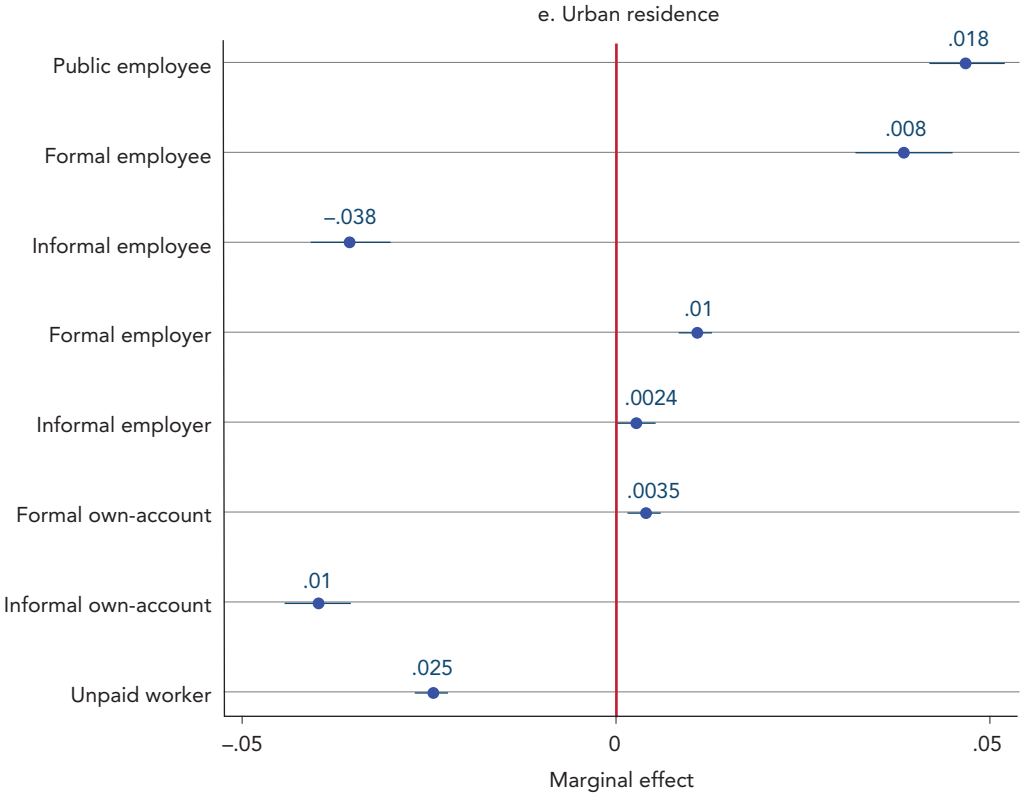
(continued)

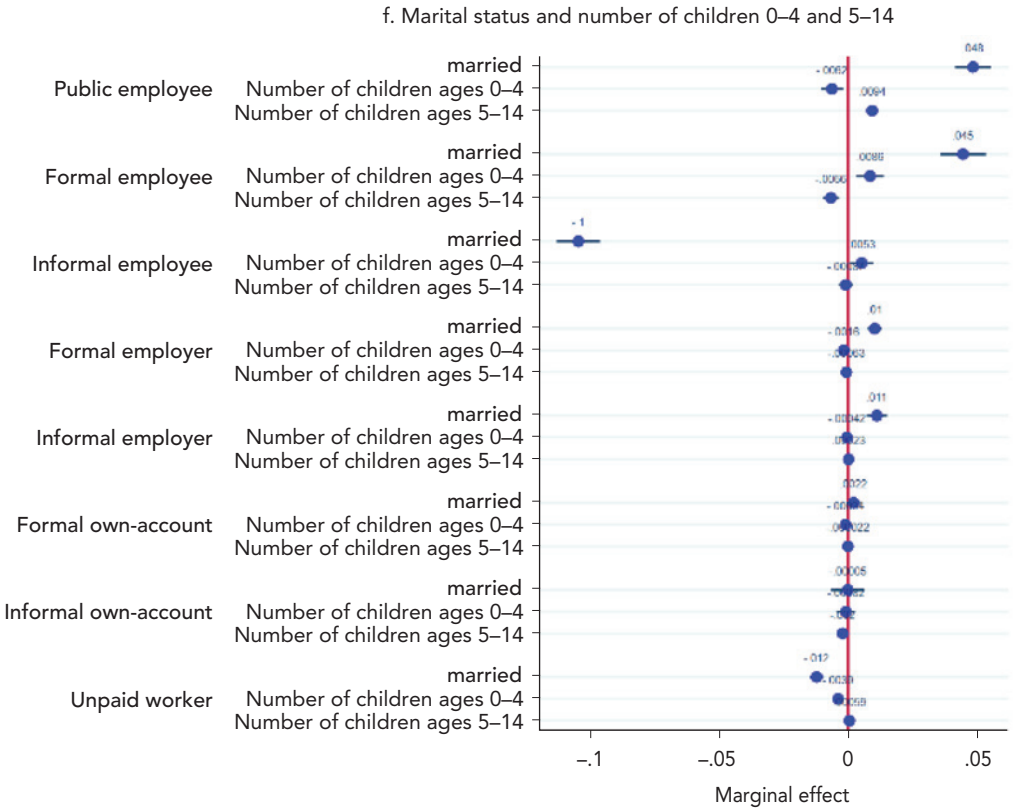
FIGURE 3.4. Marginal Effect of Selected Covariates on the Probability of a Specific Type of Employment, 2019 *(continued)*



(continued)

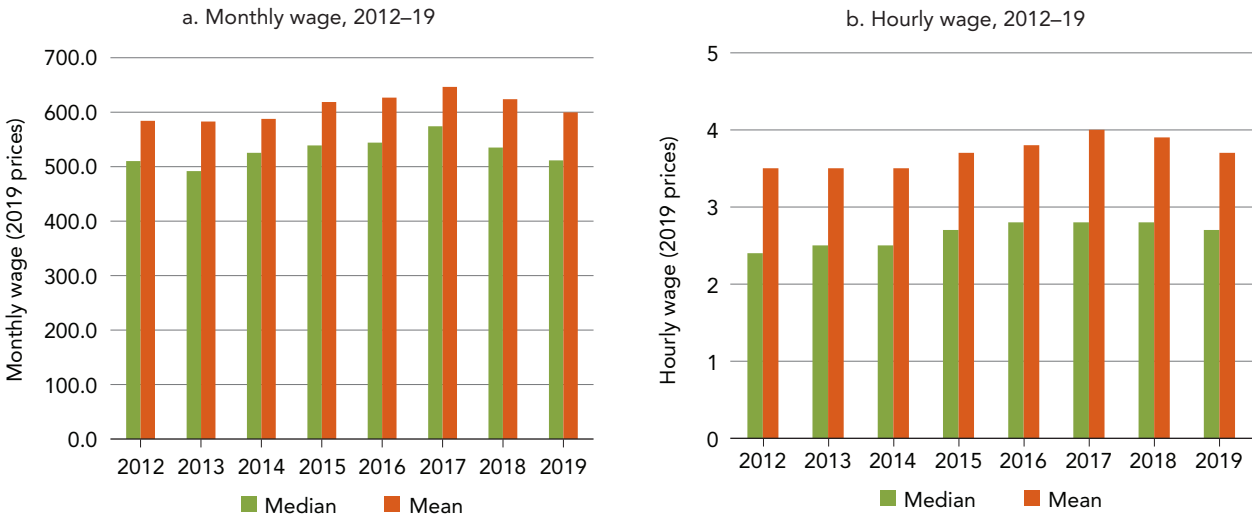
FIGURE 3.4. Marginal Effect of Selected Covariates on the Probability of a Specific Type of Employment, 2019 *(continued)*





Source: Based on data from the Labor Force Survey (ENPE), INS.
Note: The reference categories are the following: 15–25 years of age; men; no schooling; Greater Tunis; rural areas; not married.

FIGURE 3.5. Trends in Real Monthly and Hourly Wages, Average and Median Values, 2012–19



Source: Based on data from the Labor Force Survey (ENPE), INS.

among formal and informal wage workers in the private sector; and (3) analyzes correlates of wages, in particular returns to education.[47]

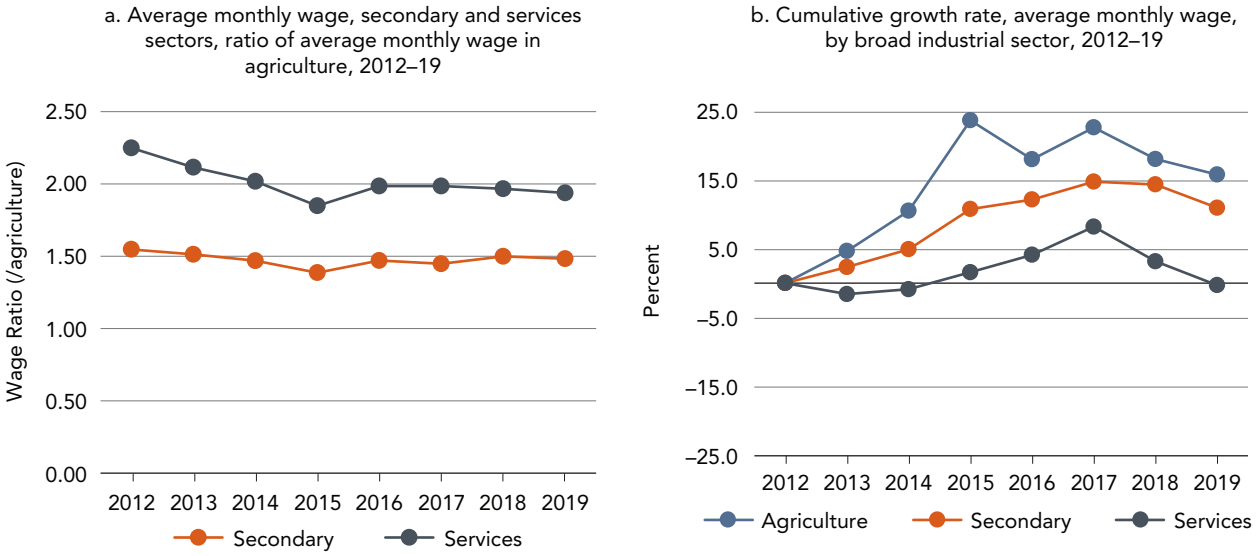
TRENDS IN WAGES

Between 2012 and 2019, average monthly wages did not increase considerably, and, in 2019, the average monthly wage was estimated at about TD 600. In 2012, the average monthly wage was estimated at about TD 583. It increased to about TD 644 in 2017. Since 2017, the rising trend in wages has been reversed, and average monthly wages have declined by over 3 percent a year. The average in 2019 stood at around TD 598 a month (Figure 3.5, panel a). A similar trend is observed among average hourly wages. In 2012, an employee made, on average, TD 3.5 per hour worked. This had increased to about TD 4 by 2017, and subsequently declined to TD 3.7 in 2019 (Figure 3.5, panel b). Over 2012–19, the annualized growth rate of mean hourly wages was higher compared with monthly wages (about 0.8 percent compared with 0.4 percent) because of a decline in the average number of working hours from about 45.3 hours per week in 2012 to 43.1 hours per week in 2019.

The secondary and services sectors pay, on average, more than agriculture, but the sectoral wage gap has been reduced over time. In 2012, the average monthly wage was about 54 percent higher in the secondary sector than in agriculture, and the services sector paid more than twice as much as agriculture (123 percent) (Figure 3.6, panel a). Between 2012 and 2015, the sectoral wage gap declined considerably, and, since then, it has expanded modestly. In 2019, the wage gap was estimated at about 48 percent in the secondary sector and about 93 percent in the services sector. The dynamic observed in the wage gap is the by-product of two factors. Average monthly wages in agriculture increased more rapidly until 2017 and subsequently declined less than in the other two sectors. Over the entire period (2012–19), agricultural wage workers had a cumulative gain in their average wages of about 16 percent,

[47] The wage statistics presented in this chapter refer to monthly and hourly wages expressed in 2019 prices for employees ages 15–64. Wages exclude bonuses and benefits in kind. As workers are allowed to report their last pay according to a reference period of choice, wages are first converted into monthly values, which is the most commonly used reference period in the survey. Wages reported by the week or by the day are converted into monthly values by multiplying weekly and daily values by the number of weeks and days worked during the previous month, respectively. If information about weeks and days worked is missing, wage values are multiplied by 4.33 (the number of weeks in a month) and 22 (number of working days in a month), respectively. This means one assumes that workers work full time during the previous month. In addition, fewer than 0.05 percent of wage workers, with the exception of 2014 (4.4 percent) and 2019 (0.5 percent), report their last wage according to an unknown time unit. The reported wage amount has been used without applying any conversion factor in this case. Hourly wages have been calculated by dividing monthly wage values by the number of hours worked the week preceding the interview, multiplied by 4.33. The question regarding the number of hours worked per week refers to all jobs in all survey rounds until 2018 and to the main job only starting with the 2019 round of the survey. For the sake of comparability, wage workers with two jobs have been excluded from the analysis. This leads to the exclusion of fewer than 0.5 percent of wage workers in each year. All hourly wage values that are more (or less) than 3 standard deviations away from the mean in each survey year are identified as outliers and are excluded from the analysis. Wage statistics are based on wages among the population of wage workers who report their wage during the interview. The share of wage workers who did not respond to the question concerning the wage amount increased from about 25 percent in 2012 to about 53 percent in 2019.

FIGURE 3.6. Trends in Real Average Monthly Wages, by Broad Industrial Sector, 2012–19

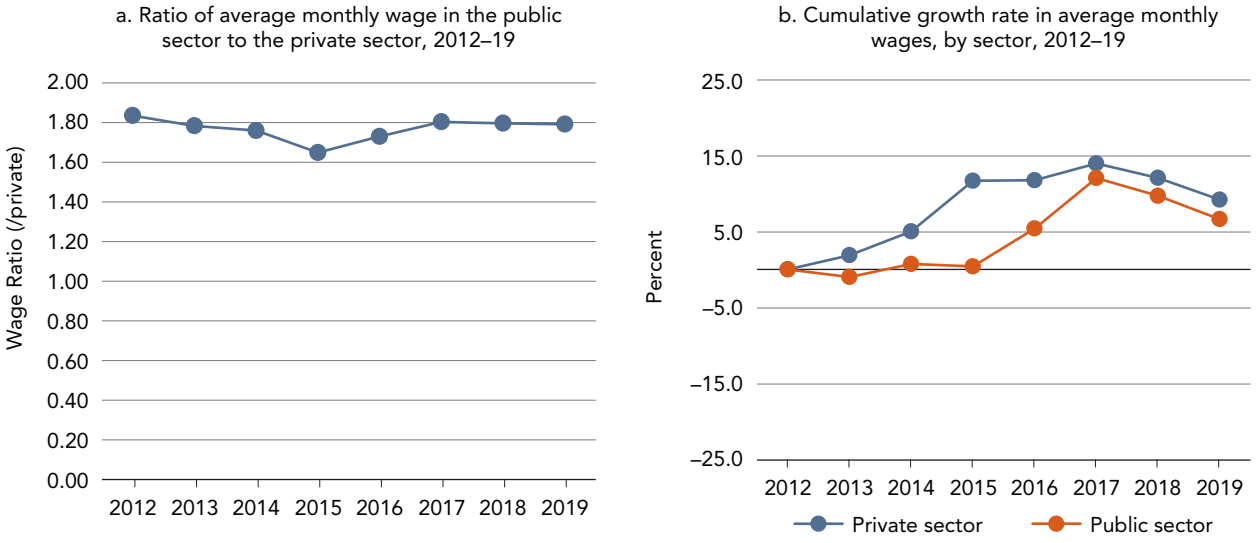


Source: Based on data from the Labor Force Survey (ENPE), INS.

whereas secondary sector workers posted a cumulative rise of about 11 percent. By contrast, the average monthly wage in the services sector remained virtually at the level of 2012 (Figure 3.6, panel b).

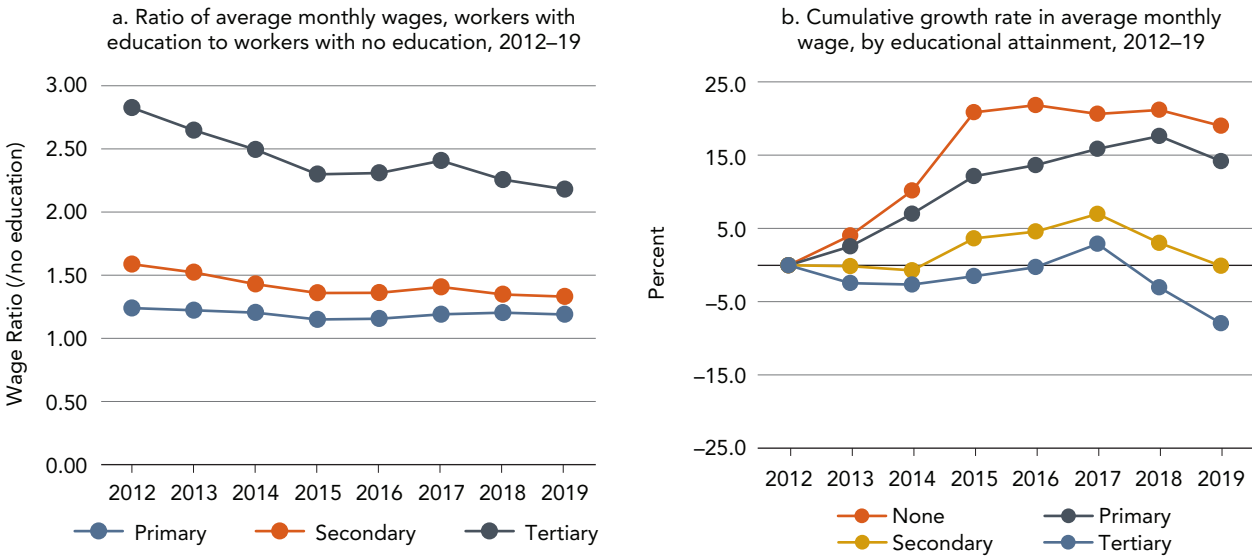
Workers employed in public administration and in public companies are paid, on average, more than private sector workers and posted larger increases in wages over time. Average monthly wages of workers have been about 1.8 times higher in public administration and public companies than in the private sector (Figure 3.7, panel a). After a slowdown in the aftermath of the 2011 revolution, average monthly wages in public administration and public companies started to rise rapidly until 2017. Over 2018–19, average wages declined in both the private and public sectors (Figure 3.7, panel b). The overall increase in average monthly wages was about 9.2 percent in the private sector and about 6.7 percent in public administration and public companies.

FIGURE 3.7. Trends in Real Average Monthly Wages, by Sector, 2012–19



Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 3.8. Trends in the Real Average Monthly Wage, by Educational Level, 2012–19



Source: Based on data from the Labor Force Survey (ENPE), INS.

The wage premium of workers with tertiary education declined considerably. As expected, the average monthly wage increases with the level of education attained by workers. For example, in 2012, a worker with tertiary education made, on average, almost 2.8 times the amount made by a worker with no education, while a worker with secondary education made about 1.6 times the amount made by a worker with no education (Figure 3.8, panel a). The wage dynamic differs considerably according to worker educational attainment. While workers with no schooling or only primary education experienced large gains and then, more recently, modest reductions in the monthly wage, workers with secondary education and, especially, workers with tertiary education posted modest gains and then, more recently, sizable reductions in monthly wages (Figure 3.8, panel b). The average monthly wages of workers with tertiary education were 8 percent lower in 2019 relative to 2012. Workers with secondary education benefited from an increase in average wages until 2017, but this was subsequently undone. Workers with primary education enjoyed a cumulative increase of 14 percent, and workers with no schooling benefited from a cumulative growth of above 19 percent. These trends are consistent with a labor market characterized by an abundance of individuals with secondary and tertiary education who cannot be absorbed given a lack of demand for these types of workers, and many of these workers end up unemployed.[48]

[48]The rest of the chapter highlights that returns to tertiary education, controlling for other observable worker characteristics, have declined over time.

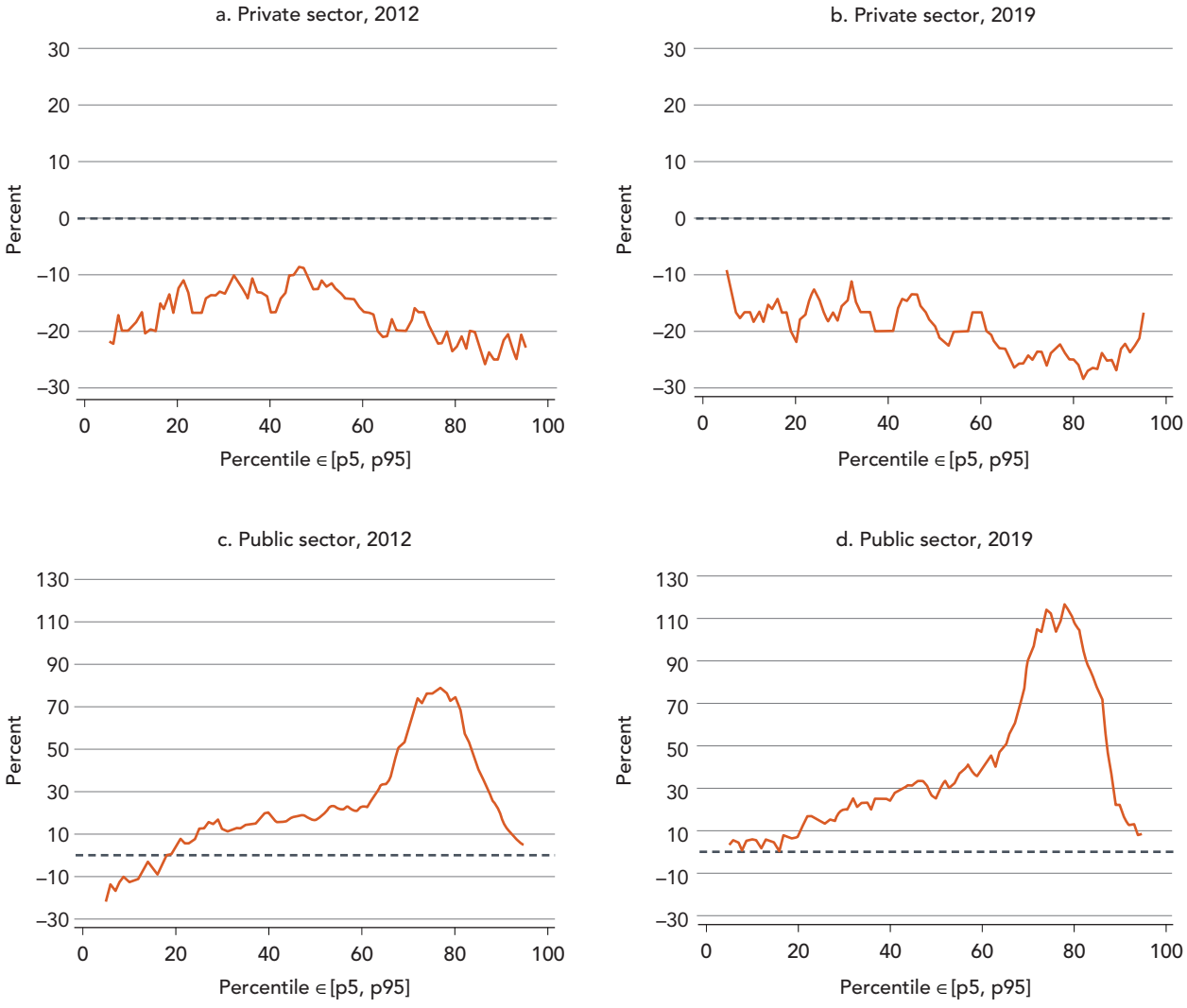
GENDER WAGE GAPS

Gender gaps in labor force participation are partly the by-product of a household-level bargaining process, whereby gender gaps in earnings and other factors determine the bargaining power of men and women within the household. This section investigates the existence of gender wage gaps, thus restricting the analysis to the population of wage workers, which, in the case of Tunisia, represents about 75 percent of the employed population and over 85 percent of employed women. In Tunisia, women are more likely than men to be employed for a wage in the public sector (see Table 3.1). There are important differences in educational attainment and the distribution across occupations between men and women employed in the private and public sectors (see chapter 2). For example, women employed as wage workers are, on average, more well educated than men, and the share of women with tertiary education is much higher in the public sector than in the private sector. The share of women with tertiary education in the public sector has also increased over time. Among men, the corresponding share remained constant over time and is estimated to be about 30 percentage points lower than the share among women. In the private sector, women are largely employed in low- and mid-skill jobs, whereas most women in the public sector perform high-skill jobs. To account for these important differences, the analysis of gender wage gaps is conducted separately for private and public sector wage workers.

In the private sector, women make, on average, $0.83 per hour to the $1.00 made by men, and the gap expands along the wage distribution. The unconditional gender wage gap, which captures the gender differences in wages without accounting for differences in the characteristics of the pool of employed men and women, indicates that, on average in Tunisia in 2019, a woman employed in the private sector earned about 16 percent less per hour worked relative to a man. The unconditional gender gap in hourly wages increased along the distribution of hourly wages from about –16 percent among the bottom 20 to about –24 percent among the top 20 in 2019 (Figure 3.9, panel b). In 2012, the gender gap had an inverted U shape, with a minimum estimated at –13 percent around the median (Figure 3.9, panel a).

In the public sector, women make, on average, 46 percent more than men per hour of work, and the gap was more than twice as large among high earners. Women employed in the public sector earned about 9 percent more per month than men in 2019. The gap in favor of women rose from 5 percent in 2012. The unconditional difference is considerably larger in the hourly wage. In the public sector in 2019, women made about 46 percent more than men, and the gap had expanded from 26 percent in 2012. The larger gap in hourly wages relative to monthly wages

FIGURE 3.9. Unconditional Gender Differentials in Hourly Wages, by Quantile and Sector, 2012 and 2019



Source: Based on data from the Labor Force Survey (ENPE), INS.

is ascribable to differences in working hours. Women employed in the public sector work, on average, fewer hours relative to men. The gap expands along the distribution, and the premium in favor of women has expanded over time (see Figure 3.9, panels c and d). In 2019, the unconditional gender gap in hourly wages ranged from about 3 percent at the 5th percentile to about 25 percent at the median. It peaked at over 110 percent at around the 75th percentile. It declined to around 80 percent among workers at the 85th percentile.

Controlling for observable characteristics, the analysis finds that, in 2019, women employed in the private sector earned, on average, about 18.5 percent less than men per hour worked; in the public sector, women made 33 percent more than men per hour worked. Given the sizable differences in some of the characteristics of men and women employed in the public and private sectors, namely, in educational attainment and occupation, the unconditional gender wage gap is not a good indicator of the extent of discrimination in the labor market. Women and men working in the public sector or the private sector are endowed with a set of characteristics that make them more or less productive. The conditional gender hourly wage differentials, that is, the hourly wage gaps obtained after controlling for a set of worker characteristics and estimated through wage equations, are reported in Figure 3.10.[49] The results indicate that women in the private sector are paid hourly wages significantly lower compared with men. The gap was estimated at about 18.5 percent in 2019, on average, and has hovered around this level over time. In the public sector, women received an hourly wage premium of about 33 percent in 2019, up from about 18 percent in 2012.

A large part of the average gender gap in the public sector is explained by differences in the characteristics of men and women. Estimates from a twofold Blinder-Oaxaca decomposition indicate the extent to which the differences observed in hourly wages between men and women are ascribable to differences in the observable characteristics of the two groups, that is, the explained component, and to unobserved characteristics or different treatments of men and women, that is, the unexplained component (Figure 3.10, panels a and b).[50] In the public sector, the explained and unexplained components work in opposite directions. Differences in observable characteristics exert a positive effect on the gender hourly wage gap that shores it up in favor of women. Among observable characteristics, the fact that women in the public sector are more well educated than men and are employed in high-end occupations, such as managers and professionals, pushes the gender gap in favor of women (Figure 3.10, panel d). This is in line with the stylized facts presented in chapter 2, whereby women in the public sector are relatively more concentrated in high-end occupations and have, on average, a higher educational level. The increase in the gender gap over time is largely ascribable to improvements in these characteristics among women employed in the public sector relative to men. By contrast, the unexplained component has a negative effect on the hourly wage, but the effect is modest. This component is associated with a different wage structure or with unobserved characteristics that would, on average, make men more productive than women.

In the private sector, most of the average gender wage gap is unexplained. In the private sector, too, the two components (explained and unexplained) run in opposite directions in most years (Figure 3.10, panel b). The largest share of the hourly wage difference is ascribable to the unexplained component that exercises a large negative effect on the gender gap. Although the explained component pushes the gender gap in positive territory in most years, its contribution is relatively small, and the overall gender gap is negative. Among observable characteristics, differences in educational level and occupation contribute positively, whereas differences in demographics, particularly a larger share of working men in rural areas and at ages above 45, exert a large negative effect on the wage differential.

[49] Regressions control for a second-degree polynomial in age and individual dummies for year-of-birth cohorts, educational level, region and urban or rural location of residence, occupation, industry and sectoral category, that is, the domain of employment in the public sector (public administration, SOEs) and in the private sector (Tunisian or foreign or mixed privately owned company, private household business, and so on), type of contract (fixed-term, open-ended, or no contract), and affiliation to social security (National Social Security Fund, National Social Security Fund, other, or no affiliation).

[50] The Blinder-Oaxaca decomposition is used to gauge the extent to which differentials in hourly wages between men and women are ascribable to differences in the observed and unobserved characteristics of the two groups. The effect associated with the first difference constitutes the explained component of the differential, also known as characteristics, composition, or endowment effect, in that it reflects the portion of the differential associated with group differences in individual observable attributes (for example, educational level, sector of activity, industry, occupation). The effect related to the second difference is referred to as the unexplained component. This embodies the portion of the wage gap stemming from the differential valuation of women and men's characteristics in the labor market that arise because of differences in unobservable characteristics or unequal pay structures between the two groups.

FIGURE 3.10. Oaxaca-Blinder Decomposition: Mean Gender Hourly Wage Differential, by Sector and Characteristics, 2012–19

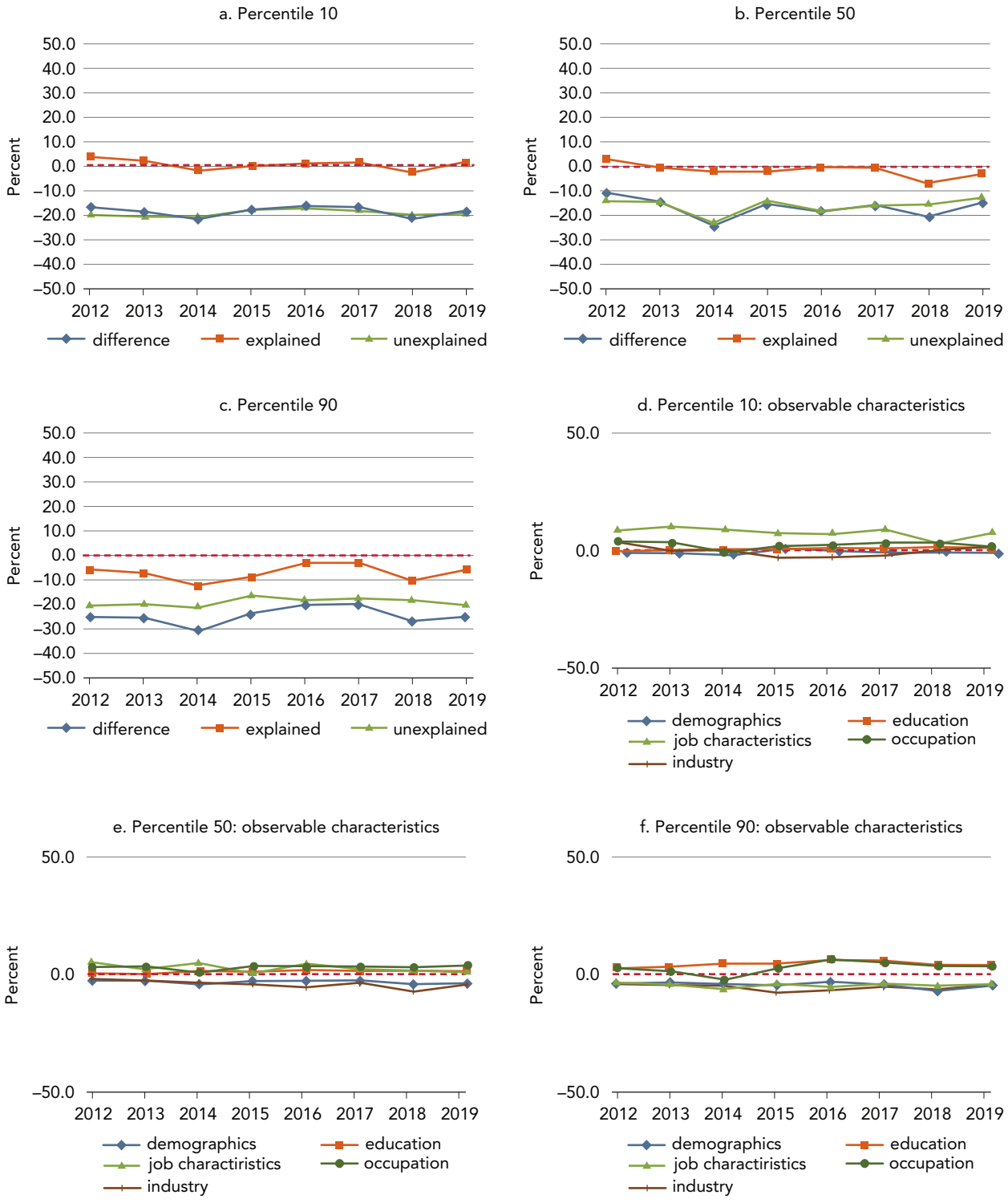
Source: Based on data from the Labor Force Survey (ENPE), INS.

In the private sector, the conditional gender hourly wage differential expands from about –16 percent at the bottom to over –25 percent at the top of the distribution.[51] In the private sector, the large bulk of the gender hourly wage difference is concentrated in the upper half of the distribution (Figure 3.11, panels a, b, and c). It was estimated at –15.6 percent at the 10th percentile, –14.7 percent at the median, and -24.9 percent at the 90th percentile in 2019. In 2012–19, it declined at the bottom and increased at the median, while it stayed roughly constant at the top. The decomposition results on this sector show that the explained and unexplained components operate in opposite directions at the bottom, whereas they both push the gender gap into negative territory at the median, particularly in recent years, and at the top (Figure 3.11, panels d, e, and f). The unexplained component contributes the largest share to the gender gap along the distribution and particularly at the bottom. Job characteristics, followed by occupation and educational level, are the main drivers of the effect in favor of women of the explained component at the bottom. In the middle and at the top of the distribution, differences between men and women in job characteristics, industrial sector, and demographic differences push the gender gap in favor of men, and the positive effect played by educational level and occupation is too modest to overturn the effect of other characteristics.

In the public sector, the gender gap differentials are lowest at the tails of the distribution and rise in the middle, displaying an inverted-U shape pattern. In 2019, at the 10th percentile,

[51] To unpack the gender gap along the distribution, an unconditional quantile regression is estimated at selected percentiles using the rifreg command in Stata.

FIGURE 3.11. Oaxaca-Blinder Decomposition: Gender Hourly Wage Differential at Selected Percentiles, Private Sector, 2012–19



Source: Based on data from the Labor Force Survey (ENPE), INS.

the conditional hourly wage gap was estimated at about 6 percent, in positive territory compared with 2012 (–9.6 percent), at about 36.0 percent at the median (up from 17.8 percent in 2012), and at about 20.4 percent at the 90th percentile (similar to the gap observed in 2012, 19.2 percent) (see Figure 3.12, panels a, b and c). At the bottom and at the median, the two components exert a positive effect—that is, in favor of women—on the gender wage gap. Meanwhile, at the top, the unexplained component plays a negative effect, but the size of the effect is not sufficiently large to undo the positive effect of the observable characteristics of women. In addition, at the top and at the median, the explained component plays the largest role, and, at the bottom of the distribution, the unexplained component contributes 60 percent to the gender wage gap. Similar to the case at the mean, differences in educational level and occupation are the main drivers of the positive effect of the explained component at each of the selected percentiles, and the differences in industrial composition exert a positive effect only at the top (Figure 3.12, panels d, e, and f).

Overall, these results suggest that, in the private sector, the wage gap in favor of men is, to some extent, ascribable to systematic differences in the jobs to which women have access, and women's higher educational levels are not sufficient to compensate for such obstacles. The main factor behind the gender wage gap in the private sector remains, however, related to differences in unobservable characteristics or in the pay structure, that is, an unequal pay structure to the disadvantage of women. By contrast, women in the public sector receive a wage premium relative to men thanks to the considerably more productive endowments of women and even though the unexplained component operates in favor of men at the top of the distribution.

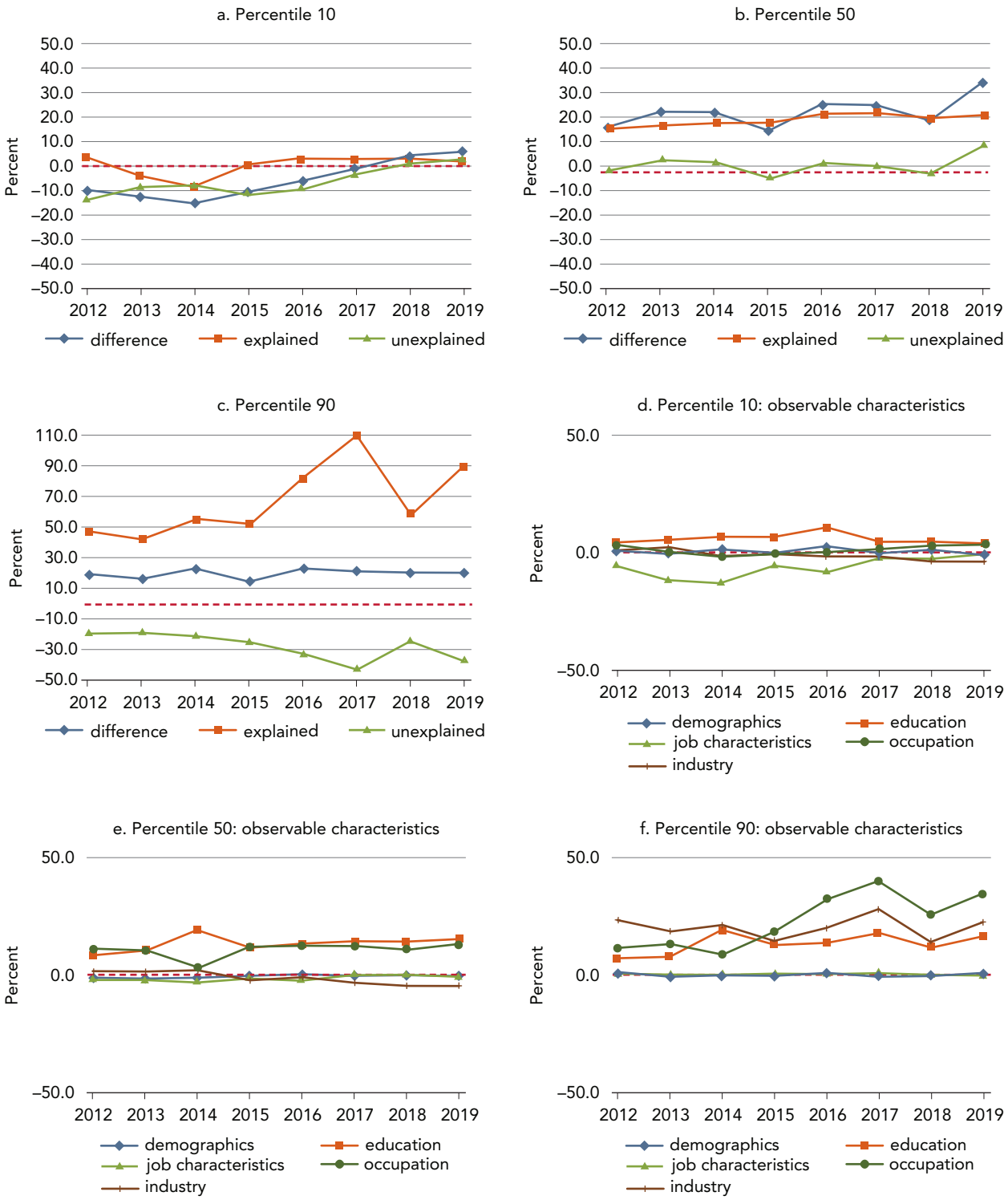
Low wages among women in the private sector may reduce women's incentives to join the labor force. Women are likely to continue to bear most of the household burden in housework and family care because of assigned gender roles (World Bank 2021a). Such activities compete for women's time spent with work on the labor market. The wage gap might keep some women out of the labor market or push some women to look for less competitive and less remunerative career paths and greater flexibility at work. Reducing and eliminating the gender wage gap in the private sector has the potential of helping increase women's participation and contributing to promoting inclusive growth and achieving the full potential of the economy, particularly among women with little education. In addition, labor market segregation and assigned gender roles can contribute to the gender wage gap. Data of the most recent available round of the labor force survey show that, in 2017, women and men tended to work in different sectors in the economy. Manufacturing (textiles, mechanical goods, and electrical equipment), trade, and social and cultural services are the three most important sectors of women's employment in the private sector, and construction, agriculture, and trade dominate among men in the private sector. Gender differences in the industrial sector of employment, occupation, and enterprise size contribute to the observed gender wage gap.

WAGE GAPS AMONG SECTORS

Workers employed in the public and the private sectors have different observable characteristics as do formal and informal workers employed in the private sector. This section investigates the existence of wage gaps between wage workers in the public and private sector and the existence of wage gaps between formal and informal workers conditional on a set of observable individual and job characteristics.

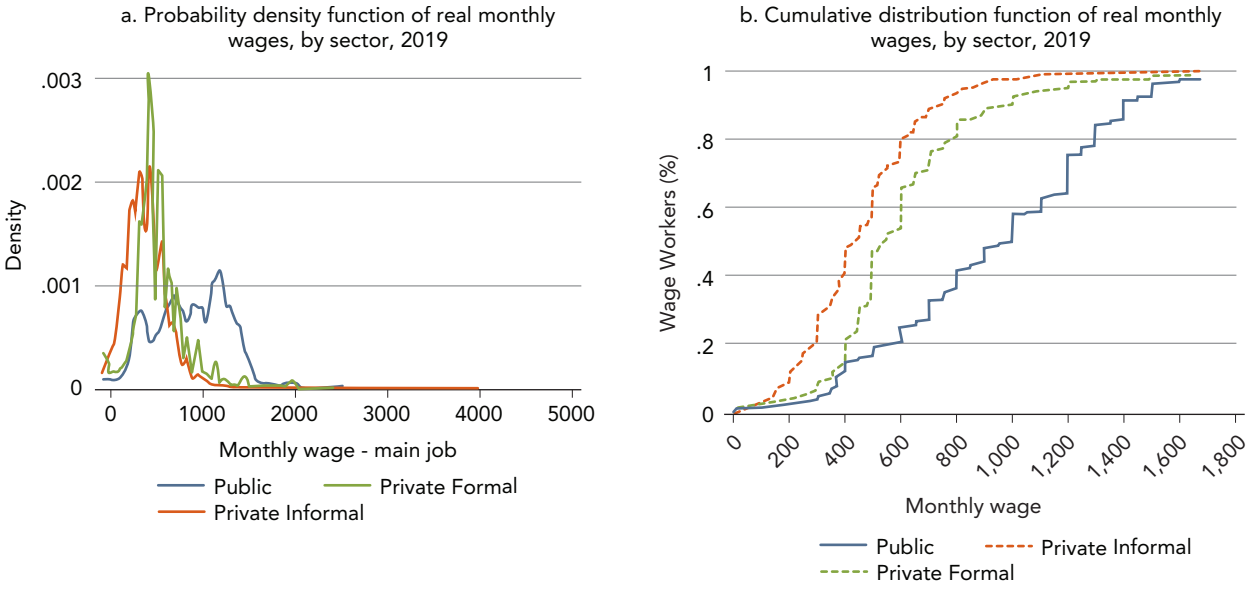
Formal (informal) private sector workers made, on average, $0.65 ($0.50) to the $1.00 made by public sector workers in 2019. There were sizable unconditional average wage gaps between public and private sector wage workers and, in the private sector, between formal and informal wage workers. The density of the monthly wages of wage workers employed in the public sector was shifted to the right of the density of the monthly wages of private sector workers, and there is only a partial overlap (Figure 3.13-panel a). There was thus a larger share of public sector workers with high wages compared with workers in the private sector. By contrast, the density function of formal and informal workers in the private sector shows a significant overlap. The density of the wages of informal workers slightly shifted to the left of the density of formal workers. A larger share of informal wage workers earn low wages relative to formal wage workers. The median monthly wage among public sector workers is about TD 1,000, which compares with about TD 540 and TD 435 in the case of formal and informal wage workers, respectively. The large differences are evident by looking at the cumulative distribution functions, which denote the proportion of wage workers whose wages fall below a given level, illustrated in Figure 3.13, panel b. For example, less than 25 percent of public sector wage workers have a wage of TD 600 or lower, whereas the percentage is about 67 percent and 80 percent in the case of formal and informal wage workers.

FIGURE 3.12. Oaxaca-Blinder Decomposition: Gender Hourly Wage Differential at Selected Percentiles, Public Sector, 201219



Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 3.13. Probability Density and Cumulative Distribution Functions of Real Monthly Wages, by Sector, 2019



Source: Based on data from the Labor Force Survey (ENPE), INS.
Note: CDFs are truncated at the 99th percentile.

CONDITIONAL WAGE GAPS BETWEEN PUBLIC AND PRIVATE SECTOR WORKERS

In 2019, conditional on observable characteristics, wage workers employed in the public sector earned, on average, over twice as much as wage workers in the private sector per hour worked. Considerable differences exist between wage workers employed in the public and private sectors, including sex, age, educational level, geographical location, industry, and occupation. Therefore, it is crucial to investigate the existence of wage gaps while controlling for observable characteristics. The conditional hourly wage differentials are estimated through wage equations and are reported in Figure 3.14, panel a.[52] The results indicate that, in 2019, wage workers in the public sector were paid, on average, over twice the amount paid per hour worked to workers in the private sector. The estimated public-private hourly wage gap declined from about 112 percent in 2012 to 89 percent in 2015 and then increased to around 106 percent in 2016–19.

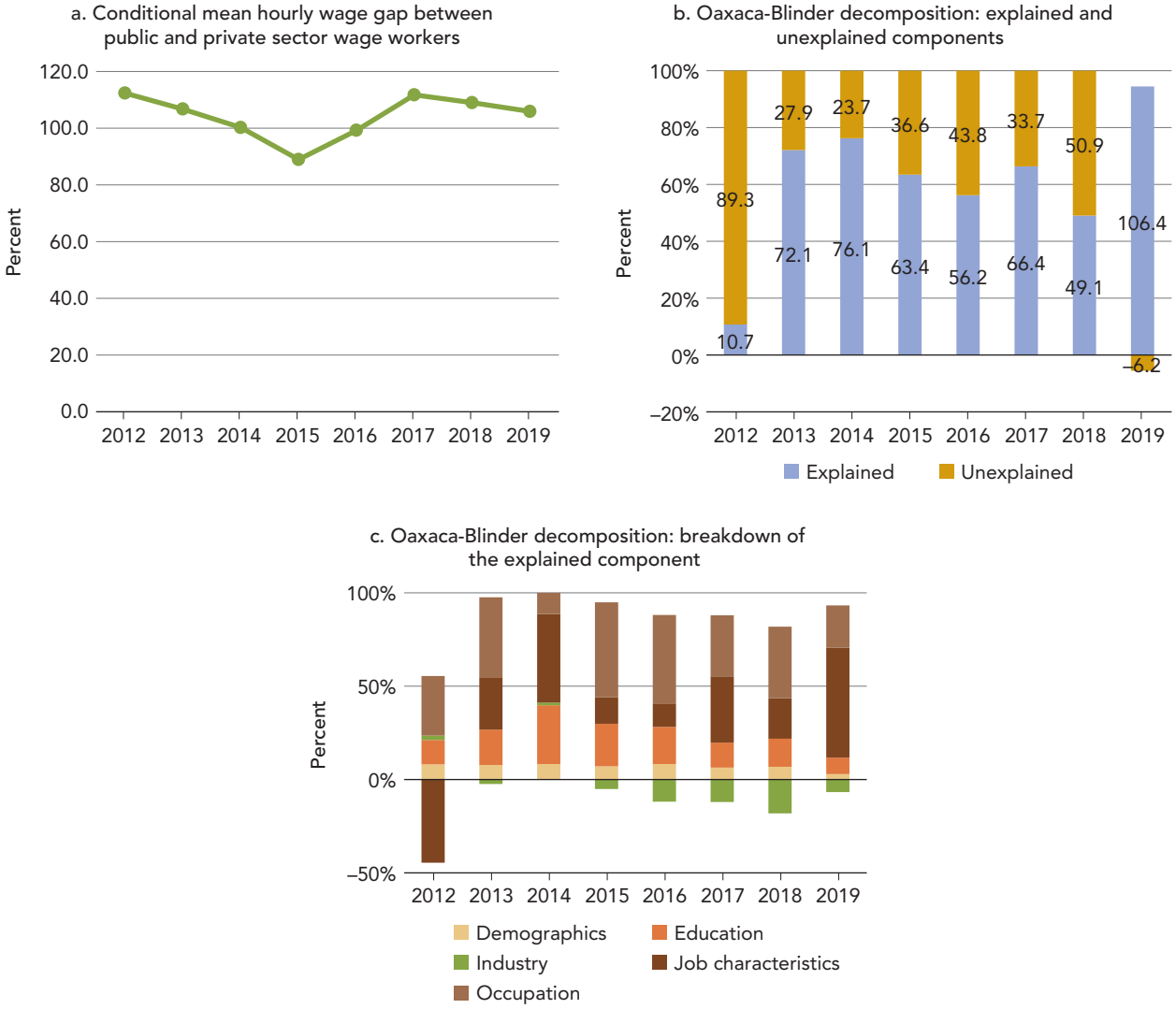
A large part of the average public-private hourly wage gap is explained by differences in the characteristics of the wage workers employed in the two sectors. Estimates from a twofold Blinder-Oaxaca decomposition indicate that the explained component contributes in all years, except 2012, 50 percent or more to the estimated gap (Figure 3.14, panel b). Differences in observable characteristics exert a positive effect on the hourly wage gap that shores it up in favor of public sector workers. Among observable characteristics, the type of occupation and other job characteristics seem to play the largest role, followed by educational level (Figure 3.14, panel c). There are also unobservable characteristics or a wage premium in favor of workers in the public sector.

YOUNG UNIVERSITY GRADUATES: UNEMPLOYMENT AND THE PUBLIC SECTOR WAGE PREMIUM

In 2019, the average monthly salary of youth ages 25–34, with tertiary education and employed in public administration was estimated at about TD 1,030, which compares with about TD 1,244 in the case of SOEs and with TD 734 and TD 466 in the case of a formal and informal employee in the private sector, respectively (Figure 3.15). A university graduate could thus expect to make, on average, about 40 percent more as a civil servant compared with a formal employee in the private sector and 1.2 times the amount gained by informal employees. The gap in hourly wages was

[52] Regressions control for a second-degree polynomial in age and individual dummies for year-of-birth cohorts, educational level, region and urban or rural location of residence, occupation, industry and sectoral category, that is, the domain of employment in the public sector (public administration, SOEs) and in the private sector (Tunisian or foreign or mixed privately owned company, private household business, and so on), type of contract (fixed-term, open-ended, or no contract), and affiliation to social security (National Social Security Fund, National Social Security Fund, other, or no affiliation).

FIGURE 3.14. Oaxaca-Blinder Decomposition: Mean Hourly Wage Differential, Wage Workers in the Public and Private Sectors, 2012–19



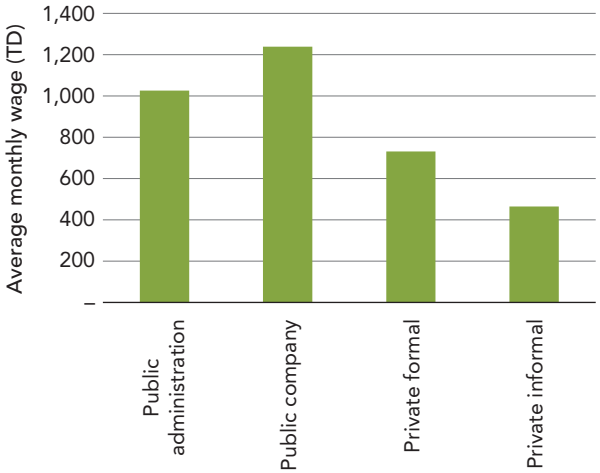
Source: Based on data from the Labor Force Survey (ENPE), INS.

even higher because employees in the public sector tend to work shorter hours relative to employees in the private sector. The average hourly salary of a university graduate ages 25–34 was estimated at about TD 8.0 in public administration and TD 3.8 and TD 2.7 as a formal and informal employee in the private sector, respectively. This is in addition to the allowances, job security, and more favorable leave policies that the public sector provides (see Box 3.1).

Among youth with tertiary education, the public sector pays, on average, about 120 percent more per hour worked relative to the private sector. Because workers employed in the public sector and the private sector differ considerably in observable characteristics, conditional wage gaps are a better indicator of whether working in the public sector pays higher hourly wages than working in the private sector, all else being equal. In 2019, wage workers ages 25–34 with tertiary education employed in the public sector, which comprises public administration and SOEs, were paid, on average, about 120 percent more per hour worked relative to workers in the private sector. This is slightly higher than the average gap estimated among all wage workers (estimated at 106 percent in 2019).

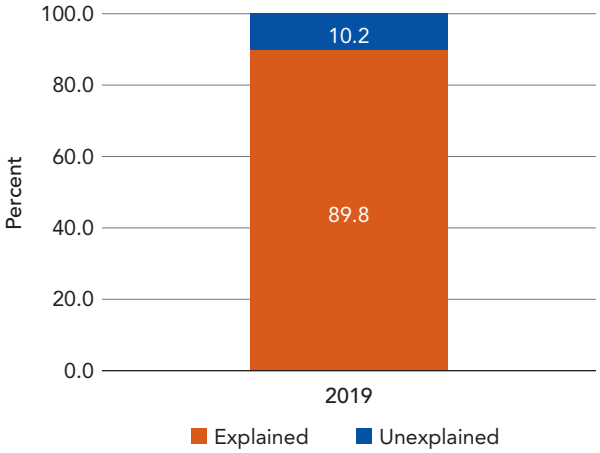
The gap is largely ascribable to differences in observable characteristics. The twofold Oaxaca-Blinder decomposition

FIGURE 3.15. Unconditional Mean Monthly Wage Gap, by Sector, 25–34 Age-Group with Tertiary Education, 2019



Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 3.16. Oaxaca-Blinder Decomposition: Mean Hourly Wage Differential Between Wage Workers Ages 25–34 with Tertiary Education and Employed in the Public and Private Sector, 2019



Source: Based on data from the Labor Force Survey (ENPE), INS.

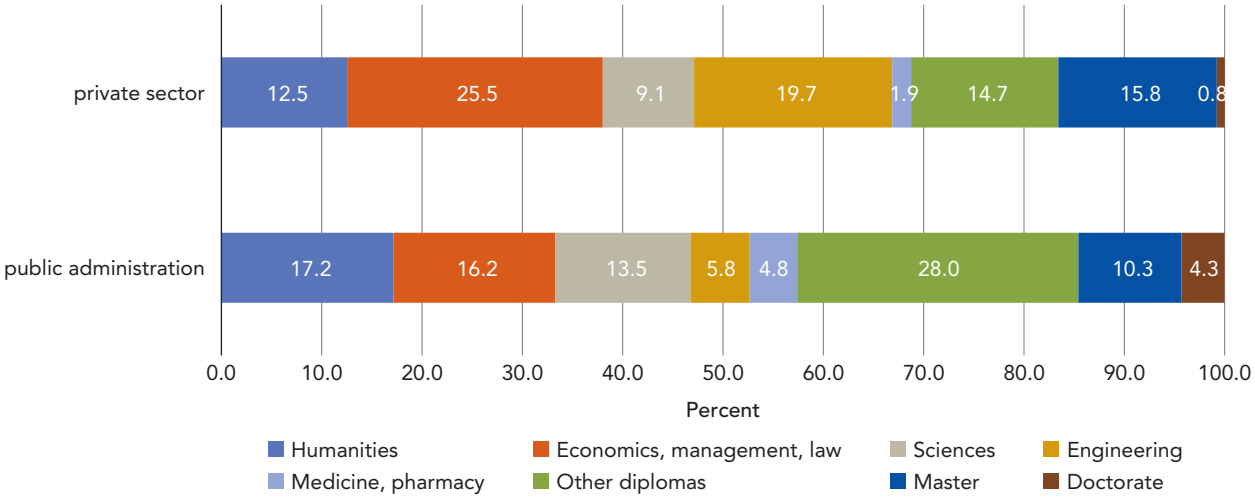
of the conditional hourly wage gap indicates that about 90 percent of the difference is ascribable to differences in observed characteristics. The characteristics that matter the most in explaining the wage gap are occupation, type of contract, place of work, and access to social security. Thus, youth with tertiary education are more likely to gain access to jobs that have specific characteristics positively correlated with wages in the public sector relative to the private sector. Although there are also unobservable characteristics and a wage premium in favor of wage workers in the public sector, this component contributes about 10 percent to the wage gap (Figure 3.16). This raises the question about whether expectations of a higher salary as a civil servant, largely ascribable to the characteristics of the relevant jobs, raise the reservation wage of young university graduates and incentivize them to queue for a public sector job while idle.[53] So, the question is what youth with the same level of education as civil servants might do.

About 1 youth ages 25–34 in 2 employed in public administration in 2015 obtained a certificate of tertiary education. Among these, 17.2 percent had a degree in humanities, compared with 12.5 percent in the private sector, followed by 16.2 percent with a degree in economics, management, or law, significantly lower compared with the same group (25.5 percent) in the private sector (Figure 3.17). The share of engineers, at 5.8 percent, was three times smaller in public administration, compared with the private sector (19.7 percent), whereas the share of youth with a degree in medicine or pharmacy was about twice as large in public administration relative to the private sector (4.8 percent vs. 1.9 percent). The share of youth with a master's degree was estimated at 10.3 percent in public administration and 15.8 percent in the private sector, whereas the share of employees with a doctorate degree was about four times larger in public administration (4.3 percent vs. 0.8 percent).

Fewer than 1 university graduate in 2 not working as a civil servant is employed, and about 1 in 4 holds a formal wage job in an SOE or in the private sector. About 46 percent of youth ages 25–34 with tertiary education and not working as civil servants were employed in 2015. Of this pool, almost 55 percent were employed in SOEs (17 percent) or formally in the private sector (38 percent) (Figure 3.18, panel a). About 29.2 percent were informal employees, and the rest were roughly evenly split between employers and own-account workers, plus a residual 1.8 percent of unpaid family workers. It is difficult to ascertain whether some of the youth employed outside public administration saw their jobs as a temporary buffer while waiting for their preferred job in the public sector or as a good employment

[53] It is difficult to provide direct evidence regarding queuing for jobs in public administration and the size of the queue because data on the number of job applications and openings would be required to construct measures of the size of the queue as the number of applicants per job posting. An example is the study of Krueger (1988), who finds that the application rate for federal jobs in the United States increases as the ratio of government to private sector earnings increases, although the rate is not related to the relative level of fringe benefits.

FIGURE 3.17. Youth Ages 25–34 with Tertiary Education, Employed in Public Administration and in the Private Sector, by Type of Degree, 2015



Source: Based on data from the 2015 Household Budget Survey (HBS), INS.

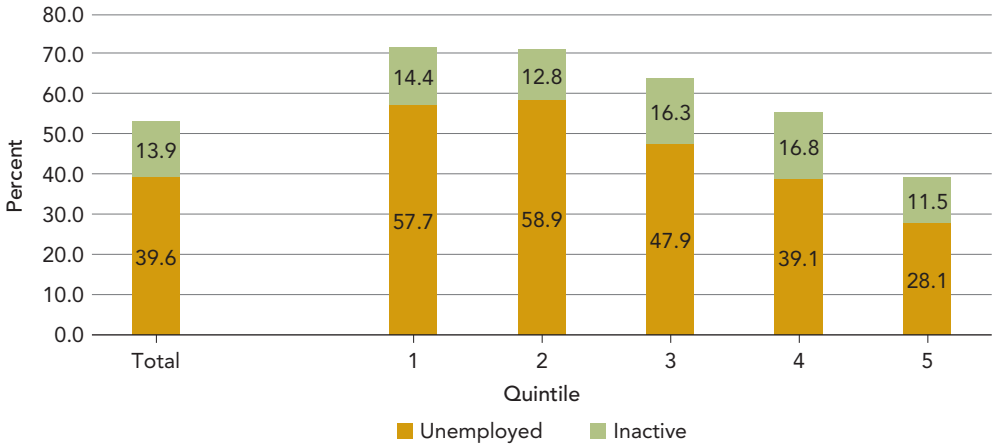
outcome. The distribution by quintile of household per capita expenditure indicates that the share of informal workers, particularly informal employees and unpaid family workers, is considerably larger at the bottom of the distribution (Figure 3.18, panel b). It cannot be ruled out that some of the youth who belong to less affluent households work in the private sector, while waiting to gain access to a job in public administration.

The rest are either unemployed or inactive, and their incidence is larger at the bottom of the distribution. Among university graduates who were not employed in public administration in 2015, about 46 percent had jobs elsewhere, and the remaining 54 percent were either unemployed (39.6 percent) or inactive (13.9 percent) (Figure 3.19). Youth with tertiary education predominantly belong to the middle and upper class, and, as a consequence, the distribution

FIGURE 3.18. Profiles of Youth Ages 25–34 with Tertiary Education, Employed Outside Public Administration, by Type of Employment and Quintile of Household per Capita Expenditure, 2015

Source: Based on data from the 2015 Household Budget Survey (HBS), INS.

FIGURE 3.19. Share of Unemployed and Inactive Youth Ages 25–34 with Tertiary Education, by Quintile of Household per Capita Expenditure, 2015



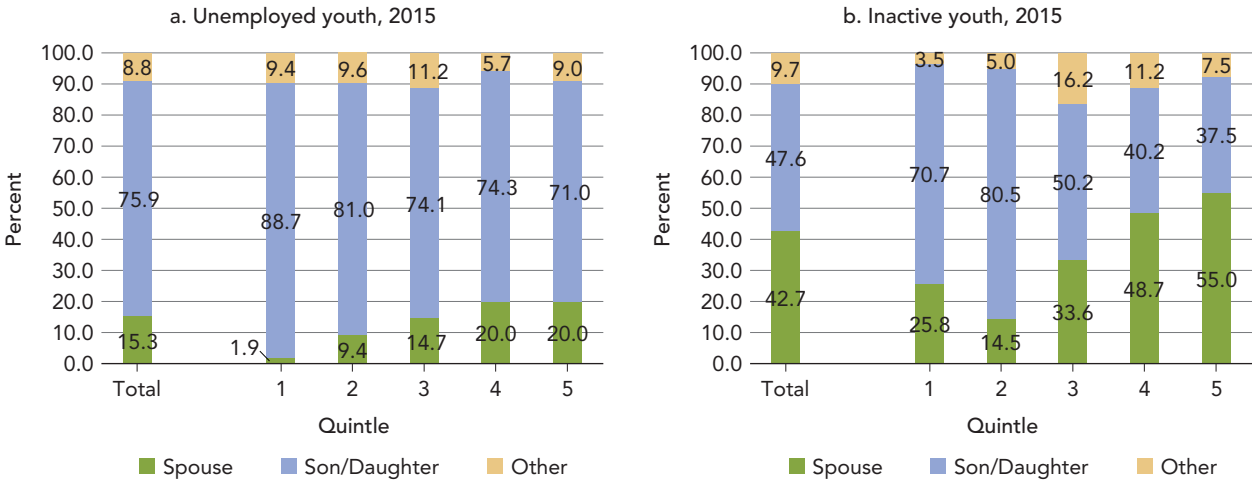
Source: Based on data from the 2015 Household Budget Survey (HBS), INS.

of unemployed and inactive youth is also skewed toward the middle and upper tail of the distribution. The rate of unemployed or inactive youth, by quintile of the distribution of household per capita expenditure, declined from about 72 percent in the lowest quintile to about 40 percent in the highest quintile.

University graduates who are unemployed or inactive live with their parents or, in the case of women, are married to a working man. The majority of unemployed youth live with their households of origin (about 76 percent), and the share declines progressively from the bottom (88.7 percent) to the top (71.0 percent) in favor of spouses (Figure 3.20, panel a).

The pool of inactive youth is more evenly split between those who live with their parents (47.6 percent) and those who live with spouses (42.7 percent) (Figure 3.20, panel b). This is largely ascribable to the sex and age composition of the pool of inactive youth with tertiary education who comprise a larger share of women, particularly of women ages in the early 30s relative to the pool of unemployed youth. The share of spouses peaks at the top of the distribution: 55.0 percent relative to 25.8 percent in the lowest quintile, while the share of children shifts in the opposite direction from 70.7 percent to 37.5 percent (Figure 3.20, panel b). Furthermore, most unemployed youth complain about a lack of jobss, whereas inactive youth report that

FIGURE 3.20. Distribution of Unemployed and Inactive Youth Ages 25–34, with Tertiary Education, by Quintile of Household per Capita Expenditure and Relation to the Household Head, 2015



Source: Based on data from the 2015 Household Budget Survey (EMNVB), INS.

household duties are the main reason they are not engaged in the labor market. This may be linked to the fact that women tend to take up most of the burden of household responsibilities as they marry. The large majority of both unemployed and inactive youth have never worked before (more than 78 percent and 71 percent, respectively), and those who did work in the past only did so for short periods, typically up to six months during the year preceding the survey.

The limited creation of suitable jobs in the private sector, assigned gender roles, and a sizable public sector wage premium are plausible causes of the high rate of nonemployment observed among university graduates. Available data do not allow a definite answer to the question on why more than 1 university graduate ages 25–34 in 2 is looking for a job or inactive. Nonetheless, the evidence illustrated above helps corroborate some hypotheses. First, the inactive youth with a university degree are predominantly women in their late 20s and early 30s, married to working men, in the middle class, and living in affluent households. The inactivity status is likely attributable to the role women have in the household as they get marry, together with the limited creation of private sector jobs suitable for university graduates. Second, unemployed graduates are largely young men living with their parents, which shows a considerable incidence at the bottom of the distribution. This may indicate that the main reason for the high unemployment rates are scarcity of suitable jobs in the private sector, together with the expectation of gaining access to high-paying jobs in the public sector. The greater incidence of unemployment at the bottom of the distribution may be explained by the employment of household members in public administration. Estimates of a multinomial regression indicate that, after controlling for other characteristics, the employment of household members ages 35 or more in the public sector is positively correlated with the probability of university graduates working in public administration. The possible explanations of these effects may include both push and pull factors. In the first case, a civil servant in the household may provide more incentives to participate in concours. In the second case, the presence of a household member employed in the public sector may increase the chances of being hired in the public sector thanks to a network effect. Based on qualitative interviews, Brockmeyer, Khatrouch, and Raballand (2015) argue that, before the 2011 revolution, the civil service recruitment system was functioning well, despite occasional interference in favor of candidates with support from the dominant political party; the system deteriorated thereafter. The general amnesty of 2011 and the exceptional provisions approved in 2011/12, which allowed for direct recruitment, as well as the regularization of contract and temporary workers between 2011 and 2014 may have contributed to favoring well-connected candidates over qualified candidates. Data from the QoG Expert Survey indicate that there were no improvements in the meritocratic recruitment indicator in Tunisia between 2013 and 2019.[54]

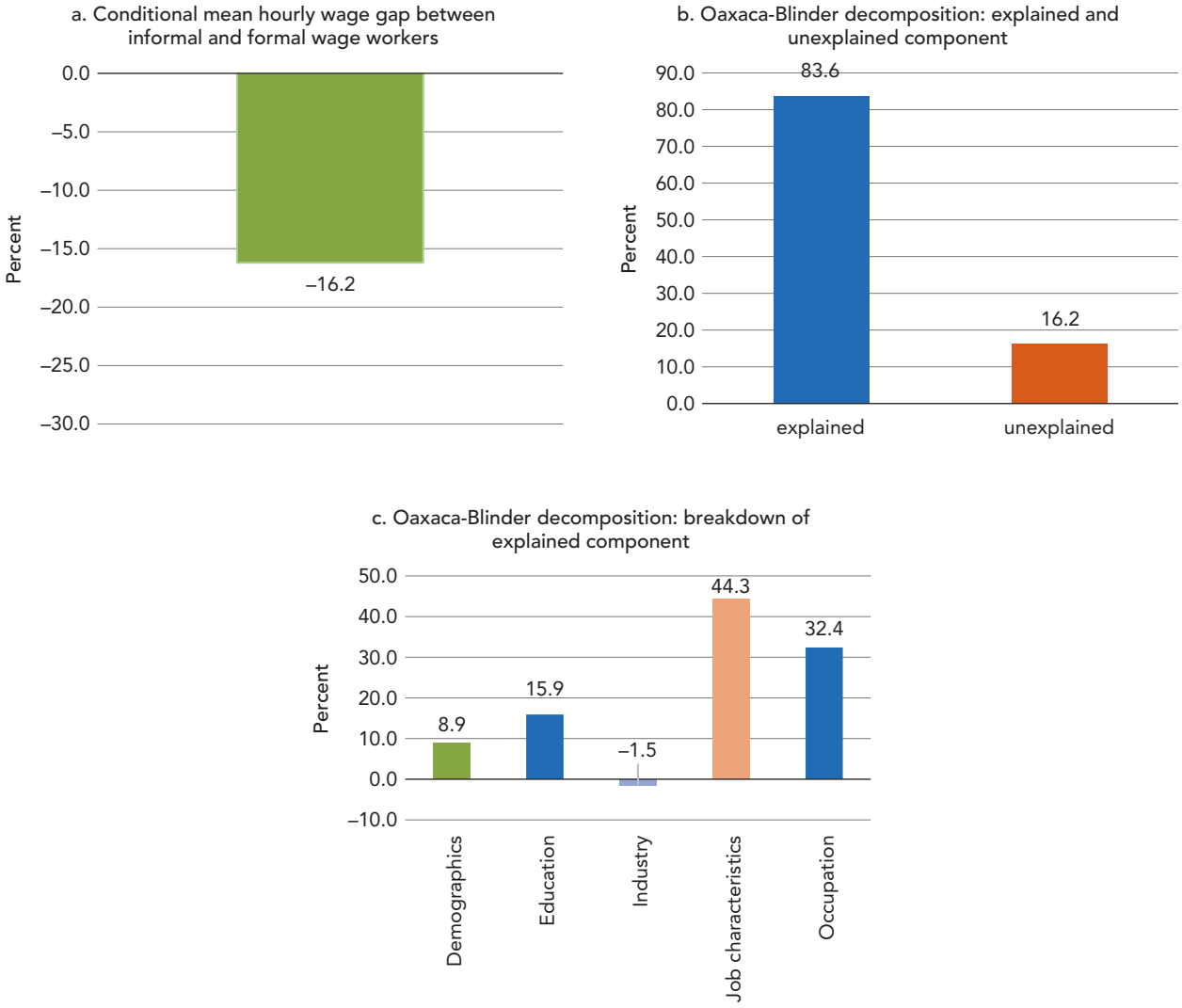
CONDITIONAL WAGE GAPS BETWEEN FORMAL AND INFORMAL WORKERS IN THE PRIVATE SECTOR

In 2019, formal wage workers made, on average, 16 percent more than informal wage workers per hour worked, and over 80 percent of the difference was explained by observable characteristics. The conditional formal-informal hourly wage gap was estimated at 16.2 percent, on average, in 2019 (Figure 3.21, panel a). About 84 percent of the difference is ascribable to differences in observable characteristics (Figure 3.21, panel b). Formal wage workers are more well endowed than informal wage workers with characteristics positively correlated with wages. In particular, job characteristics (including place of work, type of contract, and enterprise size), type of occupation, and educational level, together, explain over 90 percent of the explained component (Figure 3.21, panel c). The unexplained component acts in the same direction as the observable characteristics, that is, in favor of formal wage workers. In addition, considering that informal workers do not pay income taxes on their wages, the unexplained wage gap may be even smaller in the upper half of the wage distribution. The personal income tax system entails a zero tax area up to TD 5,000 per year, which corresponds to about TD 417 per month (slightly below the median wage of informal wage workers).[55]

[54] The QoG Expert Survey is a survey of 1,294 public sector experts in 159 countries. The survey asks experts about the structure and behavior of public administration, such as hiring practices, politicization, professionalization, and impartiality. An indicator gauges whether civil servants are appointed and evaluated according to professional criteria. Tunisia's score has been constant at 50 over time. A 50 score is earned if any of the following conditions apply: (a) not all civil servants are appointed because of their merits, (b) not all appointees are free of conflicts of interest, and (c) performance evaluations are not always based on standard benchmarks. See QoG Expert Survey (Quality of Government Expert Survey), Quality of Government Institute, University of Gothenburg, Gothenburg, Sweden, https://www.gu.se/en/quality-government/qog-data/data-downloads/qog-expert-survey.

[55] The following income bracket, between TD 5,000 and TD 20,000 per year, is taxed at a rate of 26 percent.

FIGURE 3.21. Oaxaca-Blinder Decomposition: Mean Hourly Wage Differential Between Formal and Informal Wage Workers, Private Sector, 2019



Source: Based on data from the Labor Force Survey (ENPE), INS.

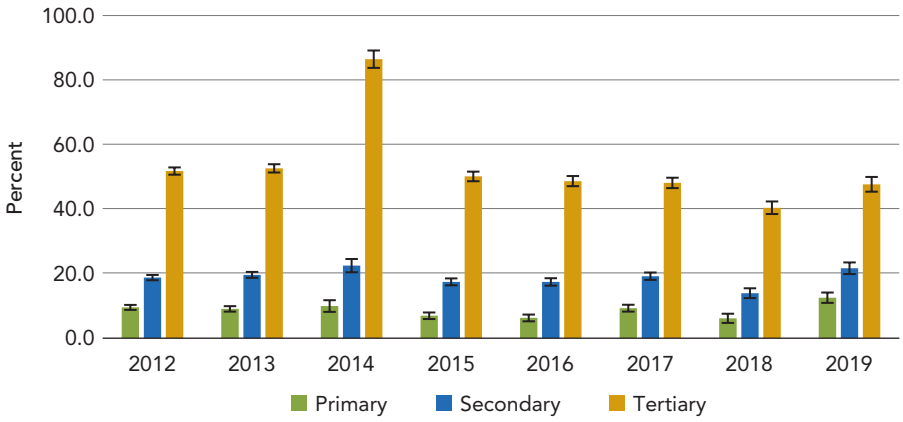
RETURNS TO EDUCATION AND OTHER CORRELATES OF WAGES

This subsection describes correlates of wages and documents the returns to education overall and separately in the public and private sectors and by sex.[56]

Returns to education, particularly tertiary education, are sizable and do not increase monotonically with the level of education. In 2019, workers with primary education enjoyed a premium of about 12.6 percent per hour worked relative to workers with no schooling (Figure 3.22). Secondary education yielded an additional premium of about 9.1 percent (21.7 percent – 12.6 percent) relative to primary education, and tertiary education a further premium of 26.1 percent (47.8 percent – 21.7 percent) relative to secondary education. This is consistent with existing evidence from developing countries (Psacharopoulos and Patrinos 2018), although the increment from secondary to tertiary education is quite large in the case of Tunisia and contrasts with the limited evidence

[56]The returns estimated in this subsection are a coarse measure of private returns to schooling. Some of the categories lump together more than one certificate or diploma. In particular, tertiary education comprises multiple educational attainments such as bachelor's, master's, and doctorate degrees. For these reasons, the returns to one additional year of schooling at different levels of education are not provided. Instead, a coarse measure of the returns to different levels of education is presented in this analysis.

FIGURE 3.22. Returns to Education, Wage Workers Ages 15–64, 2012, 2015, and 2019



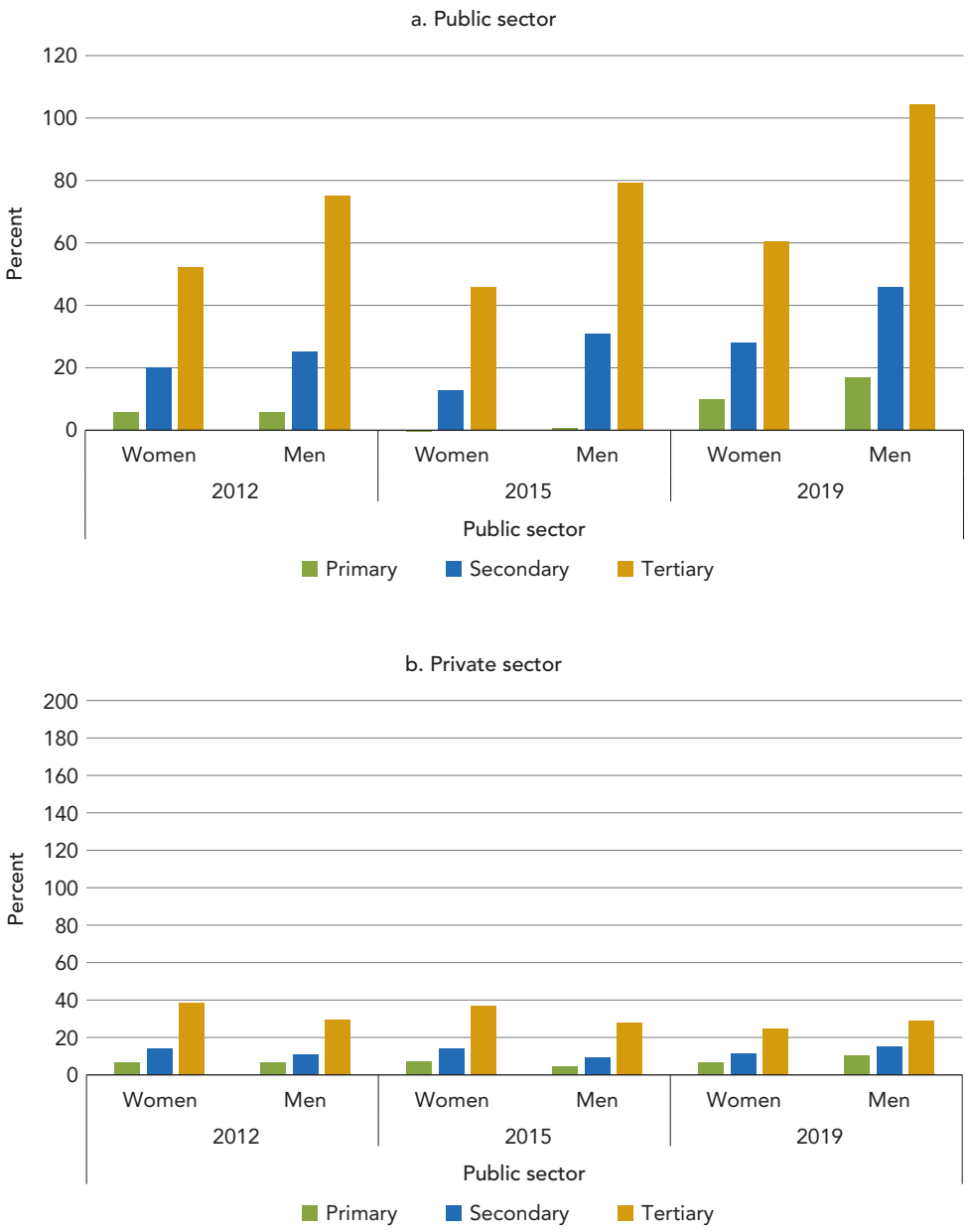
Source: Based on data from the Labor Force Survey (ENPE), INS.

available from earlier studies on Tunisia in that returns to education do not increase monotonically with the level of education (Limam and Ben Hafaiedh 2017; Zouari-Bouatour 1987; Zouari-Bouatour, Boudhraa, and Zouari 2014).

Between 2012 and 2019, the returns to primary education increased, whereas the returns to tertiary education declined. An important observed trend is that returns to tertiary education have declined over time. In 2012, the returns to tertiary education relative to secondary education were estimated at about 33 percent and gradually declined to 26 percent by 2019. The premium associated with secondary education on top of the premium of primary education hovered around 9 percent over the period. By contrast, the returns to primary education increased over time from 9.6 percent to 12.6 percent. This seems to be consistent with a growing supply of individuals of working age with university degrees that is not matched by an equally large growth in the demand for this type of educational attainment, particularly in the private sector. Another explanation of the declining returns to tertiary education concerns changes in the composition of jobs across education groups. If the supply of university graduates rises and demand does not follow, some graduates might look for jobs that require a skill level below their qualifications and thus contribute to a decline in the returns to tertiary education. Marouani and Minh (2021) find that the share of medium- and low-skill jobs performed by workers with tertiary education increased at the expense of high-skill jobs. The hypothesis of skill-biased technological change and changes in the task-content of occupations driven by the information technology revolution might contribute to the explanation. Technological change allows workers performing repetitive tasks to be replaced and can also create new functions that require a combination of technologies and high-skill workers able to perform abstract tasks. In Tunisia, the average employee performs fewer nonroutine interpersonal and analytical tasks relative to the average wage worker in Germany (World Bank 2021b). In 2017, the average routine task intensity was below the level observed in 2000, in contrast with trends observed in developed economies (Marouani and Minh 2021).

Relative to the private sector, the returns to tertiary education are about three times as high in the public sector, where they have also expanded over time. Large differences are estimated in the returns to education per hour worked between the public and the private sectors (Figure 3.23). The returns to primary education are not considerably different between the two sectors. In 2019, workers with primary education made, on average, about 11 percent more than workers with no schooling, whereas, in the public sector, the primary education premium was estimated at about 13 percent. The returns to secondary education are considerably higher in the public sector. In 2019, a wage worker with secondary education in the public sector made about 27 percent more than a worker with primary education per hour worked, which compares with a premium of about 5.4 percent in the private sector. The premium also rose over time in the public sector from 20.8 percent relative to those with primary education in 2012. Similarly, the returns to tertiary education in the public sector were about twice as high relative to the private sector in 2012, and the premium increased over time and was estimated at about

FIGURE 3.23. Returns to Education, by Sector and Sex, Wage Workers Ages 15–64, 2012–19



Source: Based on data from the Labor Force Survey (ENPE), INS.

three times as high in 2019. Public sector wage workers enjoyed a premium of about 46 percent relative to wage workers with secondary education per hour worked, which compares with about 14.4 percent in the private sector. Such large differences in the returns to tertiary education likely contribute, together with job stability, social security coverage, and other benefits, to the attractiveness of public sector jobs among university graduates.

The returns to education increase monotonically with the level of education in the public sector. The pattern identified at the aggregate level whereby returns to education follow a U-shaped curve does not hold in both the public and private sectors. In the private sector, the pattern detected at the aggregate level is respected, and the benefit of secondary education over primary is lower than the benefit of primary over no schooling. By contrast, in the public sector, the

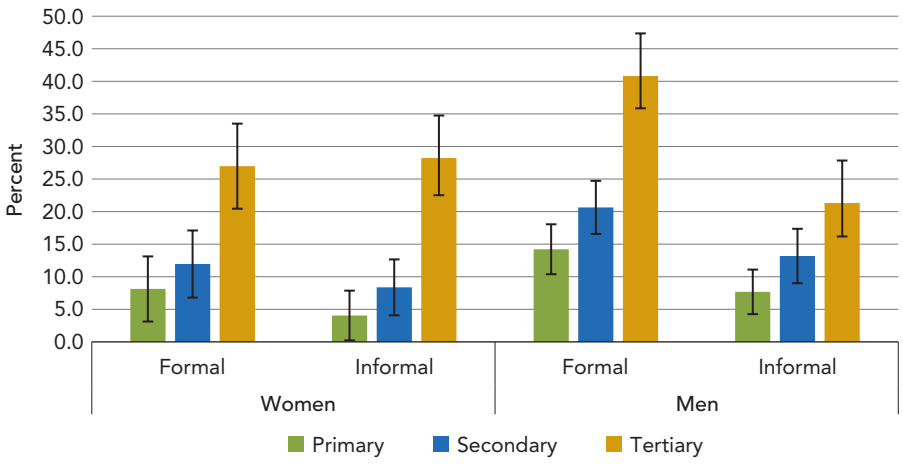
returns to education increase with the level of education, which is consistent with the findings of previous studies on Tunisia. In other words, the benefits of additional education are higher at higher levels of education.

The returns to education are higher among men relative to women in the public sector. In the public sector, returns to education are higher for men relative to women and the gap increases monotonically with the educational level (Figure 3.24). For example, in 2019, women with tertiary education enjoyed a premium of 32.6 percent per hour worked relative to women with secondary education. In the case of men, the corresponding premium is estimated at about 58.0 percent, which means a gap of almost 26 percentage points in favor of men. Similarly, women with secondary education had a premium of about 18 percent relative to women with primary education, whereas in the case of men the premium was over 10 percentage points higher. The gender difference in the wage premium associated with a primary education relative to no education was estimated at around 7 percentage points in 2019. Over time, the gender gap in the returns to education seems to have expanded. In the case of the private sector, the gender differences in the returns to education are in favor of women and have narrowed over time (Figure 3.24).

Women informal workers have higher returns to education relative to women formal workers. First, the U-shaped pattern observed in the private sector holds both among formal and informal wage workers as of 2019 (Figure 3.24). Second, a different pattern is detected between formal and informal workers by sex. In the case of men, the returns to education are higher among formal workers relative to informal ones. For example, in 2019, the returns to primary education relative to no education were about 14.0 percent per hour worked in the case of a man formal wage worker and 7.7 percent in the case of a man informal worker. The difference is considerably smaller in the case of secondary education (0.9 percentage points in favor of formal workers) and widens at the level of tertiary education (12.1 percentage points in favor of formal workers). The opposite pattern, with higher returns to education among informal workers, is detected among women, with the exception of primary education. Also, the formal-informal difference in returns is smaller in the case of women, at about –0.5 percentage points at secondary education and at –4.8 percentage points at tertiary education. Third, the returns to education are higher among men than among women at any level of education, except among informal workers with tertiary education. Among the latter, a gap of about 11.7 percentage points is estimated in favor of women.

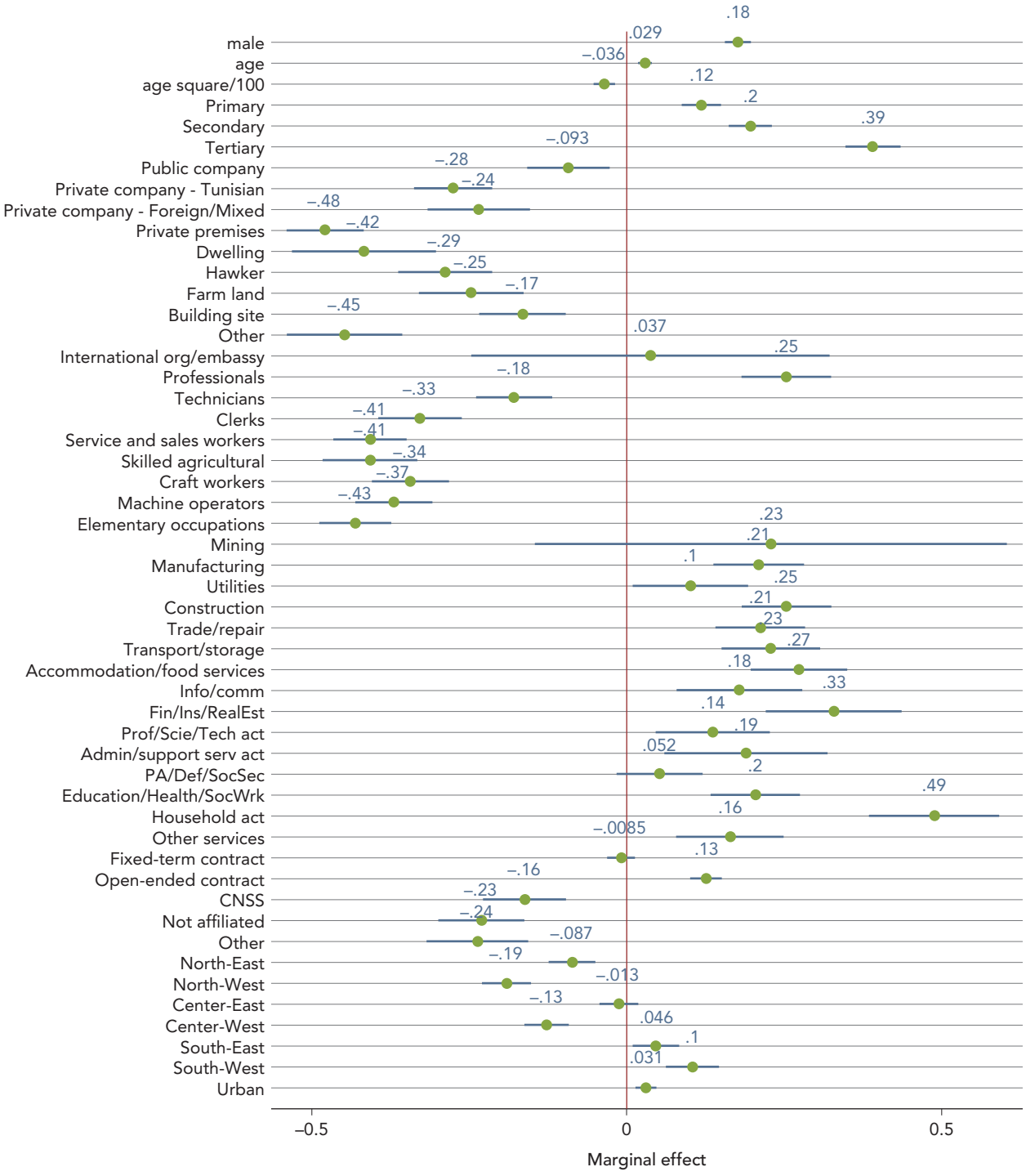
Other important correlates of hourly wages are industrial sector, occupational level, type of contract, and geographical location. Figure 3.25 illustrates the estimated coefficients of a wage regression of the logarithm of hourly wage on a set of individual and job characteristics. The industry of employment has sizable effects on hourly wages after controlling for human capital and a range of job characteristics. In 2019, for example, the interindustry wage differentials were as

FIGURE 3.24. Returns to Education Among Formal and Informal Wage Workers in the private Sector, Ages 15–64, by Sex, 2019



Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 3.25. Correlates of Hourly Wages, Wage Workers Ages 15–64, 2019



Source: Based on data from the Labor Force Survey (ENPE), INS.

high as 39 percent in financial, insurance, and real estate services, 31.5 percent in accommodation and food services, 28.8 percent in construction, 25.7 percent in mining and quarrying, 25.7 percent in transportation, 23.6 percent in trade, and 23.2 percent in manufacturing. Similarly, worker occupation contributed to large gaps in hourly wages. Relative to managers, professionals and associate professionals made almost 29 percent more per hour worked in 2019, whereas workers employed in all other occupations gained between 16 percent and 35 percent less than managers per working hour. For example, workers performing elementary occupations made about 35 percent less than managers, machine operators about 31 percent less, and craftworkers about 29 percent less than managers. The place of work, including, for example, public administration, public companies, private companies, worker dwelling, and so on also have a large effect on hourly wages. For instance, wage workers employed in a private company made between 21 percent and 24 percent less per hour worked, depending on whether the company was owned by Tunisians or was a mixed foreign and local ownership company, than the same worker employed in public administration. An open-ended contract increases hourly wages by 13.3 percent, compared with no contract, and lack of access to social security also contributes to the penalty. The marginal effects of geographical location on hourly wages are also considerable: living in urban areas increases hourly wages by about 3 percent, and living in northern or central regions has a negative effect of between 1 percent and 17 percent on hourly wages relative to workers in Greater Tunis, whereas workers in southern regions benefit from a wage premium of between 4.7 percent (South-East) and 11 percent (South-West).

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CHAPTER

4

Job Creation: Sectoral, Spatial, and Enterprise Transformation

HIGHLIGHTS

- The process of structural transformation has continued slowly over the past decade.
- Construction, agrifood and mechanical and electrical goods manufacturing in the secondary sector, and real estate, trade, and transportation activities in services have spearheaded employment creation.
- Structural transformation has not been accompanied by considerable spatial transformation: economic activities and employment opportunities remain clustered in the coastal regions of Tunisia.
- The economic landscape is dominated by microfirms: firms with fewer than six employees contribute over 98 percent of firms, of which the majority are single-person firms, and almost 50 percent of total employment.
- Small firms create the most jobs thanks to considerable firm entry, but they are also more likely to exit the market because firm mobility is limited.
- The relationship between firm size and performance is weak, and average productivity does not increase with firm age and, in fact, decreases among older firms.
- The busines environment has deteriorated and has become less conducive to investment in human and physical capital and innovation, which are key to job creation.

Enhancing productivity growth and job creation are challenges of paramount importance for many countries. Productivity is a key driver of growth and is cruxial to improving living standards through higher earnings, particularly among the bottom 40, among whom earnings are the main source of income. Labor productivity growth can be achieved in two main ways: (1) within economic sectors, through capital accumulation, technological change, or the improved allocation of resources across plants, and (2) through labor movement from sectors with lower productivity to sectors with higher productivity. As economies develop, labor reallocation across sectors, that is, structural transformation, becomes less and less important in raising labor productivity. Fostering productivity growth is the principal channel and key engine.[57]

The process of structural transformation entails a shift of labor out of agricultural toward the secondary sector and services, and it is also accompanied by a process of spatial transformation because jobs in manufacturing and services are typically concentrated in and around urban areas. In some countries, this occurs with rapid urbanization and agglomeration, and, in others, the process involves a spatial shift toward secondary cities. In Tunisia, the natural advantage provided by coastal access on the Mediterranean and vicinity to Europe, Tunisia's largest export market, has led to a concentration of economic activities and population in coastal areas, especially the North-East and Center-East regions, including Greater Tunis. According to the World Bank (2014), over 92 percent of industrial firms are within an hour's drive of the cities of Tunis, Sfax, and Sousse.

The increase in productivity within sectors requires a transformation at the enterprise level, entailing a shift toward more sophisticated and higher–value added production of goods and services as well as a shift from informal to formal firms. Dynamic and high-growth enterprises are important to the job creation and productivity growth that can translate into widely shared improvements in living standards through jobs of better quality. For this to happen, a conducive business environment is necessary, whereby labor and capital are allocated to the most productive firms and used in the most efficient manner, together with the best available technology to produce high–value added output.

This chapter assesses the channels for job creation by focusing on two main transformations: (1) structural and spatial transformation, with an analysis of changes in sectoral and spatial patterns of employment, and (2) the transformation of the landscape of private firms, with attention to changes in firm structure, productivity, and the business environment.

Structural and Spatial Transformation

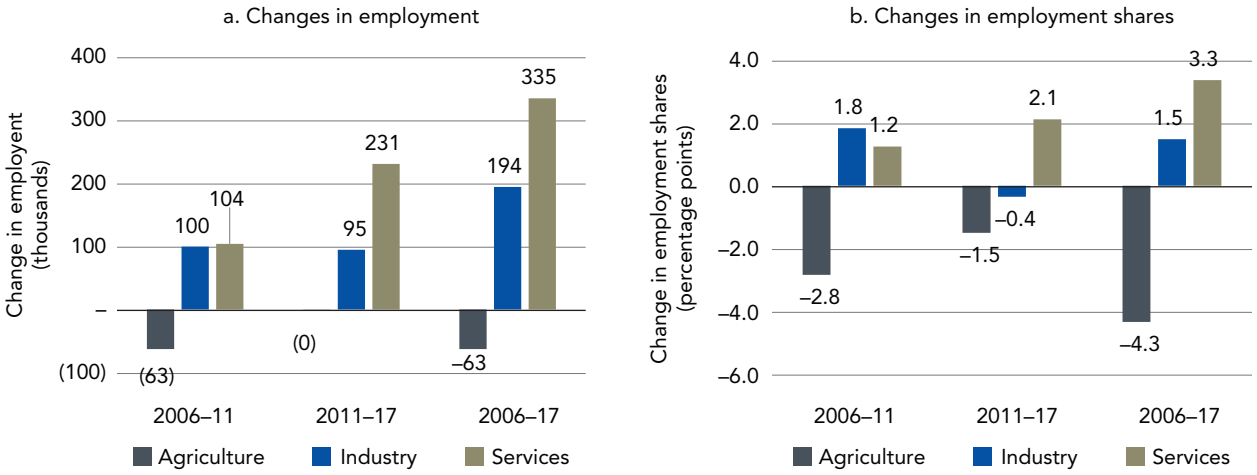
Over the decade from 2006 to 2017, the process of structural transformation continued slowly. Structural transformation proceeded at a pace slightly below the average in other middle-income countries.[58] In 2006, agriculture accounted for 19.0 percent of total employment; the share had declined to 14.8 percent (–4.3 points) by 2017 (Figure 4.1, panel b). The movement of labor away from agriculture was concentrated in the period 2006–11, when about 63,000 employed were lost in the sector. Labor moved toward secondary sectors as well as toward the services sector, with an acceleration between 2011 and 2017. The services sector's employment share increased by over 3 percentage points over 2006–17 and reached 51.7 percent in 2017. Secondary sectors posted a rise in their share between 2006 and 2011 and a small decline thereafter. Overall, about 195,000 employed were added in secondary sectors, and over 334.000 in the services sector, of which almost 70 percent occurred between 2011 and 2017 (Figure 4.1, panel a).

Construction, together with agrifood and mechanical and electrical goods manufacturing, was the driver of employment growth in the secondary sectors. While textiles continues to contribute the largest share to employment in manufacturing, its relative importance has declined. and between 2006 and 2017, the sector shed about 25,000 workers (Figure 4.2, panel a). This is the long-term consequence of the end of the Multi-Fiber Agreement in 1994, China's joining the World Trade Organization,

[57] Productivity gaps discussed in this study refer to average productivity. However, marginal productivity gaps matter and are expected to decrease as economies develop. Marginal labor productivity equals average productivity, multiplied by the share of labor input under the assumption of a Cobb-Douglas production function. Comparisons of average labor productivity are therefore meaningful only in the absence of large differences in labor shares across sectors.

[58] The average change in agricultural employment in middle-income countries over 2006–17 was –6 percentage points, whereas the average change in the secondary and tertiary sectors was +0.6 and +5.4 percentage points, respectively (based on data of World Development Indicators, ILO employment modelled estimates).

FIGURE 4.1. Changes in Employment and Employment Shares, by Sector, 2006–17



Source: Based on data from the Labor Force Survey (ENPE), INS.

China's consequent rise as a manufacturer of exports, and the pressures on low-technology exports of other countries. This raises questions about the jobs among low-skilled women, who are disproportionately employed in the textile sector. The decline in textile employment has slowed since 2011, however (Figure 4.2, panel c). In parallel, employment in agrifood and mechanical and electrical goods manufacturing has increased, contributing to an additional 87,000 jobs, representing more than three times the number of workers shed in the textile sector. Employment growth in new manufacturing sectors was driven by the diversification and sophistication of Tunisian exports, particularly the mechanical and electrical products associated with a medium level of technological intensity (Ghali and Nabli 2020; Joumard, Dhaoui, and Morgavi 2018; Figure 4.3). Construction has created jobs at a rapid pace, and the employment share rose from 12 percent to 14 percent between 2006 and 2017, with the addition of about 20,000 workers per year. The pace of employment creation in the construction sector is thought to have lost steam since the revolution.

In the services sector, employment creation was more rapid in real estate activities, trade, and transport. Within the services sector, trade and public administration, together with health and education services, employ the largest share of workers (see Figure 4.2, panel b). In 2017, the employment share of trade was estimated at about 13.2 percent,

FIGURE 4.2. Employment Levels and Employment Growth, by Secondary and Tertiary Subsectors, 2006–17

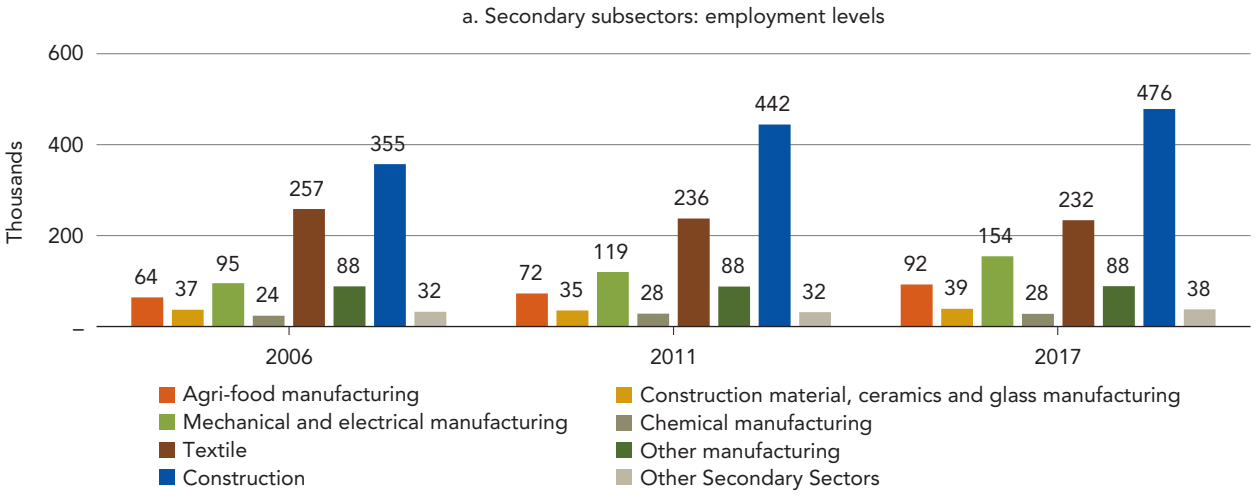


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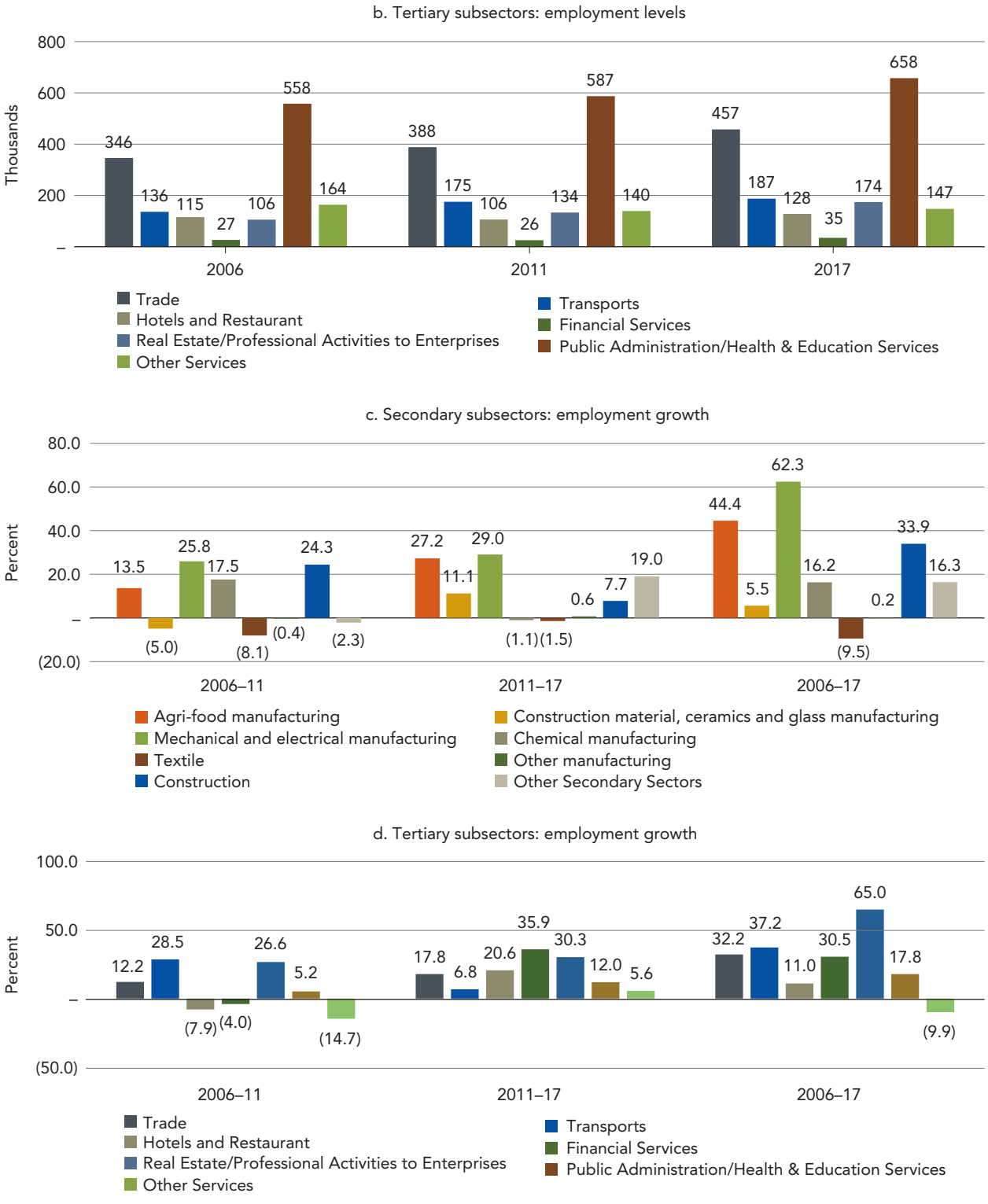
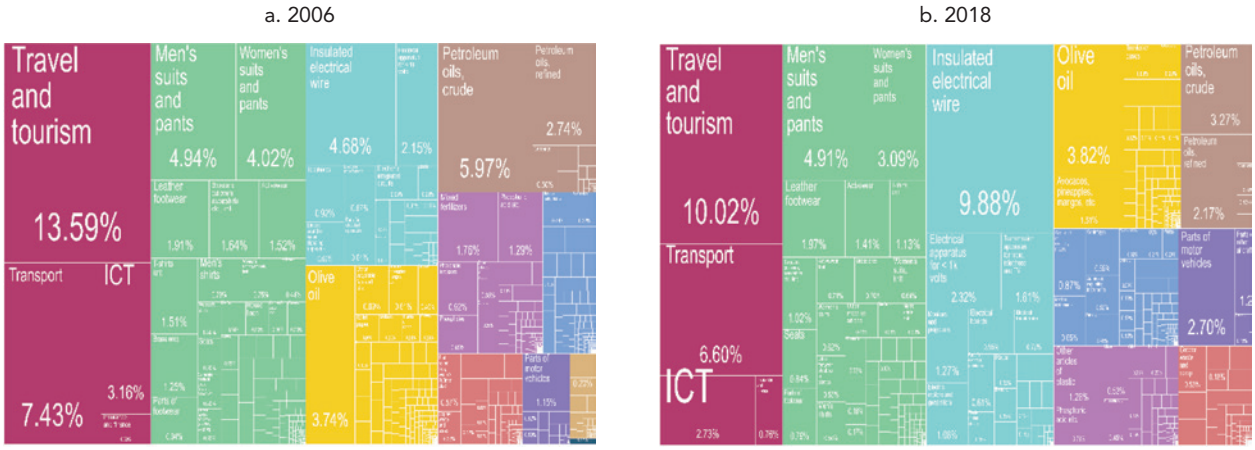
FIGURE 4.2. Employment Levels and Employment Growth, by Secondary and Tertiary Subsectors, 2006–17 *(continued)*



Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 4.3. Sectoral Composition of Exports, Tunisia, 2006 and 2018

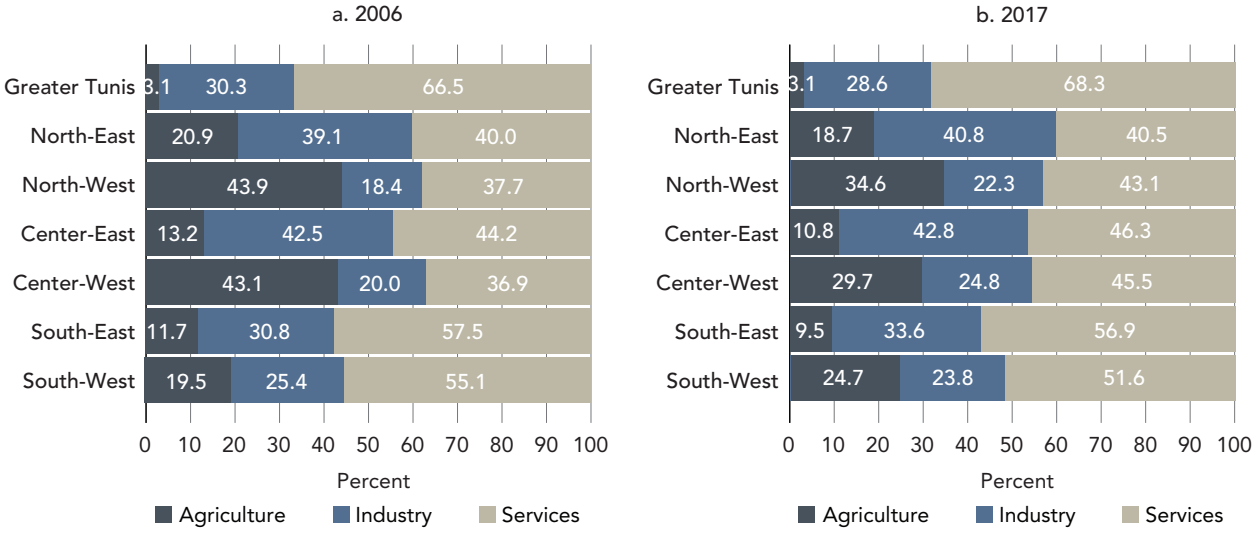


Source: Atlas of Economic Complexity (dashboard), Growth Lab, Center for International Development, Harvard University, Cambridge, MA, https://atlas.cid.harvard.edu/.

and the share of employment in public administration and health and education services was as high as 19 percent. However, employment rose at a more rapid rate in real estate services, trade, and transport (Figure 4.2, panel d): a cumulative growth of 65 percent in real estate services and above 34 percent in trade and transport between 2006 and 2017. Trade alone added over 18,000 workers a year, second only to construction.

The structural transformation of the economy has proceeded unevenly across regions. Although the process of structural transformation has continued, on average, at a slow pace over the decade, some regions achieved greater progress than others. In particular, the North-West and Center-West regions, which started with a larger share of agricultural employment in 2006, were able to progress more quickly than others in labor reallocation away from agriculture (Figure 4.4, panels a and b). In both regions, the increase in the share of nonagricultural employment was larger in the services sector compared with secondary sectors. Employment in services rose from 37.7 percent to 43.1 percent in the North-West and from 36.9 percent to 45.5 percent in the Center-West region. As of 2017, Greater Tunis, the South-East, and the South-West had the

FIGURE 4.4. Distribution of Region-Level Employment, by Sector, 2006 and 2017



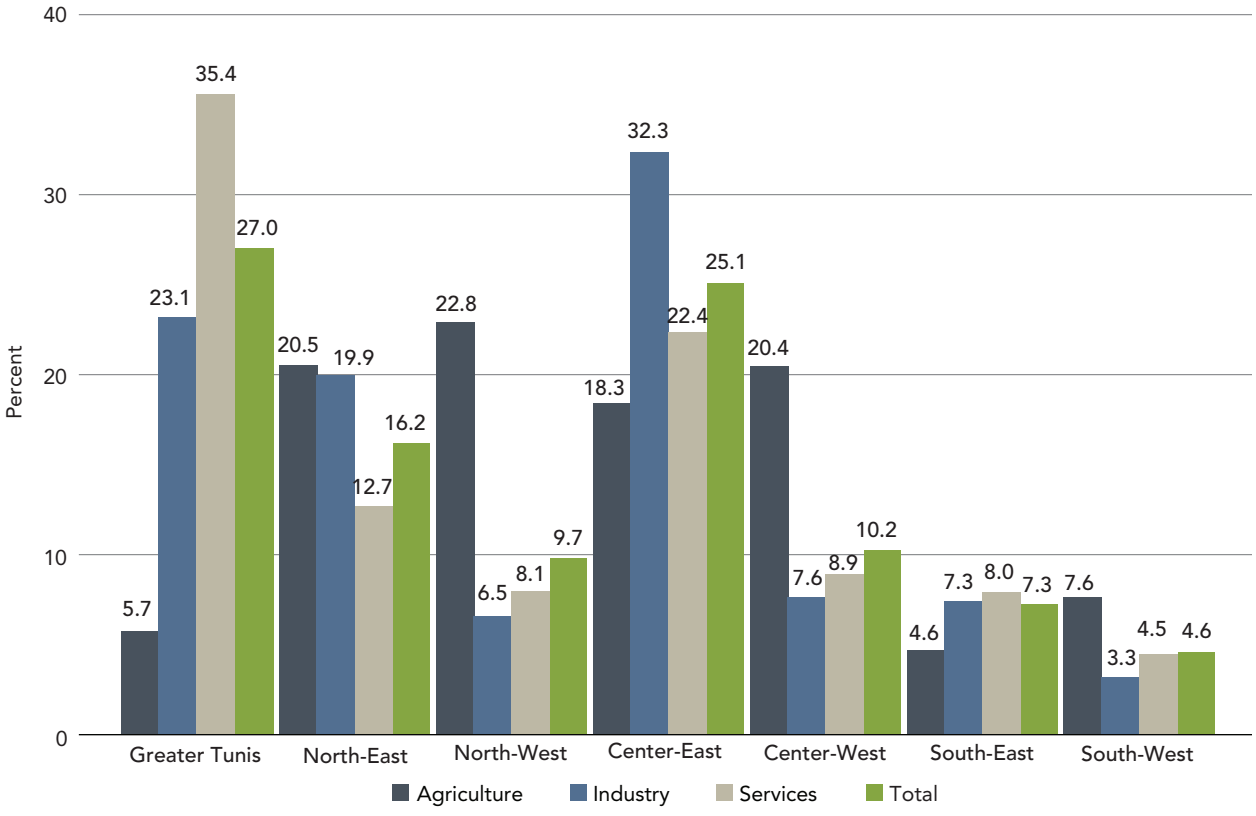
Source: Based on data from the Labor Force Survey (ENPE), INS.

largest share of employment in the services sector, whereas the North-West and Center-West had the largest share of agricultural employment despite the progress achieved over the decade. A finer sectoral breakdown indicates that the composition of the services sector is somewhat different among the three areas with the largest share of services in 2017. In Greater Tunis, banking and insurance services, real estate activities, and social and cultural services play a larger role relative to the southern regions. In the South-West, the private sector contributes considerably less to employment in services, and the share of employment in public administration, education, and health services is significantly larger (28.9 percent) compared with the other two areas (Greater Tunis and the South-East).

Employment in the services sector is concentrated in Greater Tunis and in the coastal regions. Greater Tunis, including the governorates of Ariana, Ben Arous, Manouba, and Tunis, contributes more than 35 percent to total service sector employment, followed by the Center-East at 22.4 percent and the North-East at 12.7 percent (Figure 4.5). Similarly, employment in industry is considerable in the coastal regions largely because of transportation costs and access to ports for exports: 23.2 percent in Greater Tunis, 19.9 percent in the North-East, and 32.3 percent in the Center-East. By contrast, agricultural employment is concentrated in inland regions, particularly in the North-West and Center-West (22.8 percent and 20.4 percent, respectively), although a significant share is located in the North-East.

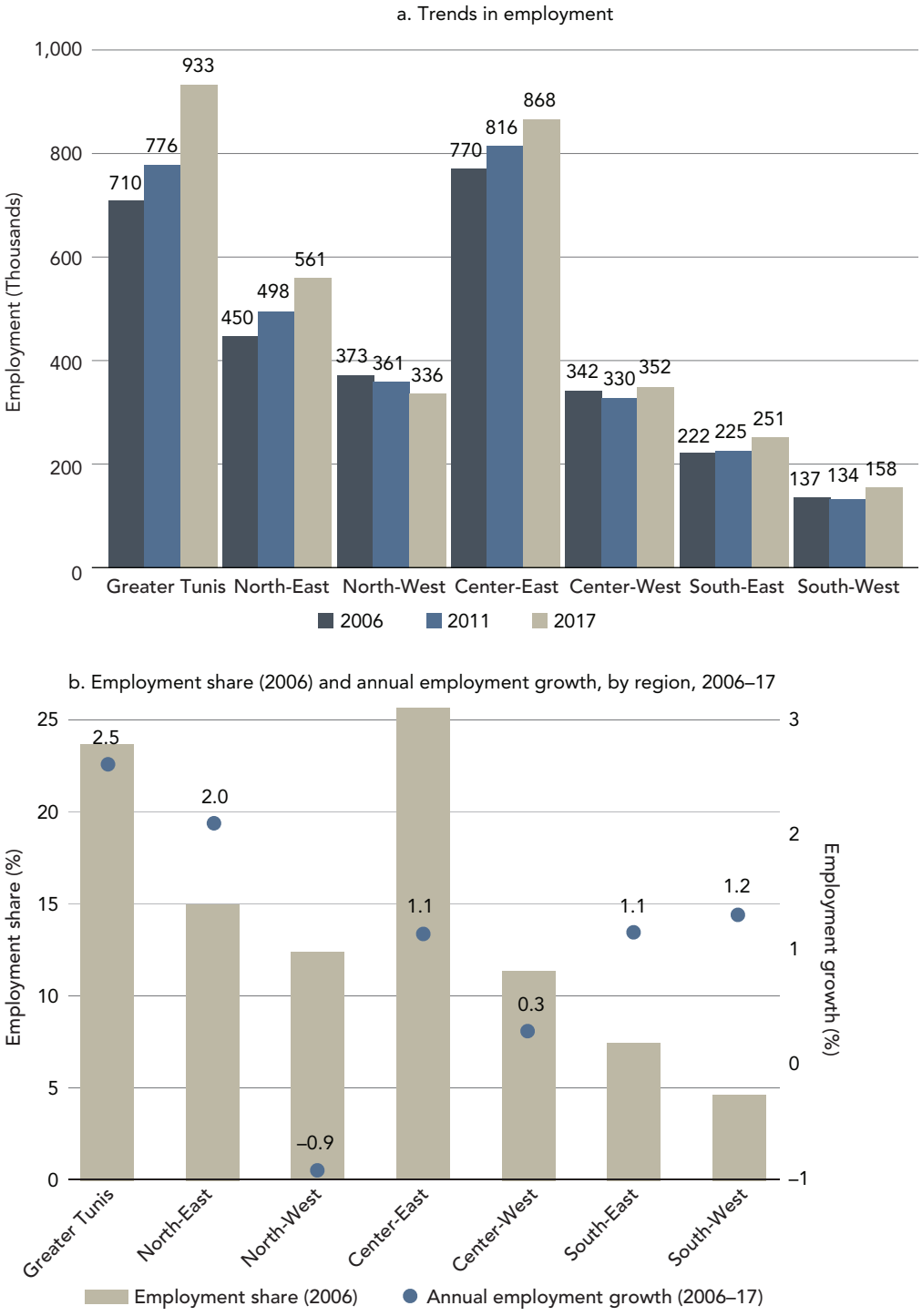
Over the decade, employment creation occurred disproportionately in the coastal regions. Between 2006 and 2017, Greater Tunis alone added over 220,000 employed individuals, almost 50 percent of all employment generated in the country (Figure 4.6, panel a). The North-East and Center-East follow with about 110,000 and 97,000 employed, respectively, contributing 24.4 percent and 21.5 percent of the total employment created between 2006 and 2017. The North-West stood out for a negative contribution to employment growth, with a loss in employment of over 36,000, whereas the rest of the regions contributed between 2 percent and 6 percent of the total employment added between 2006 and 2017. This is evident in the regional annualized growth rates in

FIGURE 4.5. Share of Sectoral Employment, by Region, 2017



Source: Based on data from the Labor Force Survey (ENPE), INS.

FIGURE 4.6. Trends in Employment, Employment Shares, and Growth Rates, by Region, 2006–17



Source: Based on data from the Labor Force Survey (ENPE), INS.

employment (Figure 4.6, panel b). Greater Tunis and the North-East posted employment growth rates of 2.5 percent and 2 percent per year, respectively. The North-West shed employment at an annual rate of 0.9 percent, and the Center-East created employment at a rate similar to that of the southern regions.

Wage employment, particularly public sector and formal wage employment, is also clustered in coastal areas. High-quality employment, including public sector and formal wage employment, is concentrated in Greater Tunis and the coastal regions. The probability of employment in different types of jobs is thus strongly correlated with region of residence (Figure 4.7, panels a and b). The estimates control for worker characteristics and indicate that the likelihood of employment as a wage worker in nonagricultural sectors is higher in Greater Tunis relative to all other regions, though workers in the North-East, Center-East, and South-East have a greater chance of employment as wage workers relative to their counterparts in other regions. Working in agriculture, either as a wage worker or self-employed, is more common in the western regions as is the probability of being a contributing family worker. Private sector formal wage jobs are more likely to appear in Greater Tunis; workers are more likely to be employed in the public sector if they reside in the North-West, Center-West, or southern regions relative to Greater Tunis. Working as a nonwage worker or an informal employee is typically more likely outside Greater Tunis (except for the North-East, North-West, and South-West in the case of informal employees).

The concentration of employment in the coastal regions has helped shape the patterns of internal migration. According

FIGURE 4.7. Effect of Geographical Location on the Probability of Working in Different Types of Job, Marginal Effects

a. Types of employment: agricultural wage worker, nonagricultural wage worker, agricultural self-employed, nonagricultural self-employed, unpaid family worker, 2017

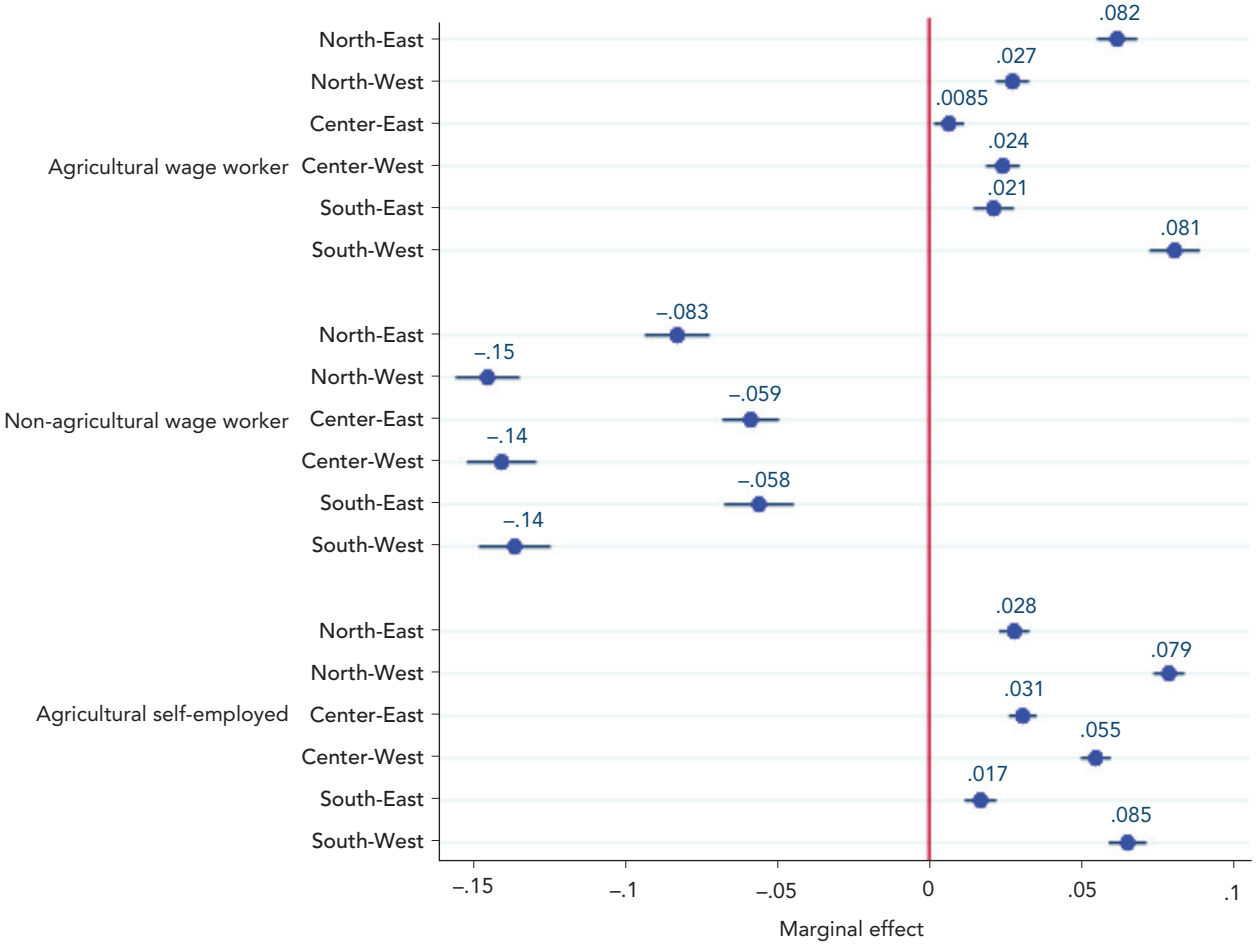


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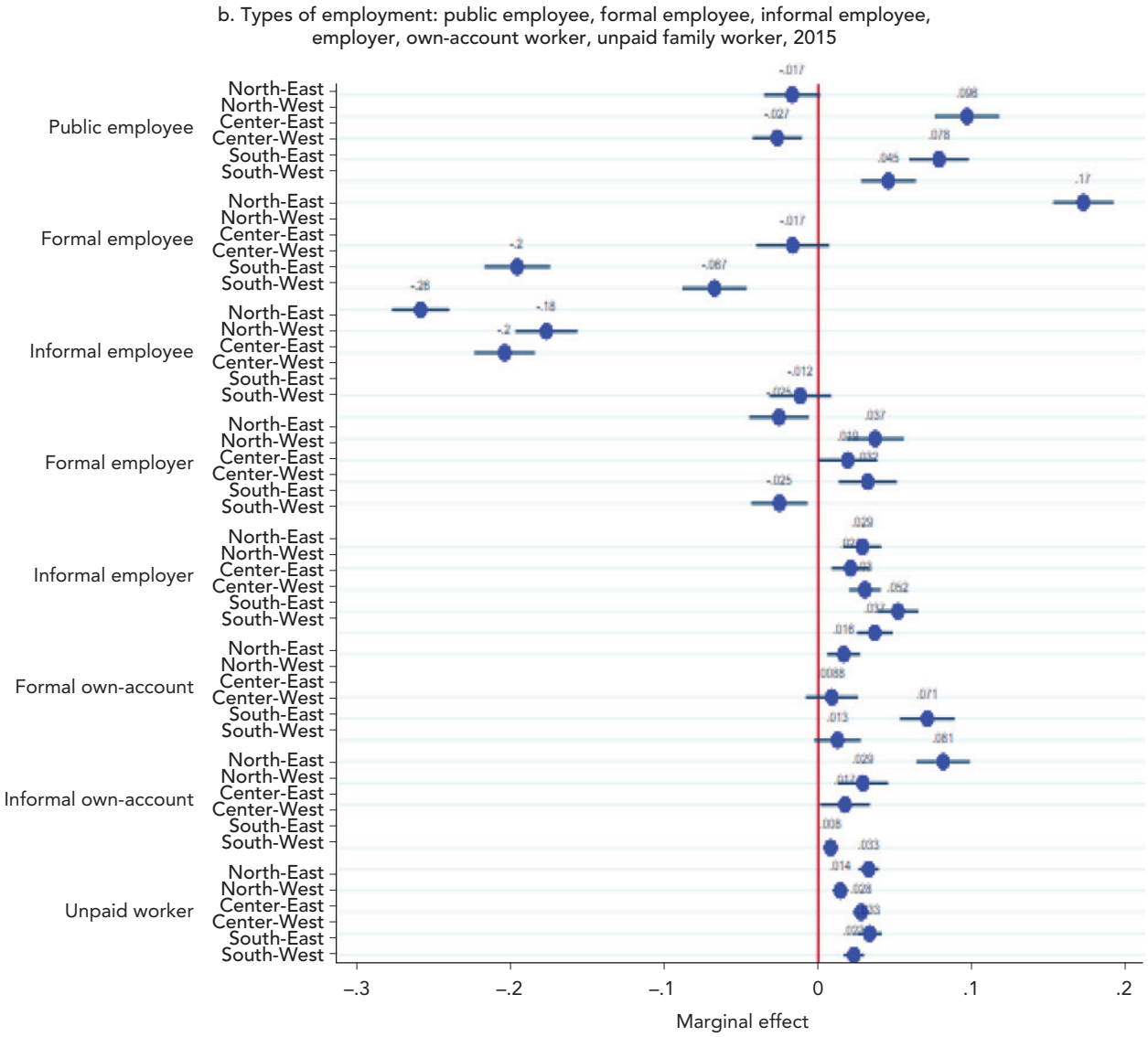
FIGURE 4.7. Effect of Geographical Location on the Probability of Working in Different Types of Job, Marginal Effects *(continued)*



Source: Based on data from the Labor Force Survey (ENPE) 2017 and Household Budget Survey 2015, INS.

to the World Bank (2021a), historical internal migration trends persist over time, and the coastal areas of Tunisia absorb the largest share of migrants. The governorates located along the eastern maritime border, including Ariana (40,100), Ben Arous (26,600), Manouba (8,500), Medenine (2,700), Monastir (11,900), Nabeul (12,800), Sfax (9,600), and Sousse (19,200), were net receivers of immigrants over 2009–14. Although the governorate of Tunis experienced a negative migration balance, more than 1 migrant in 2 living in Tunis moved to neighboring governorates that are part of Greater Tunis. As illustrated in Table 4.1, migrants move from the western and southern regions to Greater Tunis and the North-East and Center-East (World Bank 2021a). The largest negative balance is detected in the Center-West, at about –44,400 between 2009 and 2014.

Similar geographical patterns paint the landscape of firms; registered private sector firms are increasingly clustered in eastern Tunisia.[59] In 2003, Greater Tunis and

[59]The INS (National Statistics Institute) maintains a national business registry (Répertoire National des Entreprises) that provides a list of all private sector businesses registered with the tax authority, together with the number of wage workers employed in the businesses and registered with the National Social Security Institute.

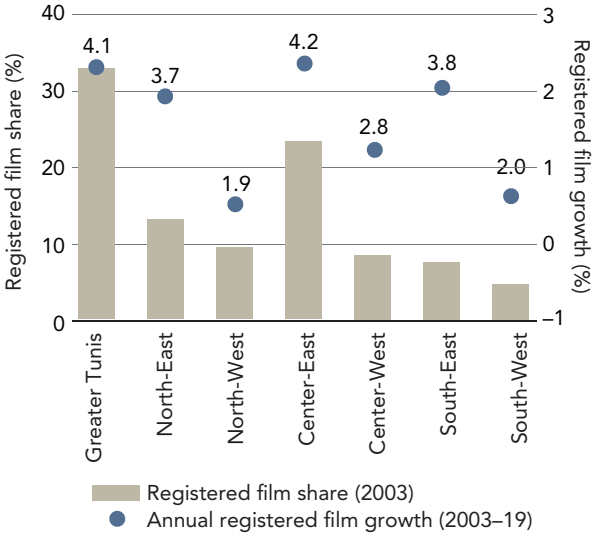
TABLE 4.1. Trends in Migration Balances, by Region, 1989–2014

	1989–1994	1999–2004	2009–2014
Greater Tunis	44,380	57,396	47,788
North East	–265	3,407	5,708
North West	–33,332	–42,384	–38,,112
Center East	17,314	47,757	37496
Center West	–22,221	–53,965	–44,382
South East	–2,537	–2,126	–1,965
South West	–3,338	–10,085	–6,532

Source: World Bank 2021a.

the Center-East accounted for more than 55 percent of all registered firms in Tunisia (Figure 4.8). The North-East followed with a share of 13.2 percent, and all other regions contributed less than 10.0 percent each, with the smallest share in the South-West (4.7 percent). Between 2003 and 2019, the average annualized growth rate of the number of registered firms was about twice as high in Greater Tunis and the Center-East, compared with the southern regions (Figure 4.8). For example, in Greater Tunis, the number of registered firms rose at a rate of about 4.1 percent per year, on average, relative to about 2 percent in the North-West and South-West. The South-East posted a considerable increase of 3.8 percent per year, on average. As a result, more than 15 years later, the landscape was even more geographically clustered. Over 60 percent of registered firms were located in Greater Tunis and the Center-East. The North-East was stable with a share of about 13 percent. All other regions posted a decline in share.

FIGURE 4.8. Distribution and Growth Rate of Registered Firms, by Region, 2003–19



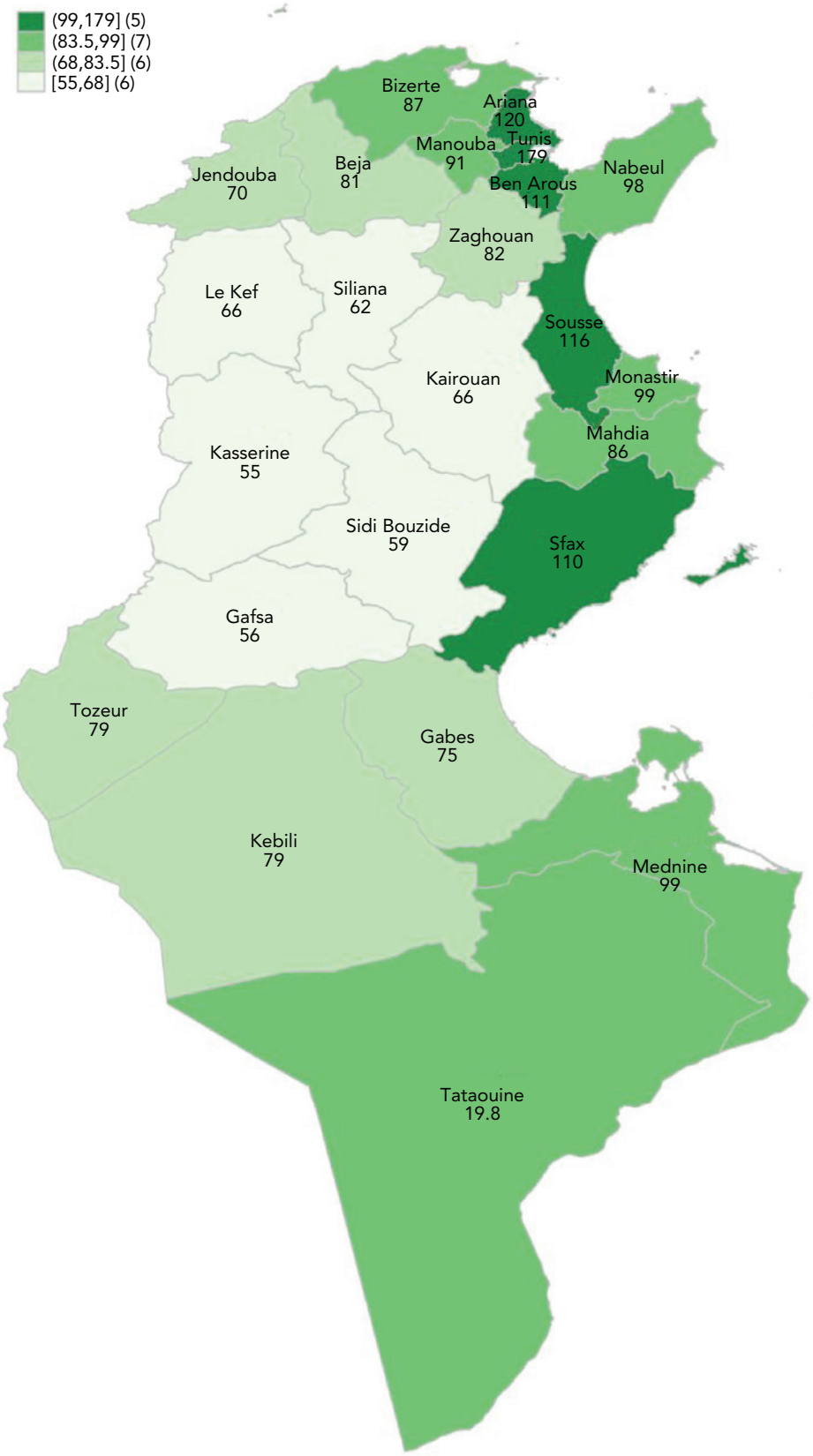
Source: Based on data from the National Business Registry (RNE), INS.

Firm density confirms the geographical concentration of registered firms. Given differences in population size across geographical areas, an indicator that captures the concentration of firms relative to the resident population can provide a better picture of the landscape of firms. The density of registered firms per 1,000 people confirms that northern and eastern Tunisia have the highest concentration of registered firms, with the governorates of Tunis (179), Ariana (120), Sousse (116), Ben Arous (111), and Sfax (110) leading the ranking in 2019 (Map 4.1). By contrast, the North-West and Center West lagged, with an average of about 60 registered firms per 1,000 residents.

Both microenterprises and larger registered firms are clustered along Tunisia's northeastern coastline; microenterprises are more prevalent in the inland regions. First, the panorama of firms is dominated by micro and small firms (Map 4.2, panels a and b). The share of firms with fewer than six employees is above 96 percent in every governorate, with peaks of 99 percent. Second, the geographical distribution of registered firms does not show large differences between micro (fewer than six employees) and larger firms (six employees or more). Third, in the North-East and Center-East, the ratio between nonmicro firms and microenterprises is higher than in the rest of the country. In 2019, there were about 3.5 nonmicro firms or every 100 microenterprises, whereas, in the rest of the country, the ratio ranged between 1.1 and 1.7 per 100.

Patterns in the location of firms differ by sector. The largest share of registered firms operate in the services sector across all regions (on average, a share of around 80 percent or higher), whereas manufacturing contributes between 8 percent and 15 percent (Table 4.2). Within the services sector, there are differences across regions. In particular, the North-East is home to more high–value added services, including information and communication, finance and insurance activities, real estate, and professional, scientific, and technical service activities. By contrast, the Center-East has a comparative advantage in manufacturing, and the remaining regions host traditional sectors, including trade and transport activities.

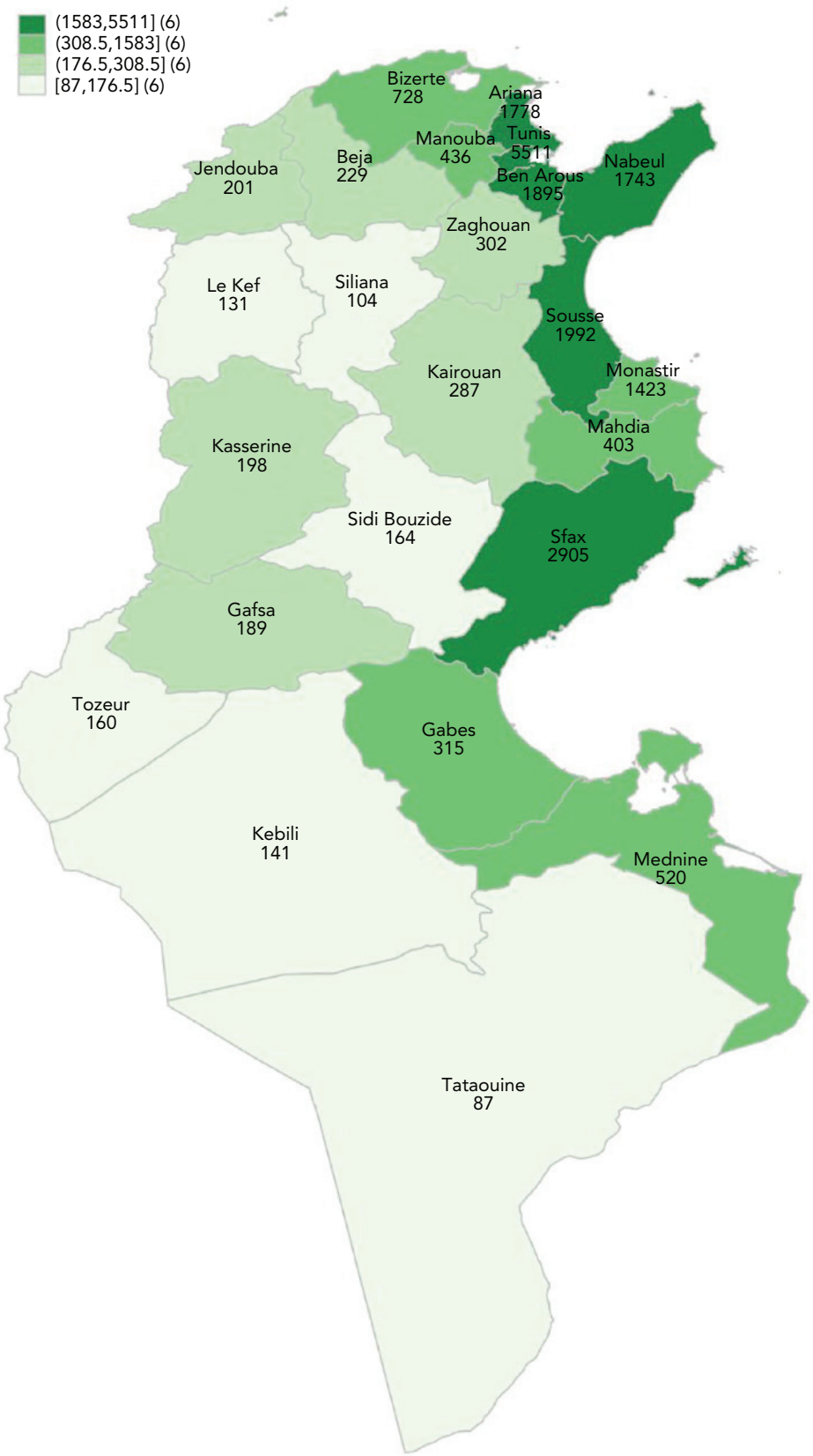
MAP 4.1. Density of Registered Firms (Number of Firms per 1,000 People), by Governorate, 2019



Source: Based on data from the National Business Registry (RNE), INS.

MAP 4.2. Distribution of Registered Firms, by Size and Delegation, 2019

a. Firms with six or more employees, by governorate



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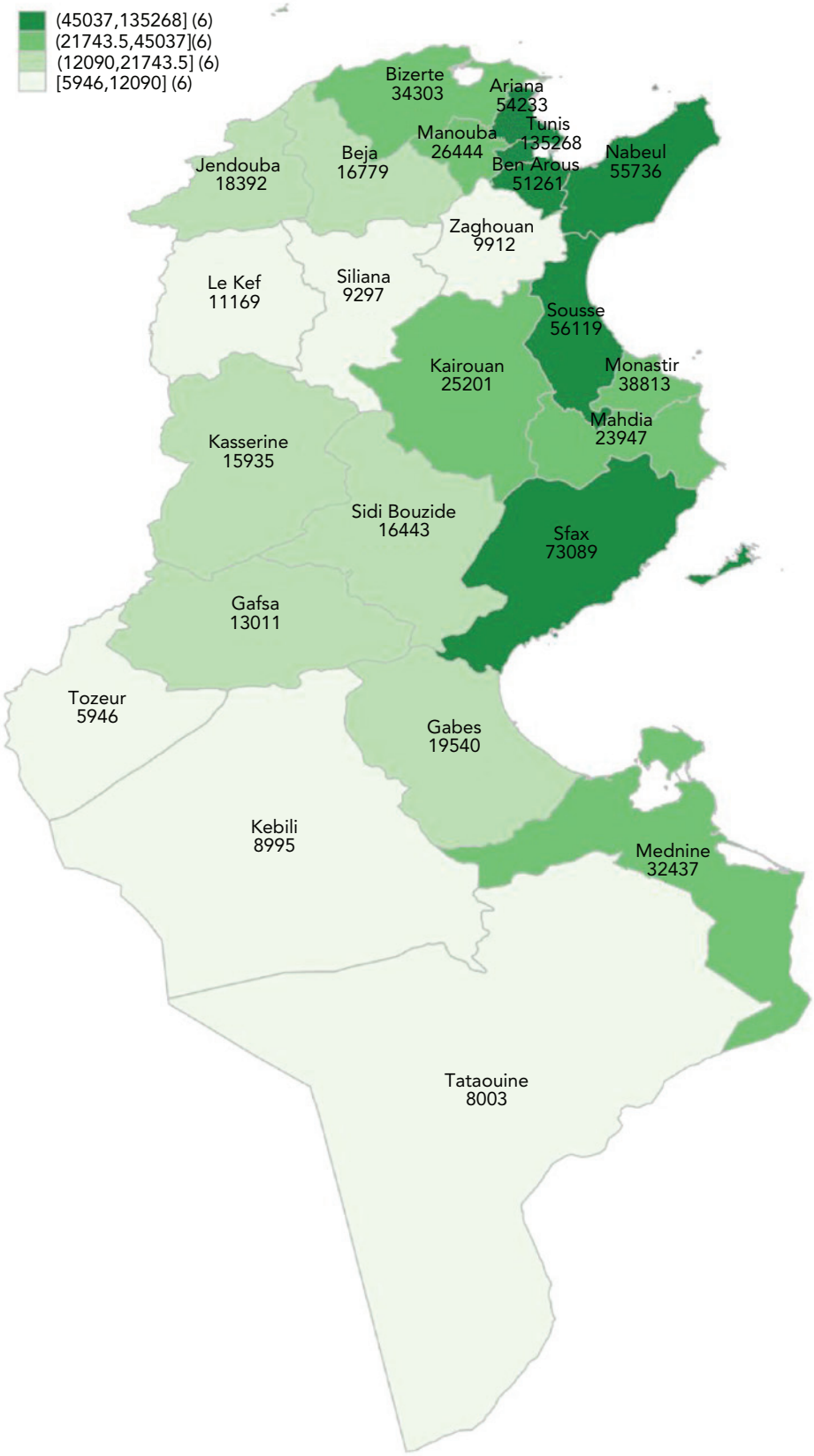
MAP 4.2. Distribution of Registered Firms, by Size and Delegation, 2019 *(continued)*

b. Firms with fewer than six employees, by governorate



Source: Based on data from the National Business Registry (RNE), INS.

TABLE 4.2. Distribution of Regional-Level Registered Firms, by Industry, 2019

	North-East	North-West	Center-East	Center-West	South-East	South-West
Agriculture	0.6	1.0	0.6	1.1	0.5	1.1
Manufacturing	10.8	7.9	14.9	8.8	10.4	10.2
Food industry	1.8	2.1	2.1	2.3	2.3	2.6
Textile	2.0	1.4	3.4	1.4	1.8	2.4
Chemical and pharmaceutical industry	0.4	0.2	0.5	0.2	0.2	0.2
Computer, electronic, optical, and electrical products manufacturing	0.3	0.1	0.3	0.1	0.1	0.0
Other manufacturing	6.3	4.2	8.4	4.8	6.1	5.0
Construction	5.0	4.9	6.1	5.6	6.5	6.8
Trade	39.0	46.8	41.1	45.1	42.9	46.6
Transport and storage	11.5	18.4	13.6	21.4	16.4	13.2
Accommodation and food service activities	6.1	6.9	4.5	5.1	6.0	5.1
Information and communication	2.8	1.0	1.5	1.0	1.2	1.1
Financial and insurance activities	0.4	0.1	0.2	0.1	0.2	0.1
Real estate activities	1.0	0.3	0.4	0.1	0.6	0.1
Professional, scientific, and technical service activities	9.5	3.0	5.3	3.0	3.4	3.0
Administrative and support service activities	3.6	1.5	2.3	1.0	2.2	2.6
Education, health, and social services	4.5	3.0	4.6	3.5	4.4	4.8
Repair of computers and other personal and household goods	0.9	0.8	0.9	0.7	0.9	0.7
Other personal services	3.0	3.4	2.7	2.6	3.1	3.0
Other services	1.4	1.1	1.2	0.9	1.3	1.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Based on data from the National Business Registry (RNE), INS.

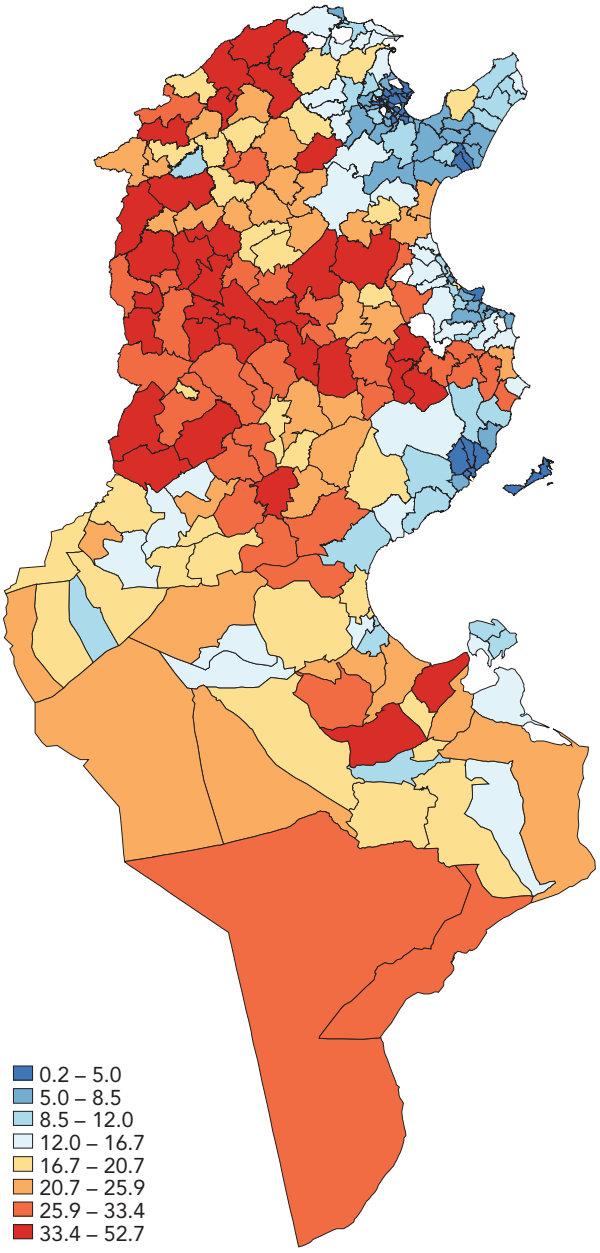
The coastal-interior regional divide is reflected in sizable disparities in living standards that persist across regions, despite considerable progress in poverty reduction. A snapshot of poverty outcomes at delegation level is provided in Map 4.3: higher poverty headcount ratios are estimated in rural Tunisia and in inland areas of the country. For example, in 2015, a poverty rate of 53.5 percent was estimated in Hassi Ferid in the Center-West, followed by Djedeliane (53.1 percent) and El Ayoun (50.1 percent) in the same region. Coastal areas had, on average, lower poverty headcount ratios: 11.9 percent in the North-East and 11.7 percent in the Center-East, although a few pockets of poverty were present in rural areas of these regions. Similarly, the same regions had lower unemployment rates thanks to a higher concentration of economic activities.

Enterprise Transformation and Productivity

Microenterprises dominate the panorama of firms. Providing a comprehensive overview of firms operating in Tunisia is challenging.[60] In 2019, over 780,000 private enterprises were registered with the tax authority, of which about

[60] The national business registry is an excellent source of information about the number of formal firms operating in Tunisia and the profile of the formal workforce. Yet, no information is available on the number of informal production units, including small unincorporated firms and household businesses not registered with the tax authority. Every five years, the INS conducts a survey of microenterprises using the business registry as a sampling frame. The survey covers production units registered with the tax authority that employ fewer than six wage workers and that show an annual

MAP 4.3. Poverty Headcount Ratios, by Delegation, 2015



Source: World Bank and INS 2020.

87 percent were single-person firms, that is, own-account workers, or production units with no formal employees. Overall, about 97 percent of the registered businesses had fewer than 6 formal employees; 2.3 percent were small firms (between 6 and 49 employees); 0.3 percent were medium-size firms (between 50 and 199 employees), and the remaining 0.1 percent were firms with 200 or more formal employees. Box 4.1 offers a profile of state-owned enterprises (SOEs). Over 2003–19, the distribution of registered firms did not change significantly, although an increase in the share of microenterprises from 96.5 percent in 2003 to 97.2 percent in 2019 was recorded. This is attributable to the rapid growth in the number of registered self-employed from about 373,500 (85.2 percent) in 2003 to over 679,700 (86.9 percent) in 2019, which may partly arise because of the low cost of registration and penalties for noncompliance, in addition to the special tax

BOX 4.1. State-Owned Enterprises

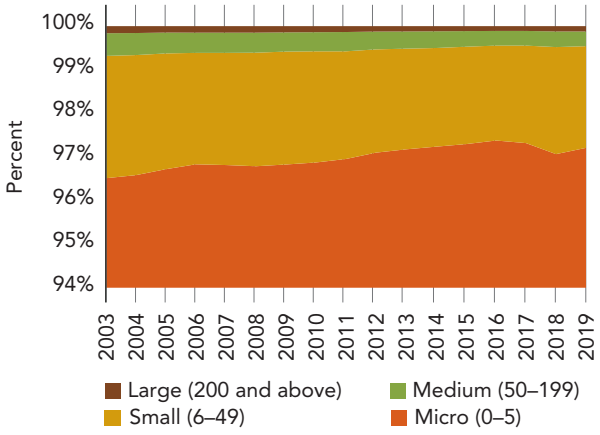
State-owned enterprises (SOEs) are a defining feature of Middle East and North Africa economies, and Tunisia is no exception. SOEs are rooted in the set of companies inherited from colonial regimes and the policies that followed in the aftermath of independence (IMF 2021).

According to the World Bank (2021c), 195 SOEs are recorded in official statistics, for total revenues in 2018 equivalent to about 20 percent of GDP and employing about 190,000 workers. SOEs operate in 40 of the 44 official sectors and subsectors, well above the average in other countries (between 22 in developed economies and 26 in developing countries). SOEs operate both in infrastructure and noninfrastructure sectors, and often the government control is indirect. Most of the large SOEs in Tunisia are highly indebted and deliver losses. In 2018, 21 of the 31 largest SOEs recorded losses of over TD 6 billion or 6 percent of GDP. The remaining 10 produced profits and contributed to 88 and 75 percent of all SOE revenues and employment, respectively (World Bank 2021c).

In Tunisia, most SOEs operate in commercial sectors (17 of the 31 largest SOEs), although there is no economic rationale for state ownership in commercial sectors, such as, for example, manufacturing and construction because markets are contestable, and private businesses can provide goods or services more efficiently. In Tunisia, commercial SOEs benefit from state support in the form of subsidies and therefore compete unfairly with private operators and are also protected from competition by regulation as the sectors in which they operate have limits on foreign direct investment or price controls (World Bank 2021c).

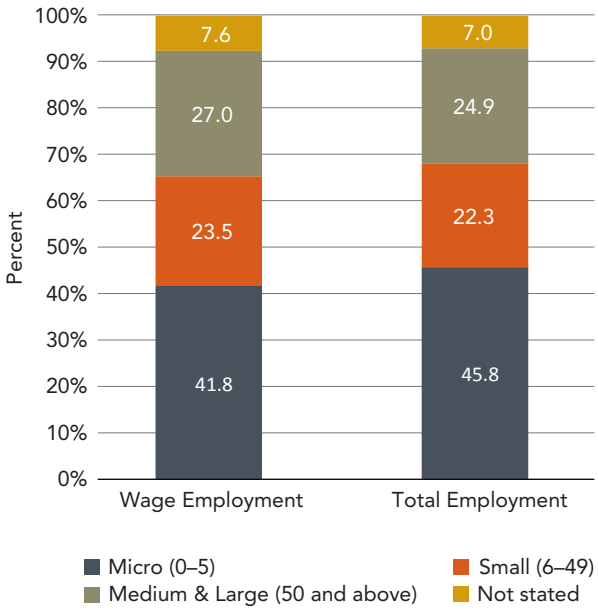
turnover below a specified threshold (TD 1 million in 2016). The survey provides information about the informal sector, which is defined as the set of production units that do not keep formal accounts, but are registered with the tax authority. In addition, the quarterly labor force survey provides information about the total number of workers in the country, including formal and informal employees and formal and informal household businesses and own-account workers. Combining these sources of information allows a more accurate snapshot of the distribution of firms by size.

FIGURE 4-9. Trends in the Distribution of Registered Private Sector Firms, 2003–19



Source: Based on data from the National Business Registry (RNE), INS.

FIGURE 4-10. Distribution of Wage and Overall Employment, by Firm Size, 2019



Source: Based on data from the labor force survey (ENPE), INS.

regime (régime forfaitaire) for microenterprises (Rijkers et al. 2014).[61] The share of small, medium, and large firms modestly declined because of the their less rapid growth in numbers relative to microenterprises (Figure 4.9). In addition, almost 520,000 informal own-account workers were estimated to be active in 2019 according to labor force survey data. This means that the distribution of firms is further skewed to the left, with over 98 percent of firms falling in the micro category. No information is available about firms operating without registering with the tax authority.

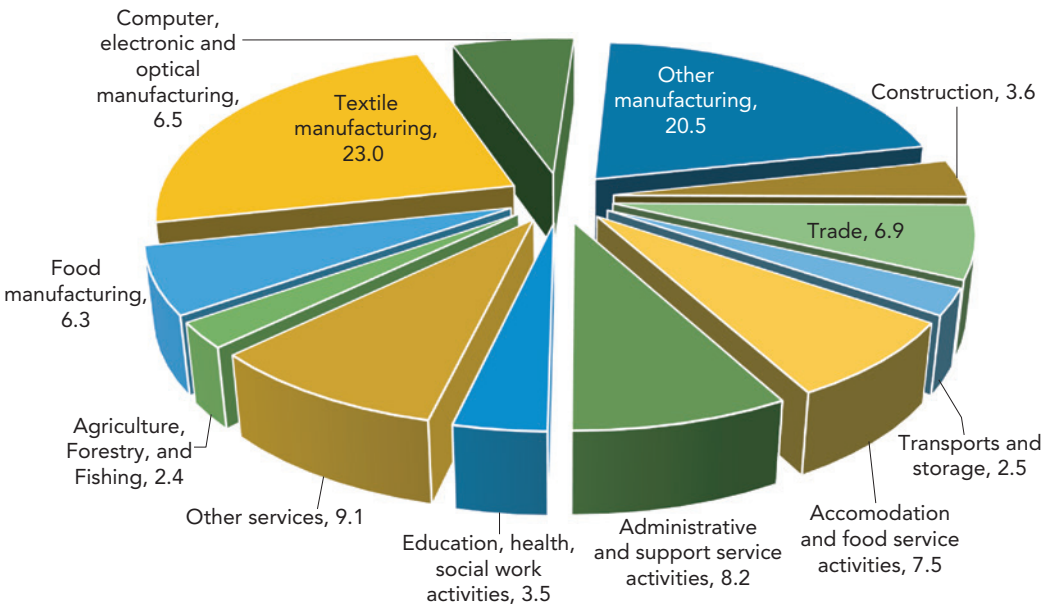
Microenterprises contribute almost 50 percent of total employment In terms of employment, the contribution of firms of different sizes is considerably different from the snapshot provided so far (Figure 4.10). First, although medium and large firms represent a small share of production units, they accounted for about 25 percent of employment (and 27 percent of wage employment) in 2019. Second, small firms contributed about 22.3 percent to total employment (and 23.5 to wage employment), and microenterprises contributed about 45.8 percent to total employment (and 41.8 percent to wage employment).[62] Overall about 1 worker in 2 is employed in firms with fewer than 10 workers. Such a pattern, whereby most firms are small and medium and large firms contribute a sizable share of employment, is not unique to Tunisia.

More than 1 registered large firm in 2 operates in the manufacturing sector. In 2019, among registered firms employing 100 or more employees, 56 percent were manufacturing enterprises (Figure 4.11). At 23.7 percent, textile manufacturing was the sector with the greatest number of large firms, followed by manufacturers of computer, electronic, and optical products (6.5 percent), and food manufacturers (6.3 percent). Outside the manufacturing sector, enterprises operating in accommodation and food services, enterprises providing administrative and support services, and enterprises in the trade sector contributed 8.2 percent, 7.5 percent, and 6.9 percent of all registered large enterprises, respectively. However, within manufacturing, microenterprises (firms with fewer than 10 employees) made up the largest share (93.6 percent) of enterprises operating in the sector. Only in two subsectors, namely, automobile manufacturing and computer, electronics, and optical products manufacturing, did registered large firms contribute a considerable share (12.9 percent and 10.4 percent, respectively) to the total number of firms operating in the subsector.

About 1 private sector formal wage worker in 3 is employed in offshore firms, and almost 90 percent of offshore sector employees are employed in medium and large firms. Over the decade, the share of offshore firms, that is, enterprises producing for the export market, increased from

[61] Based on the 2016 microenterprises survey, about 65 percent of registered nonagricultural microenterprises did not keep formal accounts.
[62] The distribution of employment by firm size is based on self-reported information by respondents in the 2019 labor force survey.

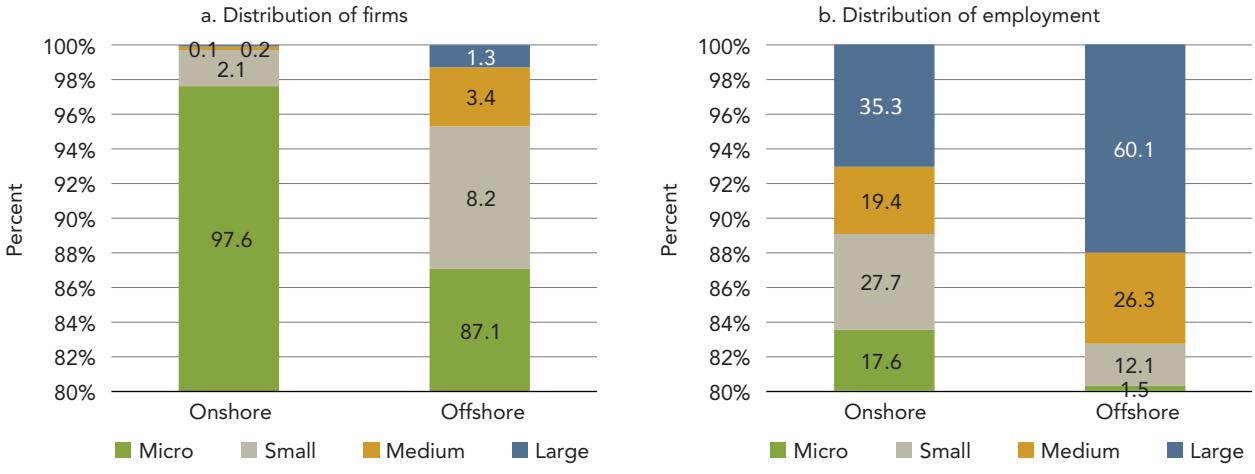
FIGURE 4-11. Distribution of Registered Firms with 100 Formal Wage Workers or More, by Sector, 2019



Source: Based on data from the National Business Registry (RNE), INS.

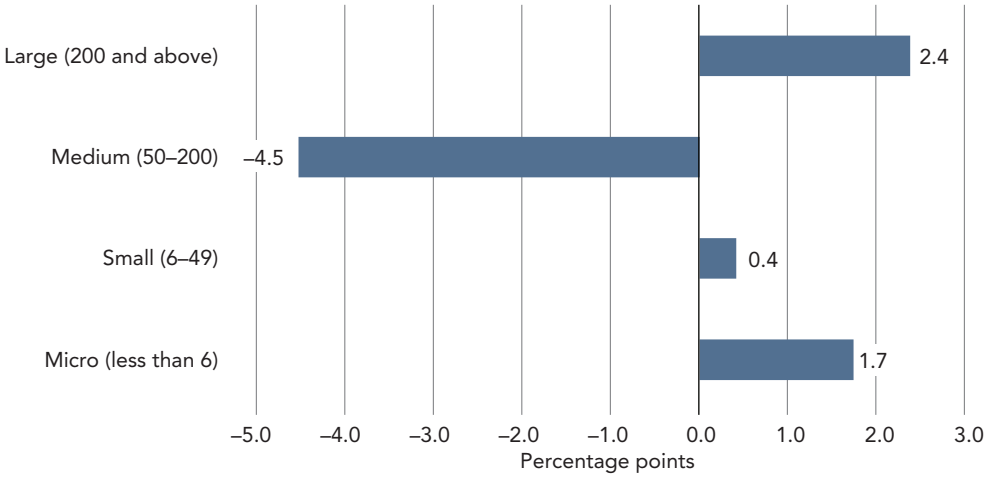
2.9 percent in 2009 to 4 percent in 2019 (31,060 units). The employment share of offshore firms also expanded, from 32.8 percent to 34.7 percent over the period, contributing a total of about 397,200 formal employees in 2019. Similar to onshore firms, offshore firms are predominantly microenterprises. About 87 percent of offshore firms are microenterprises, and 8.2 percent are small firms (Figure 4.12, panel a). Medium and large firms represent about 3.4 percent and 1.3 percent of the production units in the offshore sector. Relative to the distribution of onshore firms, there is a larger share of offshore firms in the medium and large size category. More than 86 percent of formal employees in the offshore sector are employed in large and medium firms, which compares with about 54.7 percent in the onshore sector (Figure 4.12, panel b). With the objective of facilitating the integration of firms

FIGURE 4.12. Distribution of Registered Firms and Formal Employment, by Regime (Onshore/Offshore) and Size of Firms, 2019



Source: Based on data from the National Business Registry (RNE), INS.

FIGURE 4-13. Change in the Contribution to Formal Wage Employment Creation, by Size Among Registered Firms, 2011–19



Source: Based on data from the National Business Registry (RNE), INS.

operating for the domestic and the export market, the preferential tax regime for the offshore sector was eliminated for newly established firms in January 2019 (World Bank 2021c). In January 2021, the reform was extended to all offshore firms that now pay between 10 and 25 percent of corporate tax, with potentially negative transitory effects on the competitiveness and profit margins of existing offshore firms (World Bank 2021c).

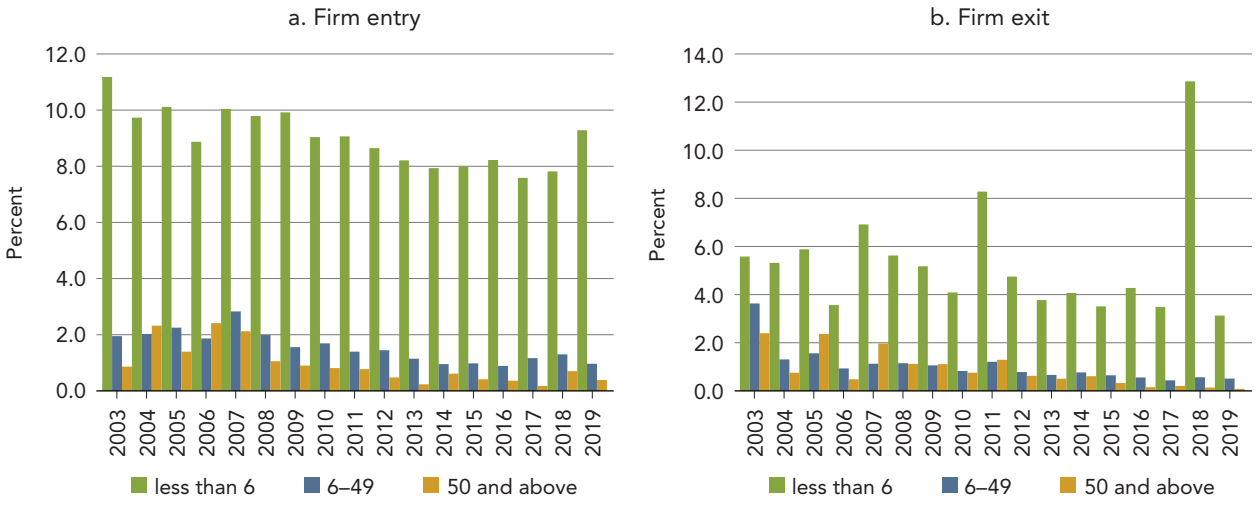
Recent trends indicate a deepening of structural patterns in firms and employment composition. Since 2011, the relative gains in employment creation of registered enterprises have occurred at the tails of the distribution of firm size. The employment share increased by 1.7 percentage points among microenterprises and by 2.4 percentage points among large enterprises (Figure 4.13). By contrast, enterprises in the middle of the size distribution posted either a negative contribution to formal employment creation (–4.5 percentage points in the case of medium enterprises) or a modest positive contribution in the case of small enterprises (0.4 percentage points).

Small firms create the most jobs; yet, this is driven by firm entry, and most entrants are small. Previous work based on business registry data covering the period 1997–2010 indicates that aggregate job creation was largely driven by firm entry (Rijkers et al. 2014). Virtually all net new jobs were created by entering firms, and particularly by the entry of one-person firms, that is, own-account workers. After entry, these firms post modest growth. Evidence from recent data of the national business registry point in the same direction: the share of entering firms is significantly larger among microenterprises (fewer than 6 formal employees) relative to small, medium, and large firms. For example, in 2019, about 9 percent of firms with fewer than 6 employees entered the registry as a share of all firms of that size, which compares with 1 percent and 0.4 percent among firms with 6–49 and firms with 50 or more formal employees, respectively (Figure 4.14, panel a).

Firm mobility is limited, and small firms are more likely to die. The majority of registered firms do not grow, even in the long run (a 14-year period, 1997–2010). For example, fewer than 4 percent and only 2 percent of all firms with between 10 and 49 employees in 1996 employed between 50 and 99 or more than 100 workers by 2010, respectively (Rijkers et al. 2014). Transition matrices built using data from the 2020 round of Enterprise Surveys confirm this pattern.[63] Between 2016 and 2019/20 virtually all medium and large firms did not grow, whereas 1.2 percent of small firms managed to turn into large firms. Considering the time period since the start of each firm's operations, only about 1 percent of small firms grew into large ones, though about 22 percent of initially small firms passed

[63]The matrices are constructed using recall data on size at the time of the enterprise survey (2020), three fiscal years before (2016), and at the time the business was established. Firms that entered or exited within this time period cannot be accounted for. See Enterprise Surveys (dashboard), World Bank, Washington, DC, https://www.enterprisesurveys.org/.

FIGURE 4.14. Share of Registered Firms Entering and Exiting, by Size and Year, 2003–19



Source: Based on data from the National Business Registry (RNE), INS.

TABLE 4.3. Transition matrices of formal firms across employment size

	Size in 2019			
	Micro and small (1–19)	Medium (20–99)	Large (100 and more)	Total
Size at start				
Micro and small (1–19)	76.8	22.2	1.0	100.0
Medium (20–99)	7.5	59.9	32.6	100.0
Large (100 or more)	1.0	13.0	86.0	100.0
Size in 2016				
Micro and small (1–19)	91.4	7.5	1.2	100.0
Medium (20–99)	2.0	96.2	1.9	100.0
Large (100 or more)	0.0	2.2	97.8	100.0

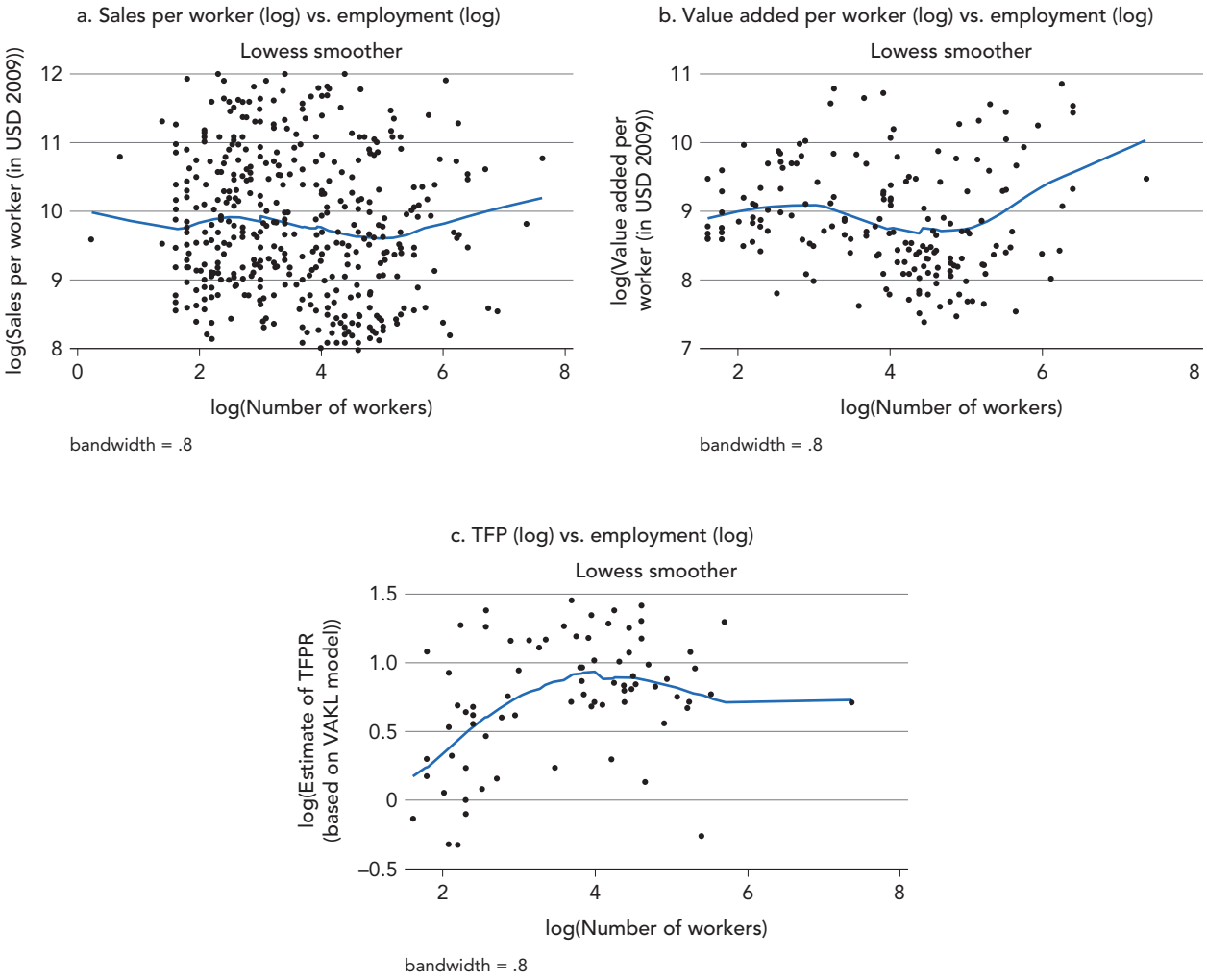
Source: Based on data from the Enterprise Survey, World Bank.

the threshold to become medium-sized firms (Table 4.3).[64] Smaller firms are more likely to die. Between 7 percent and 8 percent of firms with fewer than six workers exit the market after one year (on average over 1996–2010) compared with between 1.6 percent and 3.8 percent of medium and large firms (Rijkers et al. 2014). Similarly, over a long time period, almost 1 self-employed individual in 6 who registered in 1996 exited the market after 14 years compared with fewer than 20 percent of firm with 1,000 employees or more (Rijkers et al. 2014). Recent data confirm the findings: the share of firms exiting the market is considerably larger among firms with fewer than six workers relative to larger firms (see Figure 4.14, panel b).

The process of creative destruction is weak, suggesting the presence of distortions. Previous research using the Tunisia national business registry indicates that allocative efficiency, understood as the relationship between size and performance, is low. In addition, average productivity does

[64] Firm size and age are correlated. Therefore separate transition matrices by firm age in 2016 would provide superior information. However, the small sample size does not allow statistically meaningful transitions to be estimated by age-group. Small, young firms (between 1 and 9 years old in 2016) are more likely to become medium-sized firms (11.2 percent made the transition between small and medium size in 2016–20) compared with middle-age (1 percent accomplish the same transition) and older firms (4.5 percent grow into medium-sized firms). Medium-sized firms in 2016 tended to maintain their size, and only a relatively few managed to grow larger (2 percent and 3 percent of medium-size middle-age and older firms, respectively).

FIGURE 4.15. Correlation between Measures of Productivity and Firm Size, 2020



Source: Based on data of Enterprise Surveys (dashboard), World Bank, Washington, DC, https://www.enterprisesurveys.org/.
Note: Observations with productivity below the 5th and above the 95th percentile are dropped from the sample.

not increase rapidly with firm age and, in fact, declines among firms that have been established for more than four years (Rijkers et al. 2014). According to the World Bank (2021a), there is little correlation between various proxies for firm performance and whether or not a firm exited in six Middle East and North Africa countries, including Tunisia.[65] Using recent data from Enterprise Surveys, the correlation between size and different measures of productivity is not linear (Figure 4.15, panel a-c).[66] Productivity,

[65] Using the panel component of the 2013 and 2020 rounds of Enterprise Surveys, exit rates are defined in two ways: whether the discontinuation of the firm was confirmed (conservative definition) or whether the firm was unreachable (extended definition).

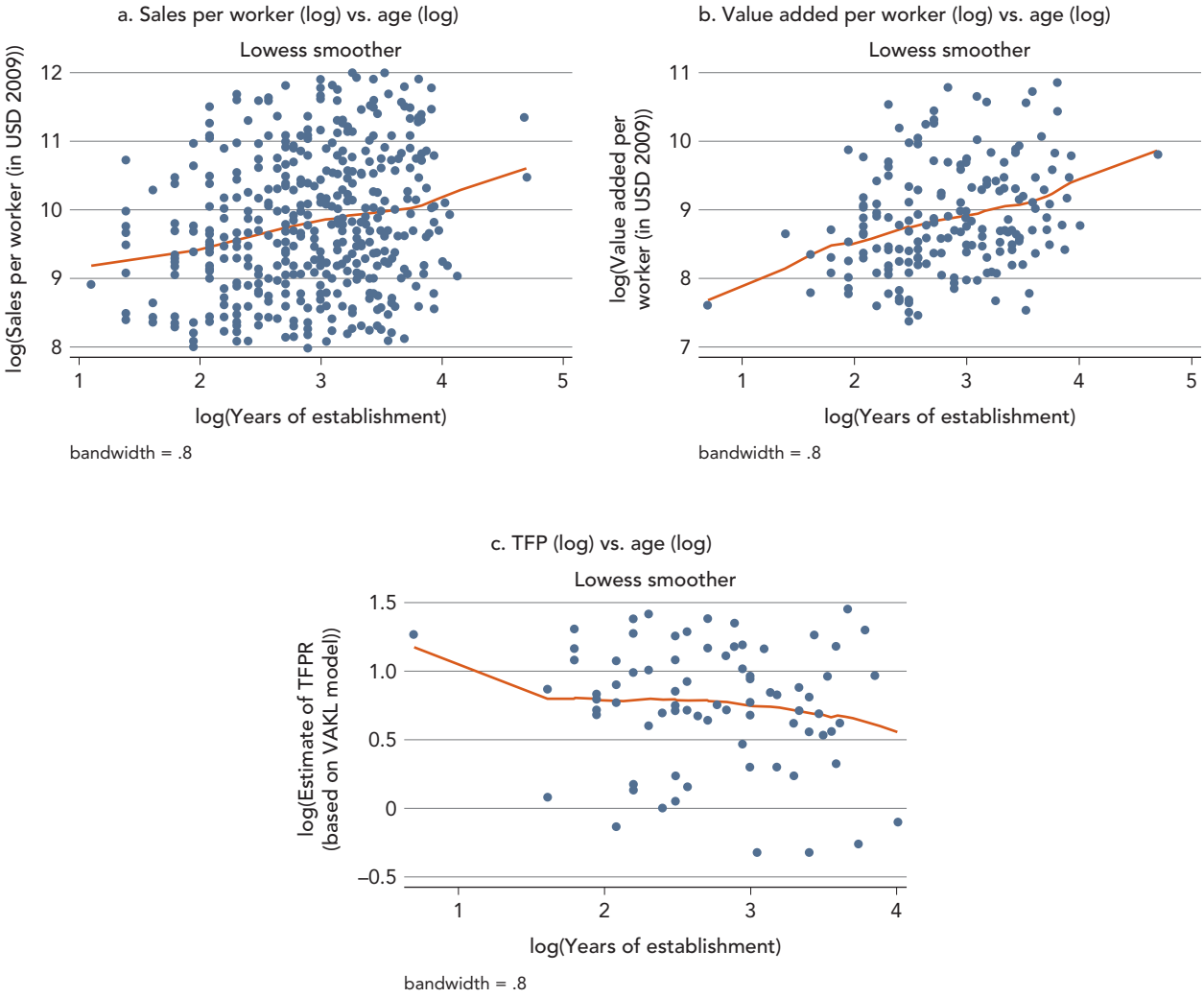
[66] The Enterprise Surveys collect data that allow labor, capital, and total factor productivity (TFP) to be calculated in a comparable manner across a large number of countries. TFP estimates are revenue based, whereby sales are measured in local currency as opposed to physical units, and therefore production efficiency cannot be separated from the effects of prices. The price variation can be decomposed into differences in input prices, differences in market power, and differences in quality and other factors affecting the demand for the product. What follows is grounded on revenue-based productivity and can potentially confuse increasing market concentration with efficiency gains. TFP captures the portion of output that is not explained by the amount of inputs utilized (see Francis and Karalashvili 2021). Labor productivity is defined either as sales per worker or value added per worker and indicates how efficiently labor is used in production. However, changes in labor productivity result from the combined effects of multiple causes, including technological change and capital accumulation, as well as the capacity of workers and the intensity of their efforts. It is therefore challenging to isolate the contribution of each variable. Large gaps in labor productivity across sectors might suggest that it would be possible to achieve efficiency by reallocating workers to what appears to be sectors with higher productivity growth. To the extent that such differences are attributable to firm rents, then the analysis would argue in favor of reallocating labor toward the more highly concentrated and distorted sectors of the economy as opposed to the most productive. Value added per worker and TFP are calculated only for manufacturing firms, whereas sales per worker is a measure available for all firms in the survey. The relationship illustrated in Figure 4.15, panel a, does not change by restricting the sample to manufacturing firms.

measured as sales per worker and value added per worker, seems to be higher among large firms (400 workers and above) relative to microenterprises and small and medium firms. In the case of TFP, the nonlinear relationship displays an inverted U-shaped pattern, with TFP rising from microenterprises to small firms and then declining modestly among firms with more than 50 workers. A regression analysis (annex Table A 4.1) indicates the existence of a positive linear relationship between sales per worker and size and a nonlinear relationship between value added per worker or TFP and size, with measures of productivity rising with size at a decreasing rate.

Productivity increases with firm age and is higher among food manufacturers compared with other sectors (with the exception of TFP). Figure 4.16 illustrates bivariate correlations between different measures of producivity and firm age. Mature firms are more productive in terms of sales per worker or value added per worker relative to young firms. However, TFP measures seem to be higher among young firms and modestly decline among older firms (Figure 4.16, panel c). A regression analysis confirms the relationship between productivity and age; geographical location and export status do not appear to be significantly correlated with productivity measures, whereas foreign-owned firms are less productive relative to those owned by Tunisians (annex Table A 4.1).

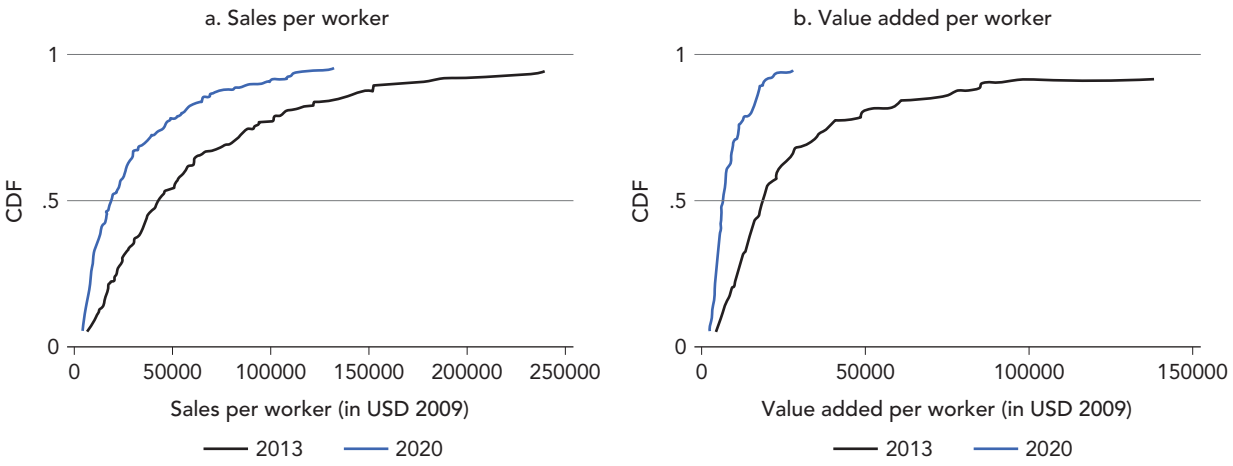
No productivity gap is detected between formal firms managed by men and those managed by women. In line with existing evidence on the Middle East and North Africa region, no statistically and economically significant

FIGURE 4.16. Correlation between Measures of Productivity and Firm Age, 2020



Source: Based on data of Enterprise Surveys (dashboard), World Bank, Washington, DC, https://www.enterprisesurveys.org/.
Note: Observations with productivity below the 5th and above the 95th percentile are dropped from the sample.

FIGURE 4.17. Cumulative Distribution Functions of Sales per Worker and Value Added per Worker Over Time, 2013 and 2020



Source: Based on data of Enterprise Surveys (dashboard), World Bank, Washington, DC, https://www.enterprisesurveys.org/.
Note: Cumulative distribution functions are truncated at the 5th and 95th percentiles.

productivity gap is detected between formal firms managed by men and those managed by women in Tunisia, using the 2020 round enterprise survey data (EBRD, EIB, and World Bank 2016; Islam et al. 2020; World Bank 2021b). There was though a slight uptick in the management (from 8.5 percent to 10.4 percent) and ownership (from 2.7 percent to 7.7 percent) of formal firms by women between 2013 and 2020.

Labor productivity decreased over time, particularly in the manufacturing sector.[67] Between 2013 and 2020, average labor productivity, measured by value added per worker, dropped from $40,767 to $22,013 in 2020 (2009 prices), implying an annualized reduction of about 8.4 percent.[68] The estimated reduction in average values is detected along the entire distribution of productivity. It widens around the middle of the distribution, and it peaks in the case of value added per worker (Figure 4.17). The decline is ascribable to a larger reduction in annual sales relative to the costs of raw materials and intermediate goods and employment levels. Except for textile manufacturing, firms operating in manufacturing posted the largest reduction in productivity level as did firms employing 100 or more employees and firms established fewer than five years before the survey (Table 4.4).

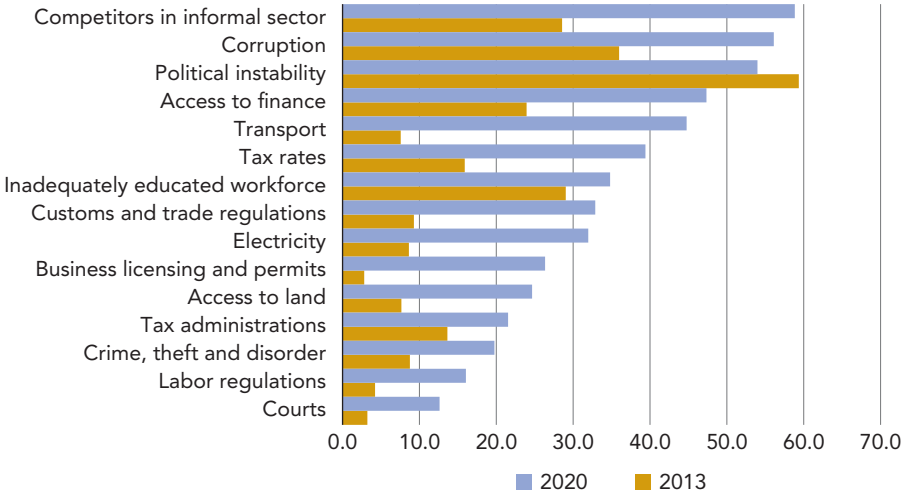
[67] Data derived from the 2013 and 2020 Enterprise Surveys may be affected by political uncertainty following the Jasmine revolution and the effect of the COVID-19 outbreak and lockdown imposed in the country, respectively. Therefore, statistics should be interpreted with caution.
[68] Sales per worker declined on average from $77,127 in 2013 to $40,897 in 2019.

TABLE 4.4. Annualized Growth Rate in Average Productivity, by Type of Firm and Productivity Measure, 2013–20

Type of firm	Sales per worker	Value added per worker	TFP
Overall	–8.7	–8.4	–4.3
Industry			
Food manufacturing	–13.2	–20.5	–5.6
Textile manufacturing	1.7	12.4	–6.2
Other manufacturing	–14.7	–13.9	–1.5
Construction	–9.6		
Trade	–7.7		
Hotels and restaurants	–5.9		
Other services	–4.1		
Size			
Micro and small (1–19)	–8.2	–17.7	–4.6
Medium (20–99)	–8.2	–0.9	–3.5
Large (100 and more)	–12.2	–17.9	–4.8
Age			
< 5 years	–26.8	–33.1	–3.3
6–14 years	–8.8	2.6	0.1
15+ years	–7.3	–14.7	–5.5
Exporting status			
Exporter	–10.0	–6.6	–5.1
Nonexporter	–7.9	–16.3	–2.8

Source: Based on data of Enterprise Surveys (dashboard), World Bank, Washington, DC, https://www.enterprisesurveys.org/.

FIGURE 4.18. Share of Firms Reporting Various Business Environment Constraints as Major or Severe, 2013 and 2020



Source: Based on data of Enterprise Surveys (dashboard), World Bank, Washington, DC, https://www.enterprisesurveys.org/.

The COVID-19 pandemic has exacerbated the downward trend in productivity. According to the Business Pulse survey, over 80 percent of firms posted a reduction in annual turnover in July 2020 relative to April of the same year.[69] Older firms seem to have been more affected by the downturn relative to younger firms, whereas chemical and pharmaceutical firms posted an increase in sales. Reductions in cashflows and difficulties in gaining access to credit are the main reasons reported by firms for the decline in business. The largest cashflow reductions reported by firms were in accommodation and food service activities, transport and storage services, and mechanical and electrical goods manufacturing.

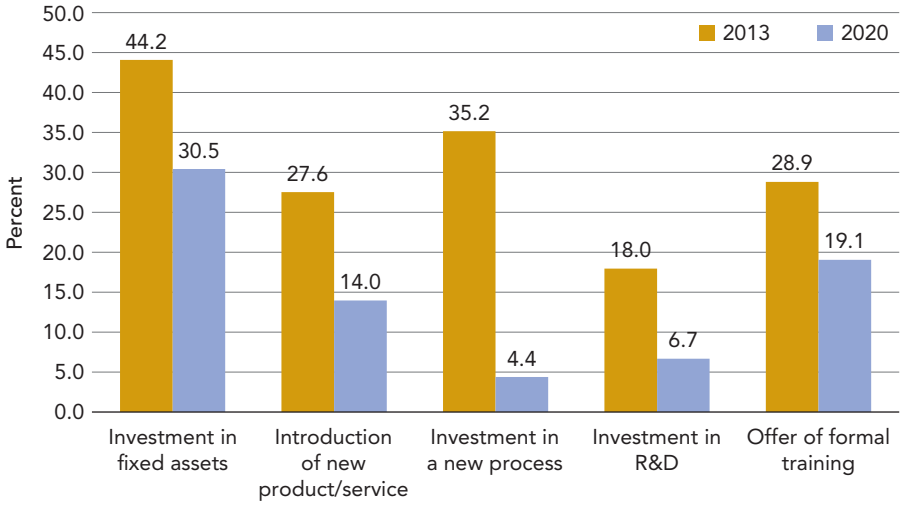
In addition, the business environment has deteriorated; an increasing share of firms report major or severe obstacles in daily operations. Firms captured in the 2019 round of the Enterprise Survey report, on average, a deterioration of the business environment along all dimensions except political instability, which is not surprising considering that the previous survey round (2013) was conducted in the aftermath of the 2011 revolution (Figure 4.18). Particularly striking is the increase in the share of firms reporting the following as major or severe constraints: transport (+37 percentage points), competition from the informal sector (+30 percentage points), business licensing and permits (+23.5 percentage points), customs and trade regulations (+23.6 percentage points), access to finance (+23.4 percentage points), and electricity (+23.3 percentage points). The top three obstacles in 2020 were competition from the informal sector, corruption, and political instability. More than 1 firm in 2 mentioned each of these issues as severe or major obstacles.

Fewer firms are investing in human and physical capital and in innovation. According to Kim and Loyaza (2019), together with education, market efficiency, infrastructure, and institutions, innovation is among the most important determinants of TFP growth. The share of firms investing in physical capital over the previous fiscal year before the survey declined from 44 percent to 31 percent between 2013 and 2020; similarly the share of firms offering formal training to workers contracted by 10 points and was estimated at about 19 percent in 2020 (Figure 4.19). Ghali and Nabli (2020) document emerging pockets of innovation that have led to more sophisticated exports over time, particularly in the mechanical, electrical, and pharmaceutical sectors. Yet, the share of firms investing in research and development declined from 18 percent to 7 percent between 2013 and 2020, as did the share of firms investing in new products or services (from 28 percent to 14 percent) or in new processes (from 35 percent to 4 percent) (Figure 4.19).

Cronyism and political connections remain a distinctive feature of the Tunisian private sector landscape. Political connections undermine market contestability and fair competition in a number of ways. For example, politically

[69] COVID-19 Business Pulse Survey Dashboard, World Bank, Washington, DC, https://www.worldbank.org/en/data/interactive/2021/01/19/covid-19-business-pulse-survey-dashboard.

FIGURE 4.19. Share of Firms Investing in Human and Physical Capital and Innovating, 2013 and 2020



Source: Based on data of Enterprise Surveys (dashboard), World Bank, Washington, DC, https://www.enterprisesurveys.org/.

connected firms are able to benefit from easier access to credit and to access sectors with barriers to entry or where the existence of privileges can deter unconnected firms from entry. In Tunisia, politically connected firms are found to have abused entry regulations for their own gain and to be more likely to avoid import tariffs (Rijkers, Baghdadi, and Raballand 2017; Rijkers, Freund, and Nucifora 2017). About 28 percent of formal firms declare that they have a political connection in Tunisia, a figure considerably higher than the average in the Middle East and North Africa region as well as in middle-income countries.[70] The World Bank (2021b) estimates that politically connected firms in the Middle East and North Africa region are more likely than firms in other regions to be part of a business organization and to have access to external finance.

[70]The 2020 round of the Tunisia Enterprise Survey included a question that asks respondents the following: "Has the owner, CEO, top manager, or any of the board members of this firm ever been elected or appointed to a political position in this country?" This is the strict definition of political connections used in the analysis.

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ANNEX CHAPTER 4

TABLE A 4.1. Estimates of Firm-Level Characteristics and Measures of Productivity, 2013 and 2020

	2013	2020	2013	2020	2013	2020
	Sales per worker		Value added per worker		TFP	
Firm sector						
Textile manufacturing	–1.848***	–1.206***	–1.404***	–1.119***	0.137	0.119
	(0.210)	(0.201)	(0.226)	(0.195)	(0.136)	(0.211)
Other manufacturing	–0.716***	–0.371**	–0.580***	–0.319*	0.011	0.368*
	(0.173)	(0.184)	(0.183)	(0.177)	(0.115)	(0.185)
Construction	–0.726***	–0.013				
	(0.256)	(0.248)				
Trade	–0.261	0.524***				
	(0.183)	(0.174)				
Hotels and Restaurants	–1.546***	–0.420*				
	(0.220)	(0.228)				
Other services	–0.884***	–0.063				
	(0.190)	(0.204)				
Firm size						
Employment (log of)	0.127	0.344*	–0.256	0.621**	–0.079	0.886***
	(0.163)	(0.190)	(0.278)	(0.288)	(0.160)	(0.329)
Employment squared (log of)	–0.018	–0.037	0.030	–0.081**	0.010	–0.097**
	(0.022)	(0.025)	(0.034)	(0.037)	(0.020)	(0.040)
Firm age						
6–14 years	–0.144	0.799***	–0.374*	1.260***	0.024	–0.103
	(0.152)	(0.241)	(0.224)	(0.355)	(0.136)	(0.345)
15 years and over	–0.188	0.988***	–0.415**	1.241***	0.213*	–0.019
	(0.142)	(0.232)	(0.206)	(0.345)	(0.119)	(0.327)
Firm location						
Sfax	0.365***	–0.063	0.176	–0.389**	–0.326**	–0.024
	(0.137)	(0.105)	(0.232)	(0.174)	(0.135)	(0.177)
North-East	–0.259**	–0.265*	–0.386*	–0.829***	–0.502***	0.133
	(0.118)	(0.158)	(0.228)	(0.242)	(0.134)	(0.214)
South Coast/South-West	–0.086	–0.247	–0.451**	–0.463*	–0.306**	–0.269
	(0.126)	(0.164)	(0.223)	(0.276)	(0.132)	(0.416)
Interior	–0.077		0.225		–0.170	
	(0.195)		(0.332)		(0.194)	
Foreign-owned firm	–0.171	0.003	–0.271	–0.520***	0.172	–0.468***
	(0.135)	(0.159)	(0.206)	(0.168)	(0.118)	(0.163)
Exporting firm	–0.013	–0.029	–0.232	–0.150	–0.076	0.289
	(0.096)	(0.124)	(0.147)	(0.148)	(0.085)	(0.176)
Constant	11.771***	8.651***	12.474***	8.810***	1.147***	–0.783
	(0.439)	(0.558)	(0.700)	(0.802)	(0.406)	(0.898)
Observations	544	483	239	197	228	84
R-squared	0.248	0.277	0.303	0.272	0.129	0.275

Note: Reference category: firms operating in food manufacturing; firms established less than 6 years before the survey time; firms located in Tunis; firms owned by Tunisians; not exporting firms.
Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

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