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GROWTH AND PRECARIOUSNESS IN EGYPT

L. Fedi, M. Amer and A. Rashad

WORKING PAPER N° 2

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Growth and precariousness in Egypt

L. Fedi, M. Amer and A. Rashad

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Foreword

Full and productive employment and decent work are at the heart of the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs). In addition to the specific goal (SDG8) of promoting “sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”, decent work is featured in many of the other SDGs.¹

In adopting the SDGs, in particular SDG8, the international community has put job creation at the heart of economic policy-making and development plans: economic growth that generates decent work opportunities will lead to inclusive and poverty-reducing growth. Systematic follow-up and review of the implementation of the 2030 Agenda is required in order to maximize and track its progress. The follow-up and review is expected to “maintain a longer-term orientation, identify achievements, challenges, gaps and critical success factors and support countries in making informed policy choices”.²

In order to support ILO constituents in their efforts to maximize and track progress on SDG8, a multi-country research programme has been undertaken that diagnoses opportunities and challenges associated with promoting productive employment and that identifies policy options for achieving SDG8. Within the framework of the ILO/Sida Partnership on “More and better jobs for inclusive growth and improved youth employment prospects”, this global research on “SDGs and employment policies: Macroeconomic, sectoral and labour market policies for structural transformation and full and productive employment” was conducted in 10 countries, taking into account their specific country context. In particular, the research focused on the interlinkages and potential virtuous circle between targets 8.1 (sustaining per capita economic growth), 8.2 (sustaining labour productivity growth), 8.3 (promoting development-oriented policies), 8.5 (promoting full and productive employment for all women and men) and 8.6 (decreasing the share of NEETs by engaging young people in the labour market).

To better tailor policy advice and to customize employment diagnostics, it is important to present types of employment and economic growth pathways, and similar dynamics, according to core employment and productive characteristics and challenges. This is related, for example, to demographic transition and labour market transformations driven by globalization and technological change. The country selection included a diversity of countries across the employment and productive transformation pathways for more nuanced and contextualized policy guidance.

Four global syntheses are presented, based on the country studies, focusing more specifically on: (i) Structural transformation for inclusive growth and productive employment; (ii) Gender impacts of structural transformation; (iii) Young people not in employment, education and training; and (iv) Delivering on SDG8.

The Employment and Labour Markets Branch (EMPLAB) is engaged in global advocacy and in supporting Member States’ efforts to put the aim of more and better jobs at the centre of economic and social policies and of growth and development strategies. Policy research and knowledge generation and dissemination are essential components of EMPLAB’s activities. The ILO/Sida Partnership on Employment working paper series is

¹ See ILO: *Decent Work and the 2030 Agenda for Sustainable Development* for more information on the linkages between decent work and the SDGs. Available at:

https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_436923.pdf

² United Nations (2015): *Transforming our world: The 2030 Agenda for Sustainable Development*. Available at: <http://undocs.org/A/RES/71/313>

designed to disseminate the main findings of research on a broad range of topics undertaken by EMPLAB on employment and youth employment policies. The working papers are intended to encourage the exchange of ideas and to stimulate debate. The views expressed in them are the responsibility of the authors and do not necessarily represent those of the ILO.

Sukti Dasgupta
Chief
Employment and Labour Markets Branch

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Executive summary

We studied precarious work in Egypt over the period 2007–17 using a statistical definition based on the ILO’s broad definition, following Rodgers (1989).

The study finds a 30 per cent rise in precarious work in just three years, between 2015 and 2017. While about half of workers had jobs that matched at least one of six characteristics of precarious work³ in 2014, by 2017 two-thirds qualified as precarious.

We also find that precariousness is deepening for those who are worst off and that inequality of access to good employment conditions has increased. While in 2007, 5 per cent of workers could be considered “highly precarious”, matching all or all but one of the features of precariousness, by 2017, 27 per cent of workers were highly precarious.

This drastic degradation of job quality happened as the economy was growing at 4–5 per cent annually, bouncing back from a deep slump in the first half of the decade. It also coincided with the unrolling of major IMF-backed economic reforms. The labour market costs of the reform programme have manifested themselves not as higher unemployment (which decreased over the period), but in a degradation of working conditions. We infer from the data that the signalled freeze in public hiring and the commitment to downsize the public labour force has been the principal driver of a sharp downward adjustment of reservation working conditions, particularly among women and tertiary graduates.

We find precariousness to be indicative of economic participation and educational choices in Egypt. While educational choices are paradoxical, given their unemployment outcomes, they are well explained by outcomes in terms of working conditions. In Egypt unemployment rates increase with educational attainment. In 2007, tertiary graduates were four times less likely to be in precarious employment than the least educated. By this measure, returns on higher education have decreased considerably over the period under observation, and particularly since 2014. By 2017 tertiary graduates were only half as likely to be in precarious employment than those with no or only primary qualifications.

Precarious employment is more prevalent among men (69 per cent versus 49 per cent among women), but the degradation of employment conditions has been much steeper for women. Women with secondary or higher educational attainment have long maintained higher reservation working conditions, at the cost of lower activity rates. This social contract across genders is being eroded, however: the gender gap in precariousness has narrowed from 30 points in 2007 to 20 points in 2017.

Traditionally male-dominated sectors are also the ones that are growing the most; conversely, agriculture and public administration, dominated by women – at both ends of the skills scale – are losing ground. Public sector employment in particular has allowed women to reconcile heavy household duties with working life. In light of our analysis the reduction in labour force participation among middle class, educated women is indicative of increasing difficulties in balancing family duties with work. Balancing household duties with men, better access to child and elderly care, and improved working conditions in the private sector (that is, more opportunities for work to which the Labour Code is applied) appear to be key to enabling women to play a more equal role in the economy.

³ These include: working poverty; time-related underemployment; irregular employment; unprotected or informal work, itself including work with no work contract, work with no old-age pension, and work with no health insurance.

Over the longer term, the challenge of generating better jobs in Egypt is largely about structural transformation. In other middle income countries (MICs) manufacturing is absorbing the excess labour generated from rising productivity in agriculture, thereby further increasing overall productivity. Such a virtuous cycle is not observed in Egypt, however. Manufacturing's share of GDP is diminishing and agricultural jobs are shifting to low-productivity, precarious construction and trading.

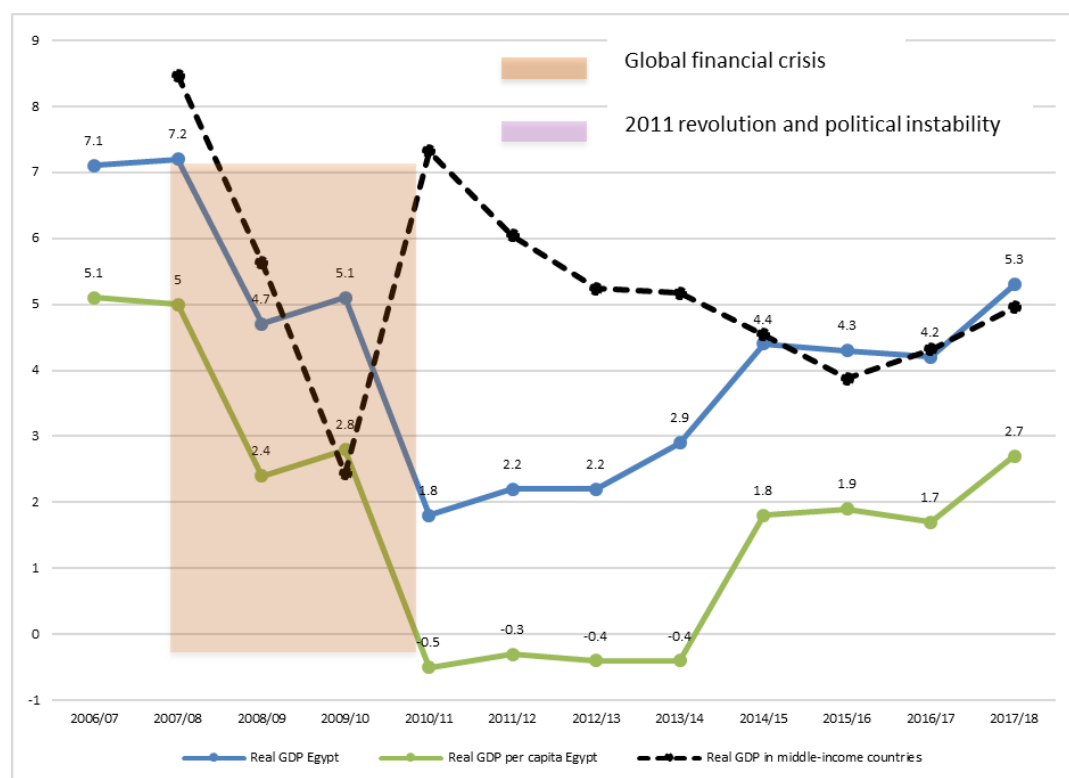
1. Growth and employment, 2007–17: a rollercoaster ride

1.1 Growth

This study looks back at the past decade, with most data referring to the period 2006–17. These times have been far from smooth sailing for Egypt. The 2000s saw relatively high growth, averaging 5 per cent a year, with peaks of 7 per cent. At the turn of the decade, however, a wave of social discontent swept through the country and toppled the long-established rule of President Hosni Mubarak. Political uncertainty and instability ensued, compounding the challenges arising from the global financial crisis that was by then crippling Europe, Egypt’s major economic partner. Growth plunged by over 5 percentage points between 2007–08 and 2011–12 and per capita growth turned negative for three years.

At the other end of the reference period the economy bounced back. While not yet returning to the heights of the 2000s, by 2017–18 it had climbed above 5 per cent. In “real-real” terms – that is, accounting for demographic growth – real per capita growth reached 2.7 per cent in 2017–18. As this chapter was being written the growth outlook was stable for 2018 and 2019.

Figure 1. Real GDP growth in Egypt and middle-income countries, 2006–07 to 2017–18



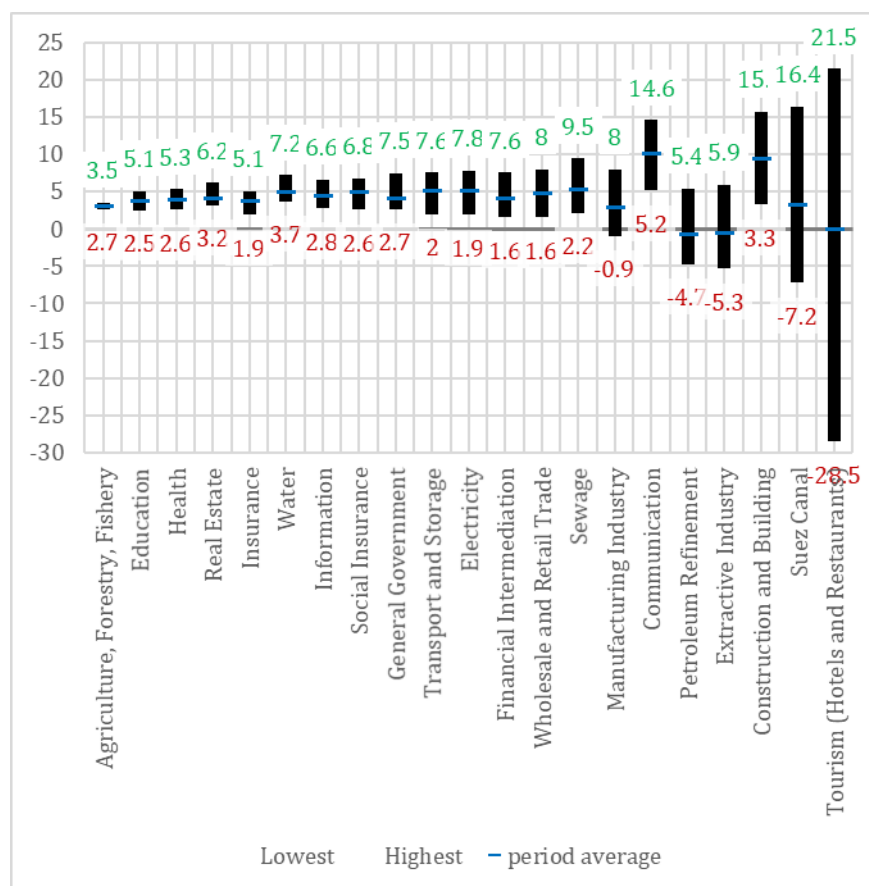
Source: Ministry of Finance, Financial Monthly Bulletins (December 2012, June 2019, January 2019).

This chapter considers the period 2006–2008, with its 7 per cent growth and per capita growth rate of 5 per cent, as the top of the business cycle. As the 2007 global financial crisis hit, Egypt initially suffered less than the average middle income country; it lost 2 percentage points of growth between 2007 and 2009, while average growth in middle income countries lost more than 5 points. In 2011, however, while other middle income countries were bouncing back, Egypt was entering its worst economic crisis in decades. This was the effect not only of domestic political instability, but also of the slow-moving crisis in the EU area.

We consider the 2 per cent growth rate and zero per capita rate as the bottom of the business cycle (see Figure 1).

The combined effect of these financial and political crises had different impacts on different economic sectors. More internationalized sectors, as well as sectors with longer-term investment life-cycles, were affected more than others. As Figure 2 shows, tourism, construction, and the Suez Canal were most sensitive to the economic environment, while agriculture paid little notice. Tourism's annual real growth rate exceeded 20 per cent at the end of the 2000s, but hit a low of –28 per cent over the period, a spread of over 50 points (see Figure 2).

Figure 2. Highest, lowest real and period average GDP rates by sector, 2006–07 to 2016–17



Source: Authors' calculations based on Ministry of Planning National Accounts.

1.2 Labour market

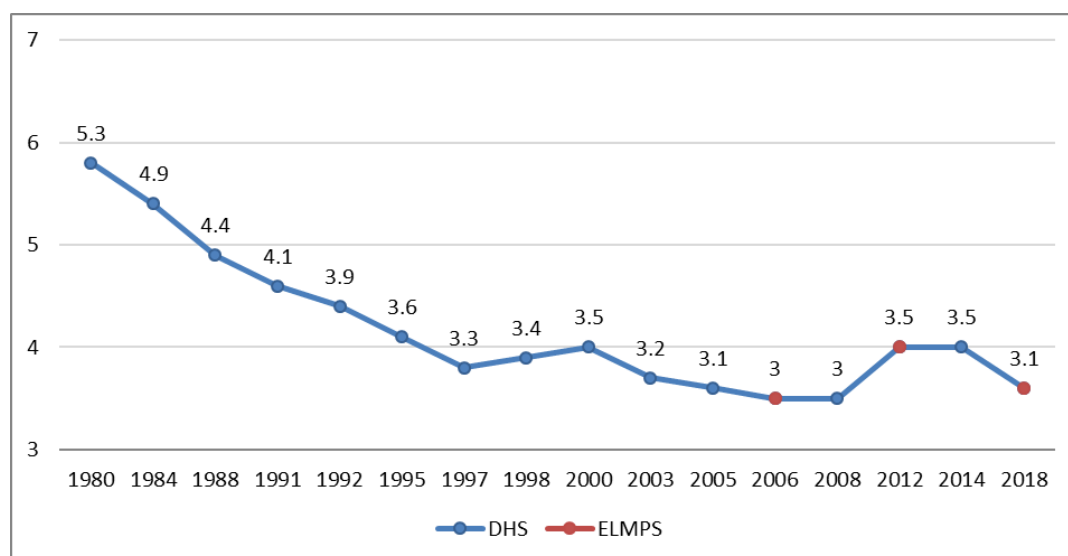
Demographic growth

Egypt's population is growing much faster than the typical middle-income country, and will continue to do so in the foreseeable future. According to the latest population census of 2017, Egypt had 94.799 million residents (CAPMAS, 2018). It is estimated that the resident population increased by almost 1.5 million in 2018 alone, and multiplied more than fivefold between 1947 and 2017. Between the last two censuses it grew by 2.4 per cent a year, well above the lower middle-income country average of 1.4 per cent (United Nations, 2019).

The fertility rate fell significantly between 1980 and 1997, from 5.3 to 3.3 children per woman, but has not further fallen since, instead fluctuating between 3.5 and 3.1 children per woman (Krafft, Assaad, and Kleo, 2019). In 2018, the fertility rate stood at 3.1 children per

woman, well above the lower middle-income country average of 2.71 (United Nations, 2019).

Figure 3. Total fertility rate, 1980–2018

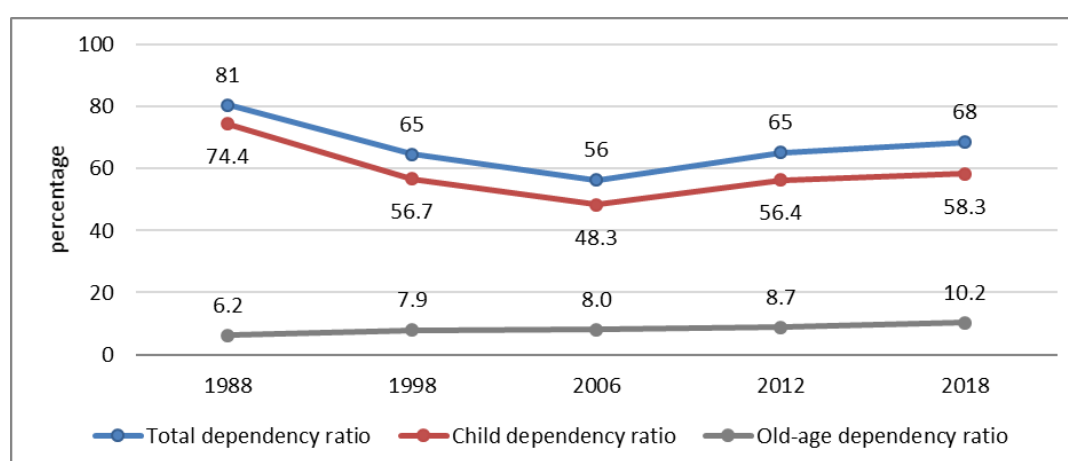


Source: Krafft et al., 2019.

As a consequence, the Egyptian population remains very young. In 2017, more than half (52.4 per cent) were under the age of 25, and more than two-thirds were under the age of 30. The share of young people aged 15–24 fell from 22 per cent in the 2000s to 15.9 in 2018, but an increase in fertility in the late 2010s, as seen in Figure 3, will accelerate the share of new entrants in the labour market in the mid-2020s (Krafft, Assaad, and Kleo, 2019).

Dependency ratios decreased sharply between 1988 and 2006, from 80.6 per cent to 65.1 per cent, but have risen by 3 percentage points in the past decade, reaching 68.5 per cent in 2018. The old-age dependency ratio was on the rise, but old-age dependents still made up only about 15 per cent of all dependents (see Figure 4).

Figure 4. Dependency ratios, 1988–2018



Source: Authors' calculations based on LFSS, 1988; ELMPS, 1998–2018.

Labour force participation

Labour force participation has been declining in Egypt since the end of the 1990s, among both men and women. Over the period 2007–17 men's participation fell from 75.4 to 69.5

per cent, while women's participation decreased more modestly, albeit from much lower levels, from 24.5 to 23.1 per cent.

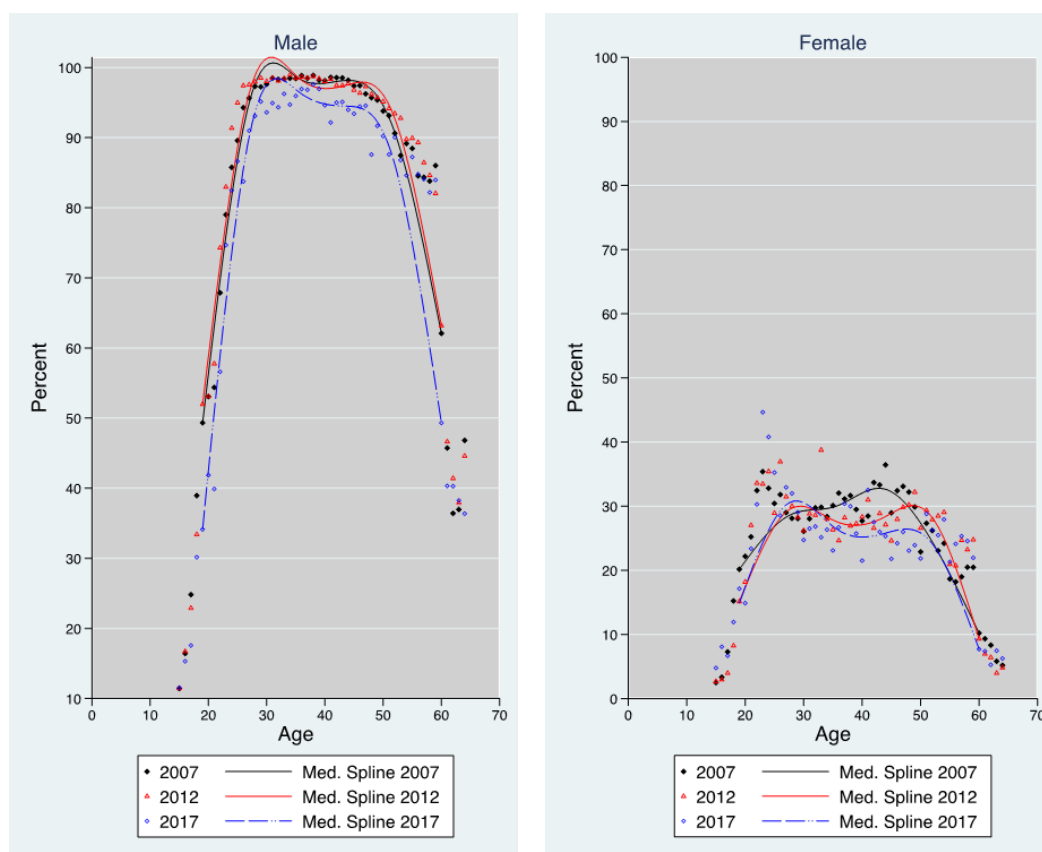
The participation curve by age for males is in line with international patterns, remaining largely unchanged over the years. On the other hand, the female participation rate follows a more unusual pattern, with significant differences between years of observation. In 2012 and 2017, female labour force participation reached a peak of about 30 per cent at around the age of 25, then fell up to the age of 40 before surging again and reach another peak of about 25 per cent around the age of 50. The curve was different for the year 2007. The peak in participation was then higher at about 33 per cent, and was reached among women around the age of 45. The curb did not peak twice. Women were joining the labour market earlier in their life cycle, but were also more likely to leave the labour market midway through their working lives. While in 2012 women around the age of 50 were returning to the labour market, in 2017 they were no longer doing so (see Figure 5).

While a declining trend of male participation is consistent with the patterns seen in other countries, the continuing decline in female participation is of particular concern. Over the past decade male participation has declined at both ends of the age range, among both the youngest (aged 15–24) and the oldest (aged 60–64), due to increasing school and university enrolment and early retirement. By contrast, the decrease in female participation is also observed in the middle of the lifecycle, between the ages of 30 and 64 (see Figure 5).

The decline in participation observed among women is at least partly related to the end of guaranteed public sector hiring for tertiary graduates⁴ and the contraction of public sector employment that has occurred particularly since 2016. Women favour public administration employment as it allows them to reconcile work with (persistently heavy) domestic responsibilities. Hendy (2015) showed that married women worked longer hours on domestic chores than unmarried women, and that the domestic workload seemed inflexible whether women worked or not, regardless of their marital status. While the proportion of women in employment decreased after marriage for women working in the private sector, it increased after marriage for women working in the public sector (Hendy, 2015; Krafft, 2016). The gradual reduction of public employment (discussed further below) since the 2000s did not result in an increase in women's employment in the private sector, but rather in women's withdrawal from the labour market, especially for the most educated (Hendy, 2015; Assaad, Hendy, Lassassi, and Yassin, 2018). Female labour force participation is further investigated below in the section on precarious work.

⁴ In the 1960s a policy of lifetime guaranteed employment in the public sector was introduced for university graduates. This was subsequently extended to secondary school graduates on both the general and the technical tracks. The scheme has been shown to have led people (particularly women) to consider public sector employment conditions as reservation working conditions.

Figure 5. Labour force participation rate by gender and age, ages 15–64, 2007, 2012, and 2017



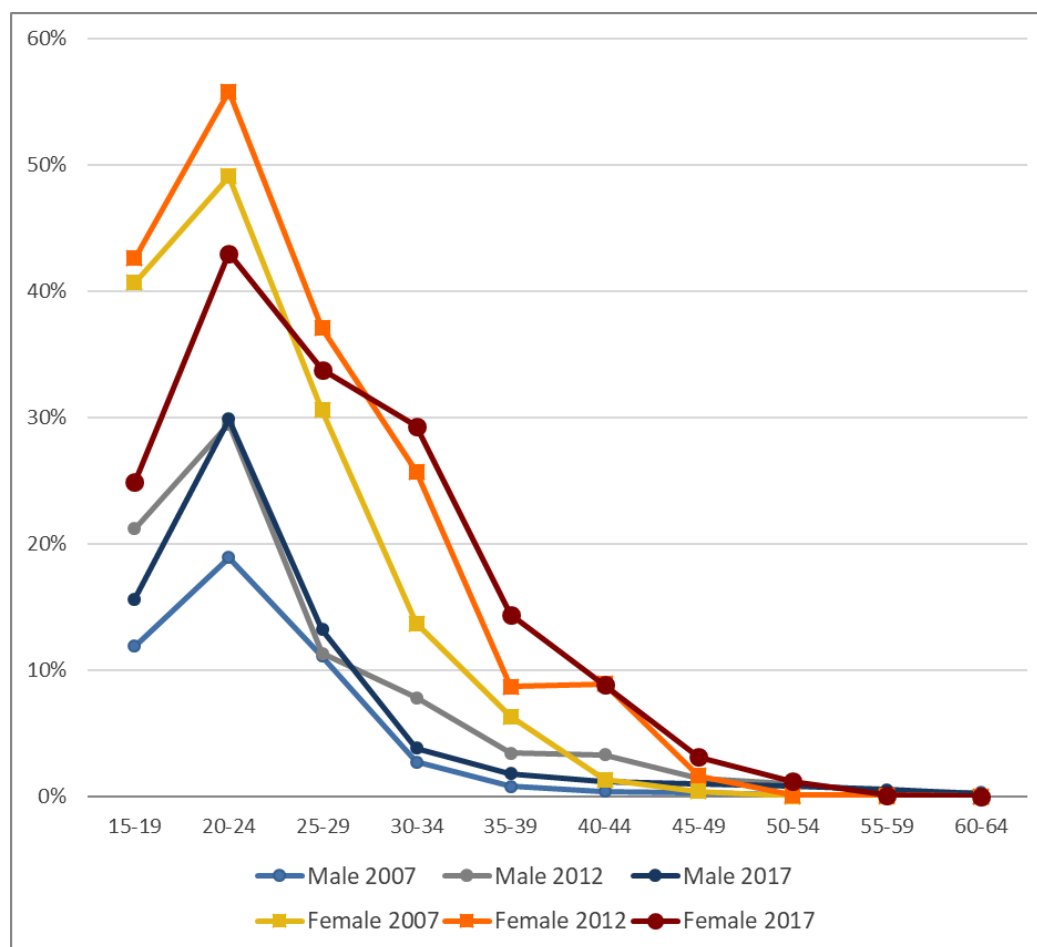
Source: Authors' calculations based on LFS 2007, LFS 2012 and LFS 2017.

Unemployment

Unemployment in Egypt affects disproportionately young people, women, and the more educated.

Total unemployment stood at a low of 6 per cent for males and 18 per cent for females at the height of the business cycle in 2007. By 2011, with the economy in crisis, the male rate almost doubled to 9 per cent, while the female rate increased to 23 per cent. Male and female unemployment have decreased since 2014, but at a very slow pace. In 2018 total unemployment stood at 8 per cent (see Figure 6).

Figure 6. Unemployment rate by gender and age, ages 15–64, 2007, 2012, and 2017

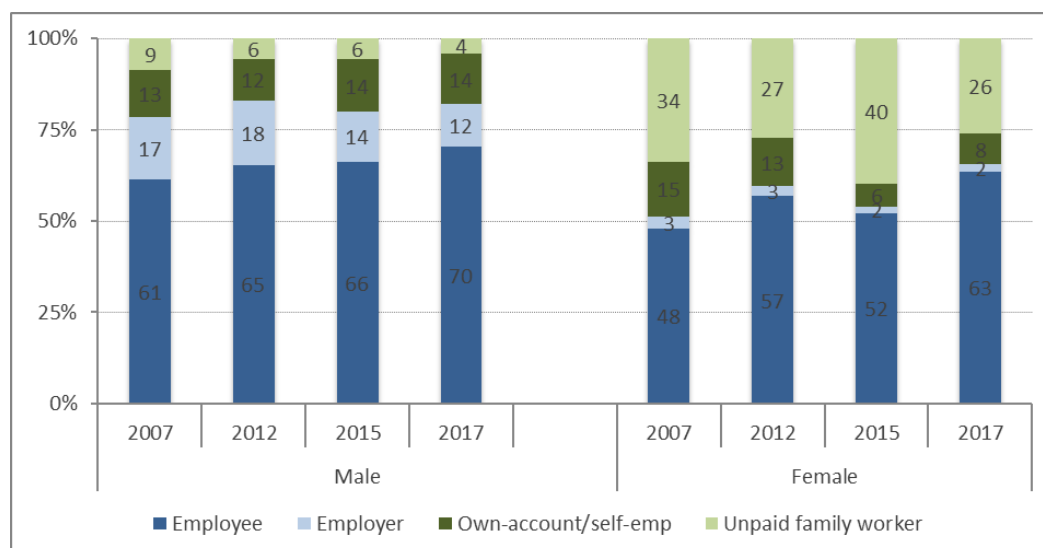


Source: Authors' calculations based on LFS 2007, LFS 2012 and LFS 2017.

Employment status

In 2017, two-thirds of workers were employees (wage earners), including 70 per cent of total employed males and 63 per cent of total employed women. In the course of the decade, unpaid-family work has decreased among both men and women, in favour of wage employment. Self-employment has remained largely stable among men, while decreasing among women. The share of “employers”, that is, business owners who are not self-employed, has decreased among men, while self-employment has decreased among women (see Figure 7).

Figure 7. Employment status by gender, ages 15–64, 2007, 2012, and 2017

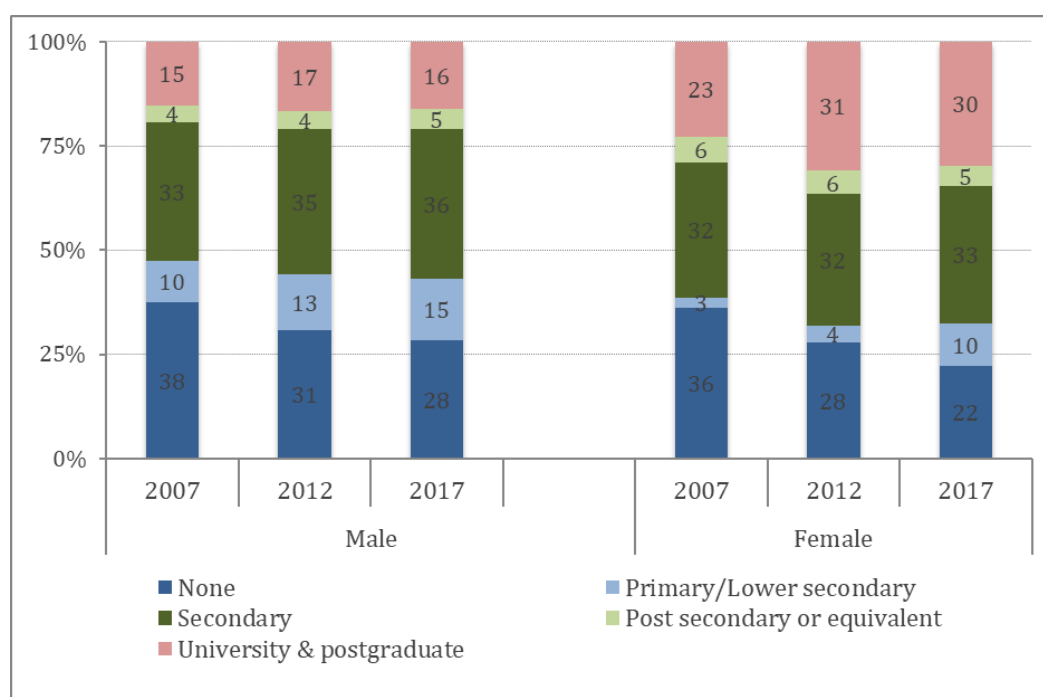


Source: Authors' calculations based on LFS 2007, LFS 2012, LFS 2015 and LFS 2017.

Educational attainment

The labour force in Egypt is increasingly educated. Over the period 2007–17 the proportion of illiterate workers fell from 38 to 28 per cent and from 36 to 22 per cent for men and women, respectively. The active population with primary and lower secondary education rose from 10 to 15 per cent and from 3 to 10 per cent, for men and women, respectively. The share of those completing tertiary education increased substantially for women, from 23 per cent in 2007 to 30 per cent in 2017, while remaining stable for men. The share of tertiary graduates in the labour force was then twice as high among women as among men (see Figure 8).

Figure 8. Labour force distribution by educational attainment and gender, ages 15–64, 2007, 2012, and 2017

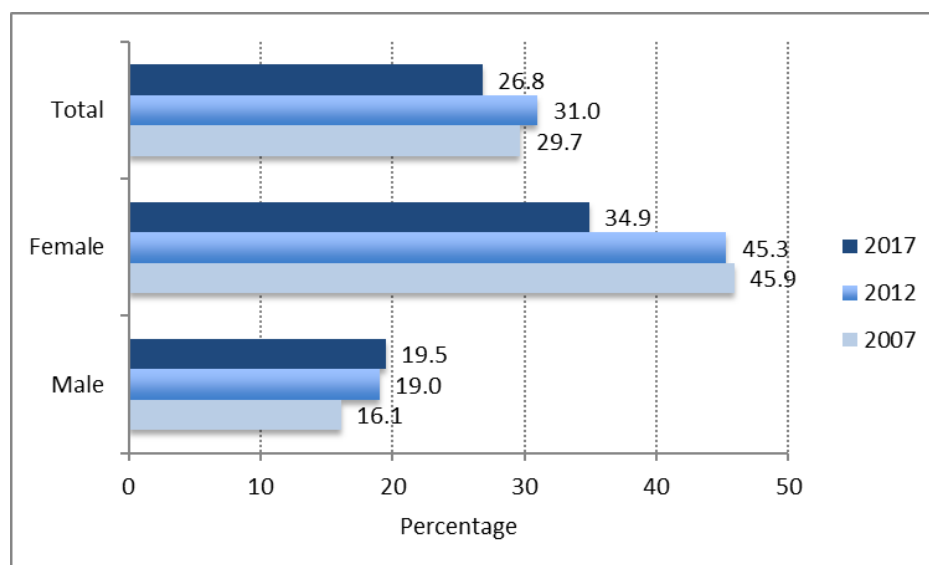


Source: Authors' calculations based on LFS 2007, LFS 2012 and LFS 2017.

NEETs

About a quarter of Egyptian young people are not in education, employment or training (NEET).⁵ The characteristics of this population and its trends are heavily differentiated across genders. In 2017, more than one-third of young women were neither working nor enrolled in school, compared with only 20 per cent of young men. While the female share decreased from 46 per cent in 2007 to 35 per cent 2017, the male share rose (see Figure 9).

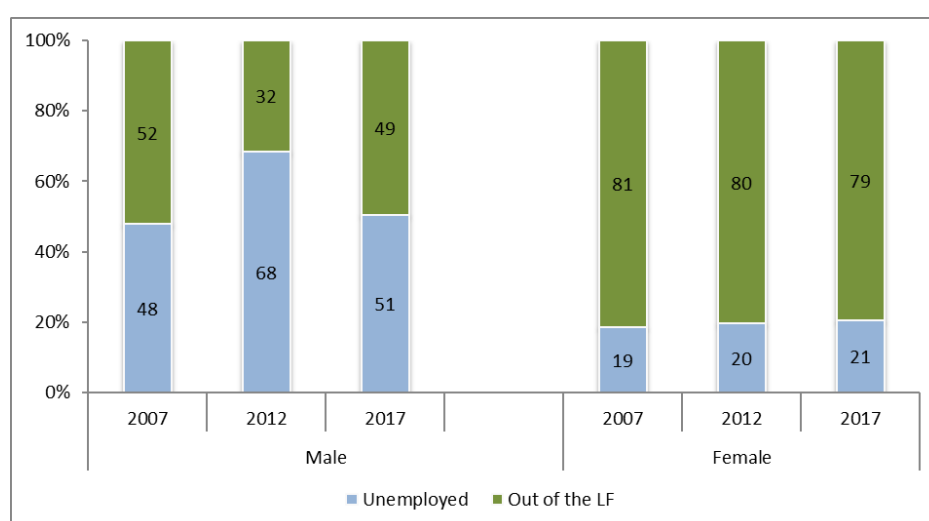
Figure 9. Share of NEETs by gender, ages 15–24, 2007, 2012, and 2017



Source: Authors' calculations based on LFS 2007, LFS 2012 and LFS 2017.

Young female NEETs were mainly inactive (at a stable 80 per cent), whereas young men were mainly unemployed (51 per cent in 2017). The fall in the proportion of female NEETs can be explained by a rise in school enrolment (see previous section). The reason for the irregular trend among males is less immediately discernible and would require additional research (see Figure 10).

Figure 10. Distribution of NEETs by labour market status and gender, ages 15–24, 2007, 2012, and 2017



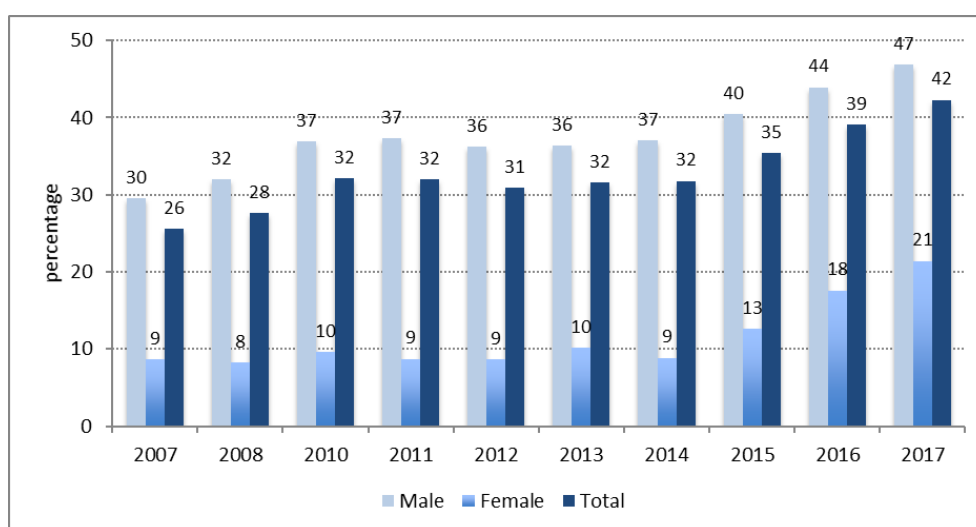
Source: Authors' calculations based on LFS 2007, LFS 2012 and LFS 2017.

⁵ As the LFS data do not identify people in training in this report, our measure of NEETs refers to young people neither in education nor in employment (“NEE”).

Informal employment

The rise of informal employment, as will be studied in further detail in Section 3, is perhaps the most dramatic change observed in the Egyptian labour market over the past decade. Starting at 26 per cent in 2007, informal employment in non-agricultural employment reached 42 per cent in 2017.⁶ Males are more frequently in informal work (47 per cent) than females (21 per cent), but the gap has narrowed over recent years (see Figure 11).

Figure 11. Share of informal employment in non-agricultural activities by gender, wage workers, ages 15–64, 2007, 2012, and 2017



Source: Authors' calculations based on LFS 2007, LFS 2012 and LFS 2017.

We discuss in much further detail informal employment and other related variables in the section on precariousness.

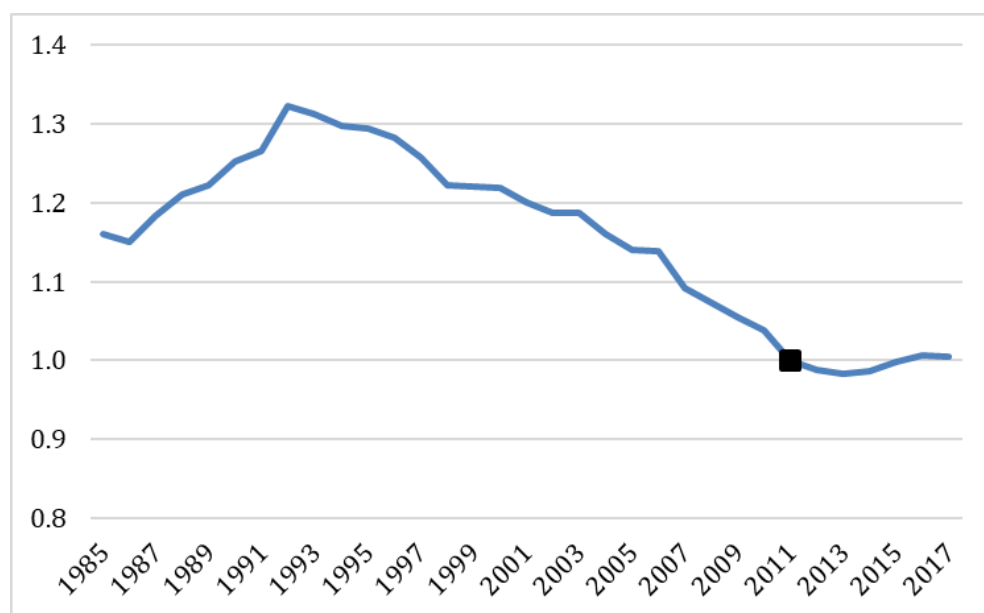
1.3 Economic transformation: down the early de-industrialization slope

Beyond the *pace* of economic growth, it is equally important to consider its “quality”; in other words, the extent to which the economy is becoming more productive and thus able to generate higher incomes. In developing economies, the ascent towards higher incomes involves a transformation away from subsistence agricultural activities towards industrial activity and (subsequently) high value added services. Shifts of capital and labour between economic sectors, rather than gains in productivity within sectors, account for the larger part of economic gains.

As Figure 12 shows, total factor productivity, which includes both capital and labour, has been eroding in Egypt since peaking in the early 1990s. The reasons for such degradation need to be looked at primarily in terms of the way labour and capital are allocated across sectors.

⁶ Informal employment is here defined as employment with no social security or a written contract.

Figure 12. Total factor productivity, annual, not seasonally adjusted
Constant national prices, index 2011=1



Source: University of Groningen, PENN World Table 9.1.

Over the past decade Egypt's economy has tilted towards construction and trading, away from agriculture and manufacturing, pursuing a trend that has been developing over the past three decades.

As Figure 13 shows, the share of real estate, construction, and trade (and petroleum refining) in GDP has increased faster than that of any other sector, while agriculture and manufacturing (and extractive industries) have lost ground. Comparing data from 2007 and 2017, manufacturing, which represented 15.3 per cent of GDP in 2006–07, was down to 12.8 per cent (–2.5 percentage points) in 2017–18. Agriculture shrank from 14.1 to 11.5 per cent (–2.6 percentage points) of GDP. Extractive industries were down by 4.8 percentage points, although a major new gas field is being put into production and is expected to reverse the trend. On the other hand, construction and real estate were up by 1.8 and 7.5 percentage points, respectively (see Figures 13 and 14).

Figure 13. Average annual change in GDP by economic activity, 2006–07 to 2016–17

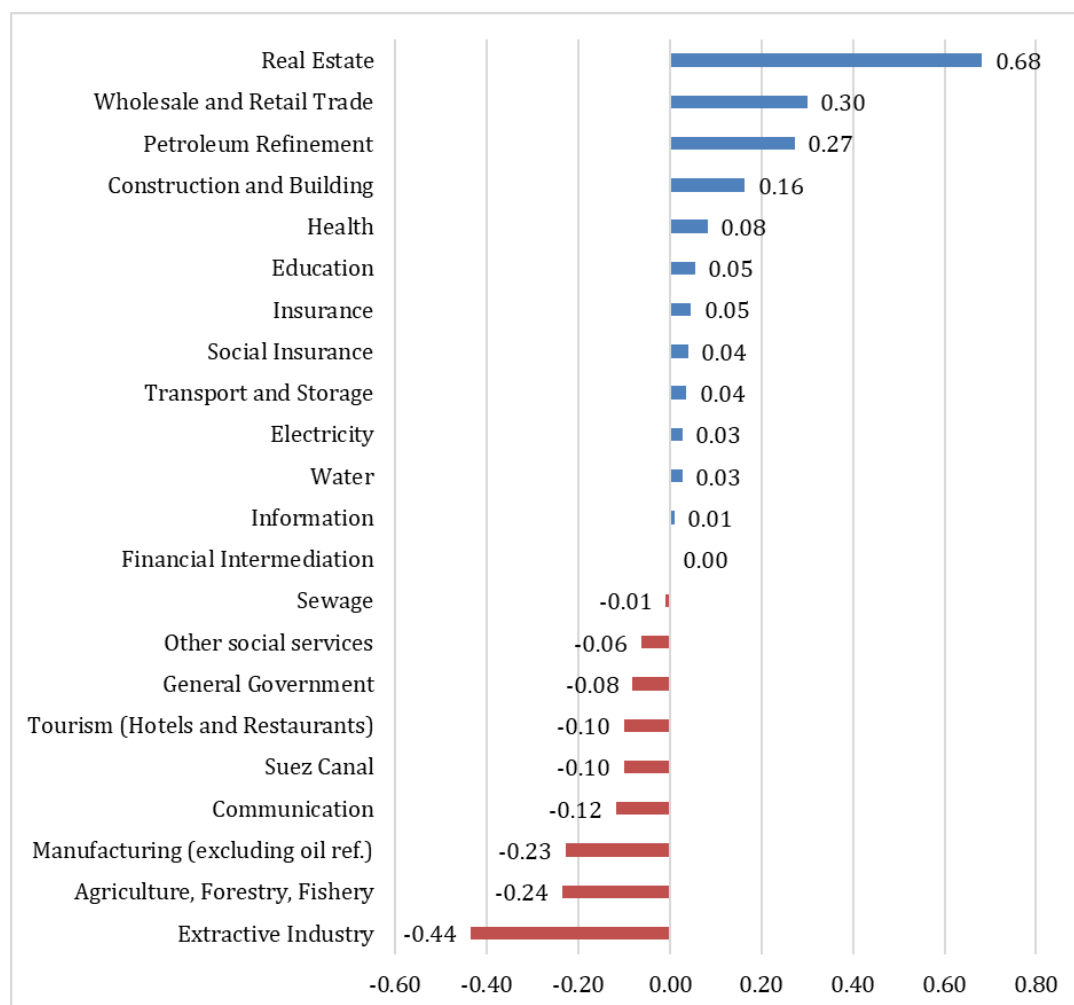
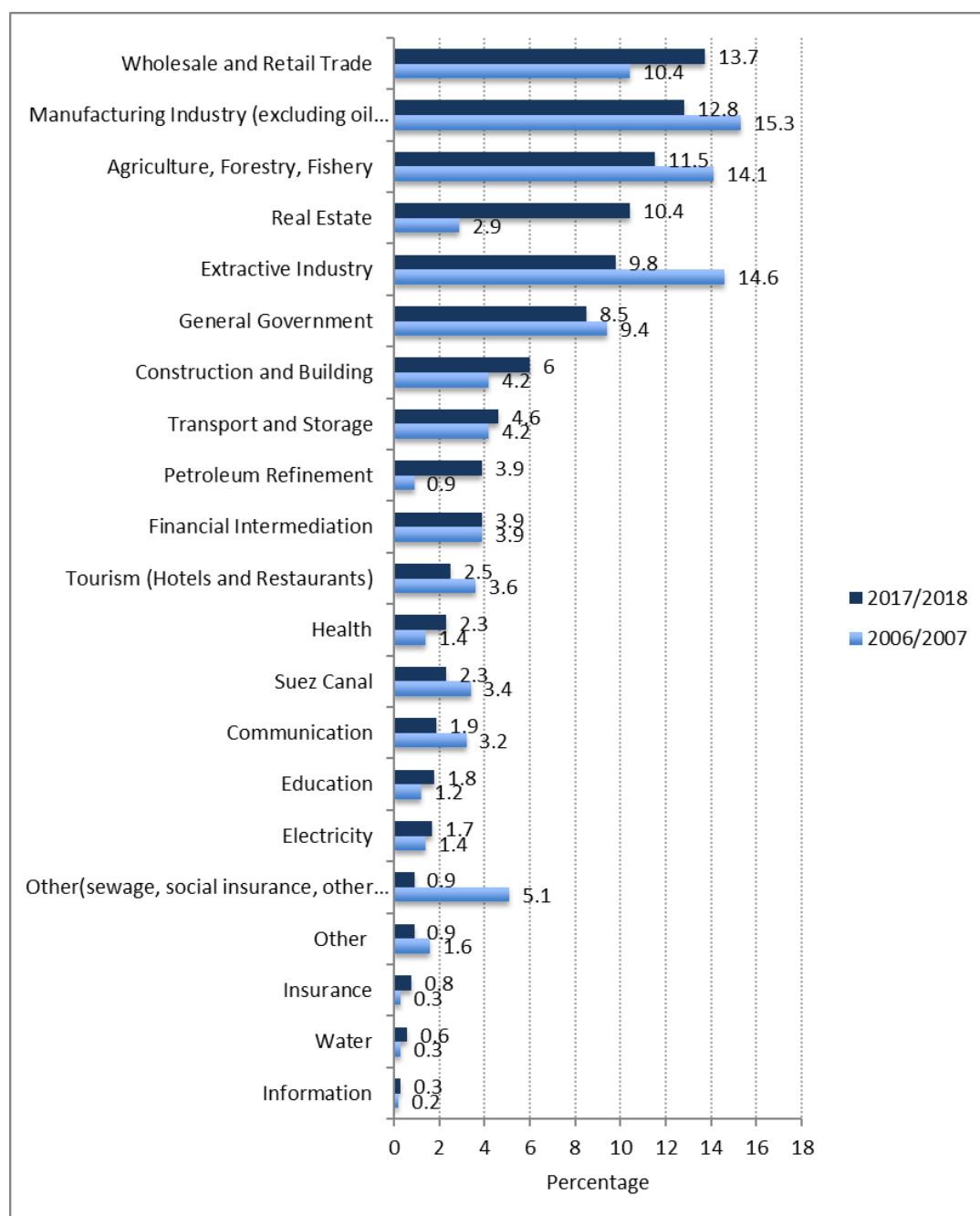


Figure 14. Distribution of GDP by economic activity, 2006–07 and 2017–18



Source: Authors' calculations based on Ministry of Planning National Accounts.

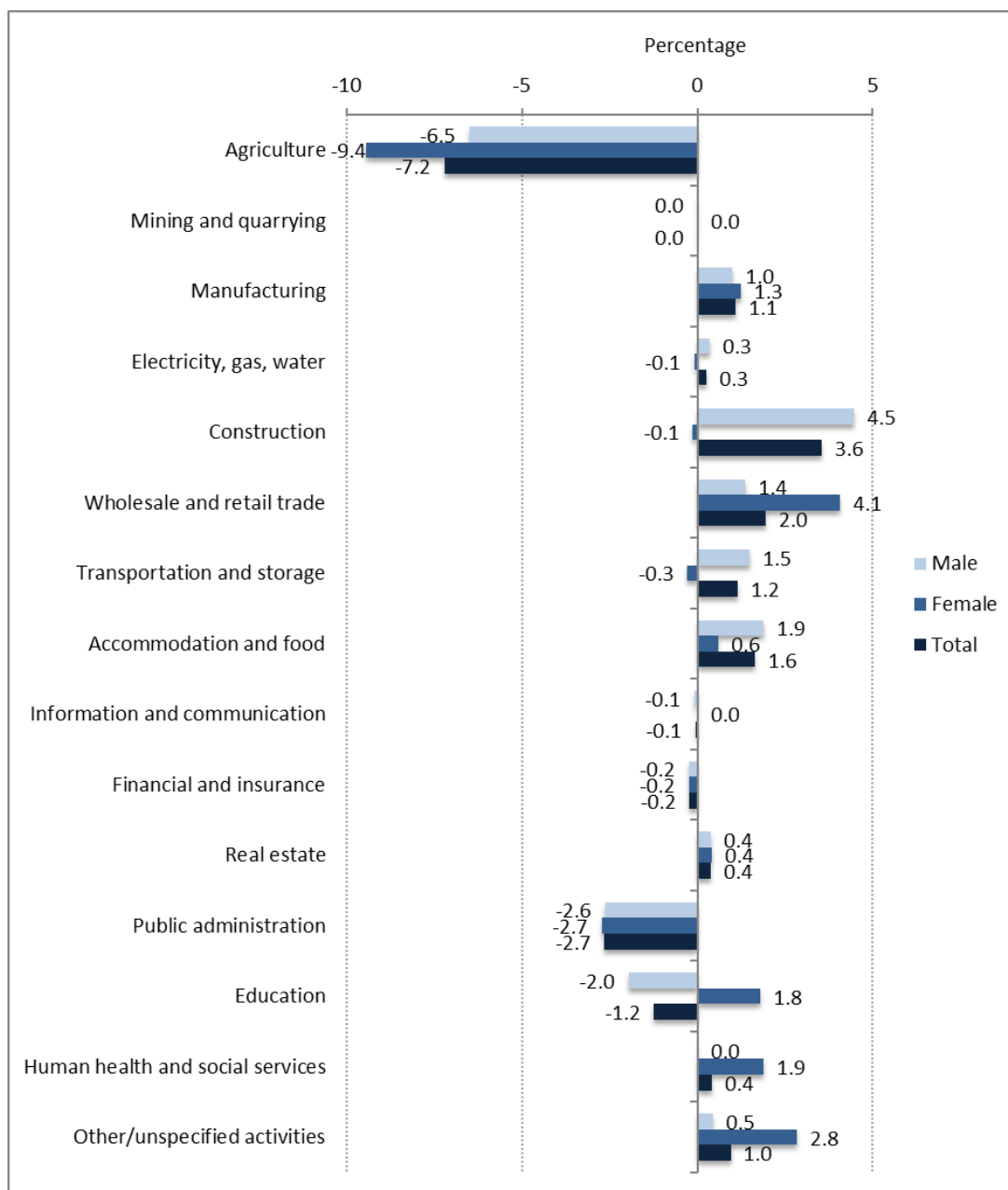
Employment

Changes in the distribution of employment by economic sector broadly mirror changes in the distribution of value added. Agriculture and public administration have been shedding employment, mainly in favour of construction and trading, and to a lesser extent tourism. While manufacturing is losing ground in value-added terms, it is still gaining – albeit only a little – in terms of employment.

Traditionally male-dominated sectors are also growing the most, and conversely, agriculture and public administration, in which women dominate, are losing ground. Women are overrepresented in agriculture (+16 percentage points), education (+16 percentage

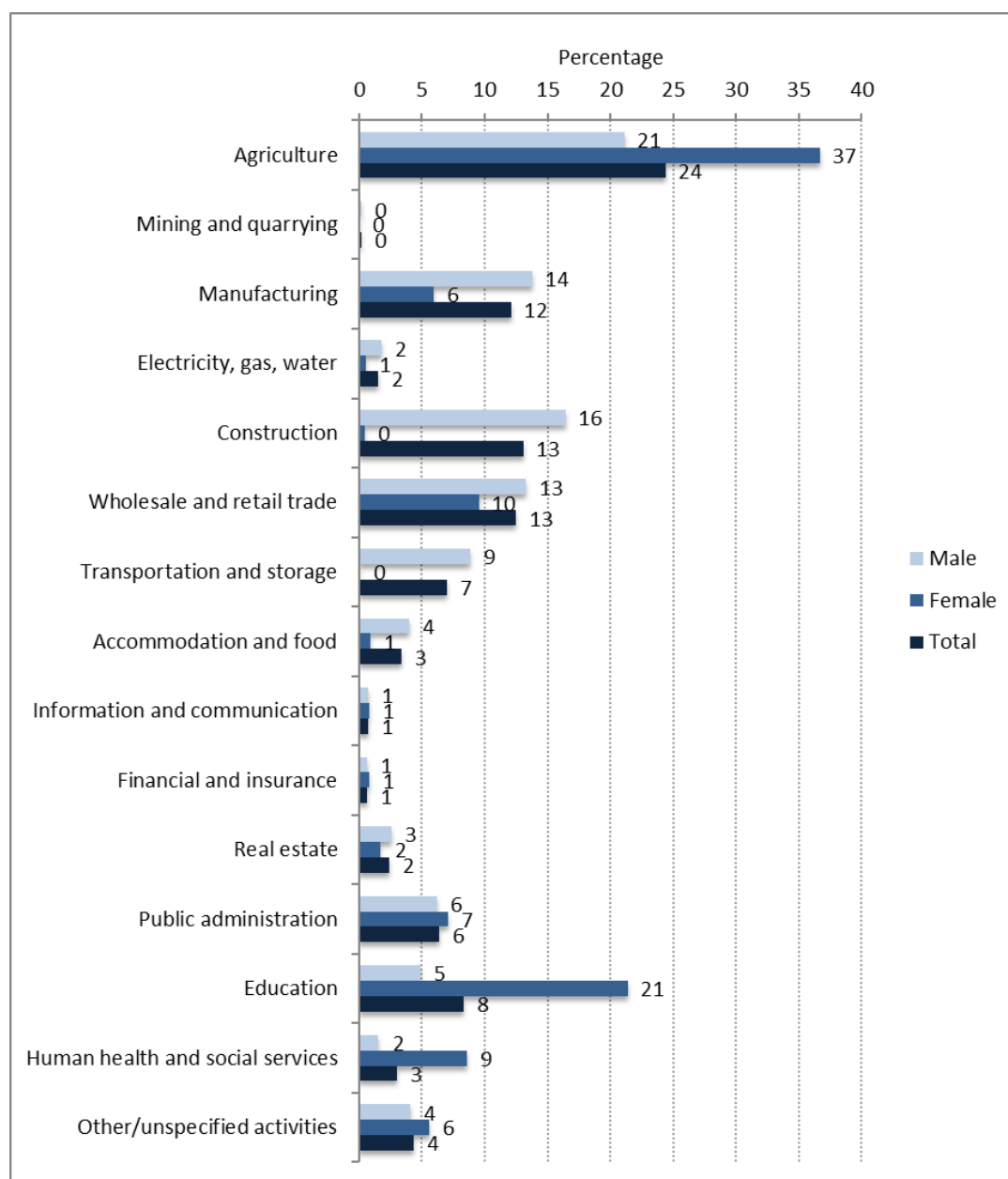
points), and human health and social services (+7 percentage points), and underrepresented in construction (–16 percentage points), transportation and storage (–9 percentage points), manufacturing (–8 percentage points), accommodation and food (–3 percentage points) and in trade (–3 percentage points) (see Figures 15 and 16).

Figure 15. Change in the distribution of employment by economic activity and gender, ages 15–64, 2007 and 2017



Source: Authors' calculations based on LFS 2007 and LFS 2017.

Figure 16. Distribution of employment by economic activity and gender, ages 15–64, 2017



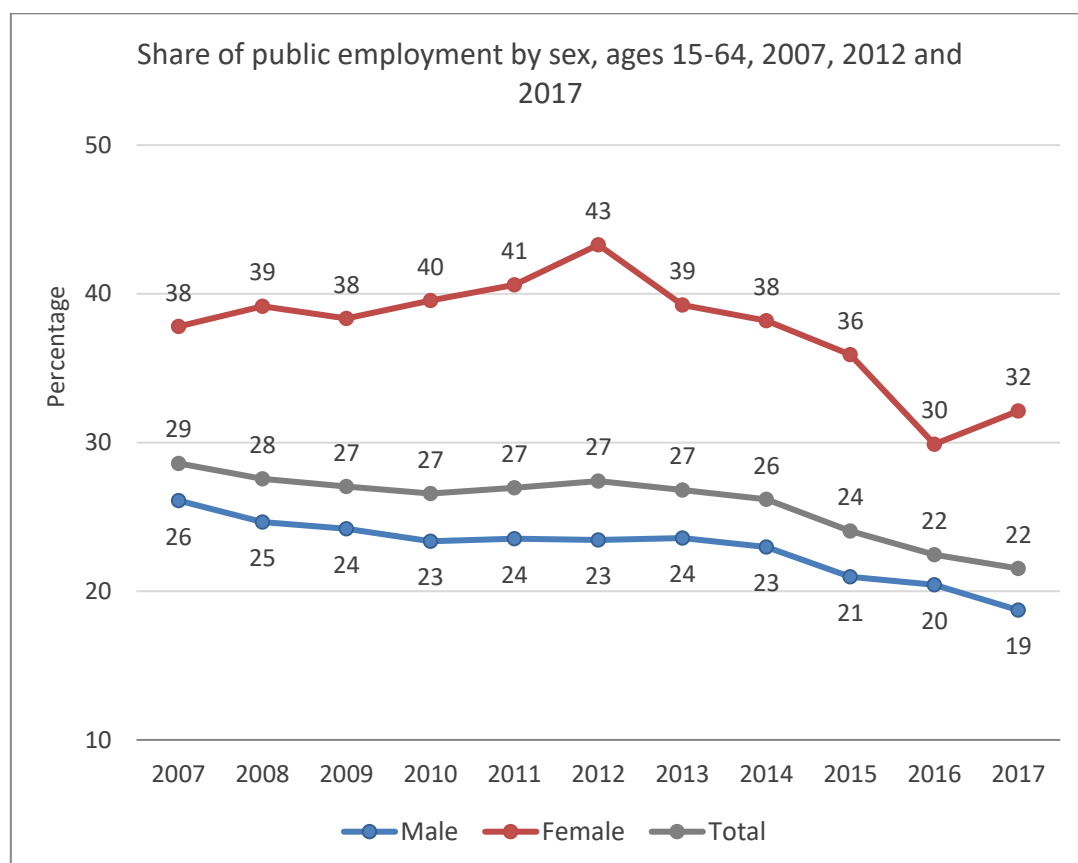
Source: Authors' calculations based on LFS 2017.

Public sector employment

The share of public employment has been shrinking since the early 1990s. Several waves of privatization of state-owned enterprises, early retirement schemes, and hiring freezes in public administration have progressively shrunk the share of public employment in the economy. Over the past decade public employment has fallen by 25 per cent, from 29 to 22 per cent. Since 2015 the rate of contraction has accelerated.

The public sector has long been particularly important for women, accounting for about 40 per cent of all female employment. The share was down to 32 per cent in 2017.

Figure 17. Share of public employment by gender, ages 15–64, 2007, 2012, and 2017

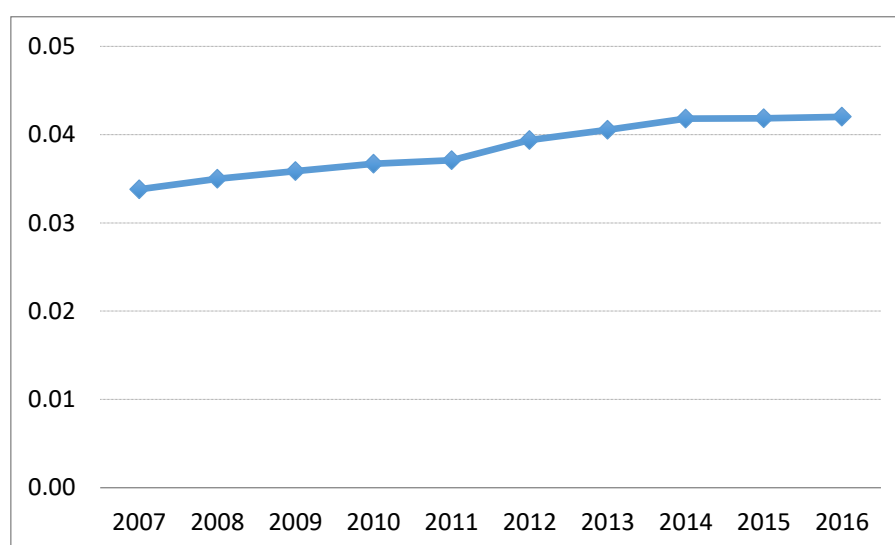


Source: Authors' calculations based on LFS 2007, LFS 2012 and LFS 2017.

Sectoral productivity

Labour productivity is low in Egypt and increased only very slightly between 2007 and 2016 (see Figure 18).

Figure 18. Labour productivity, 2007–16

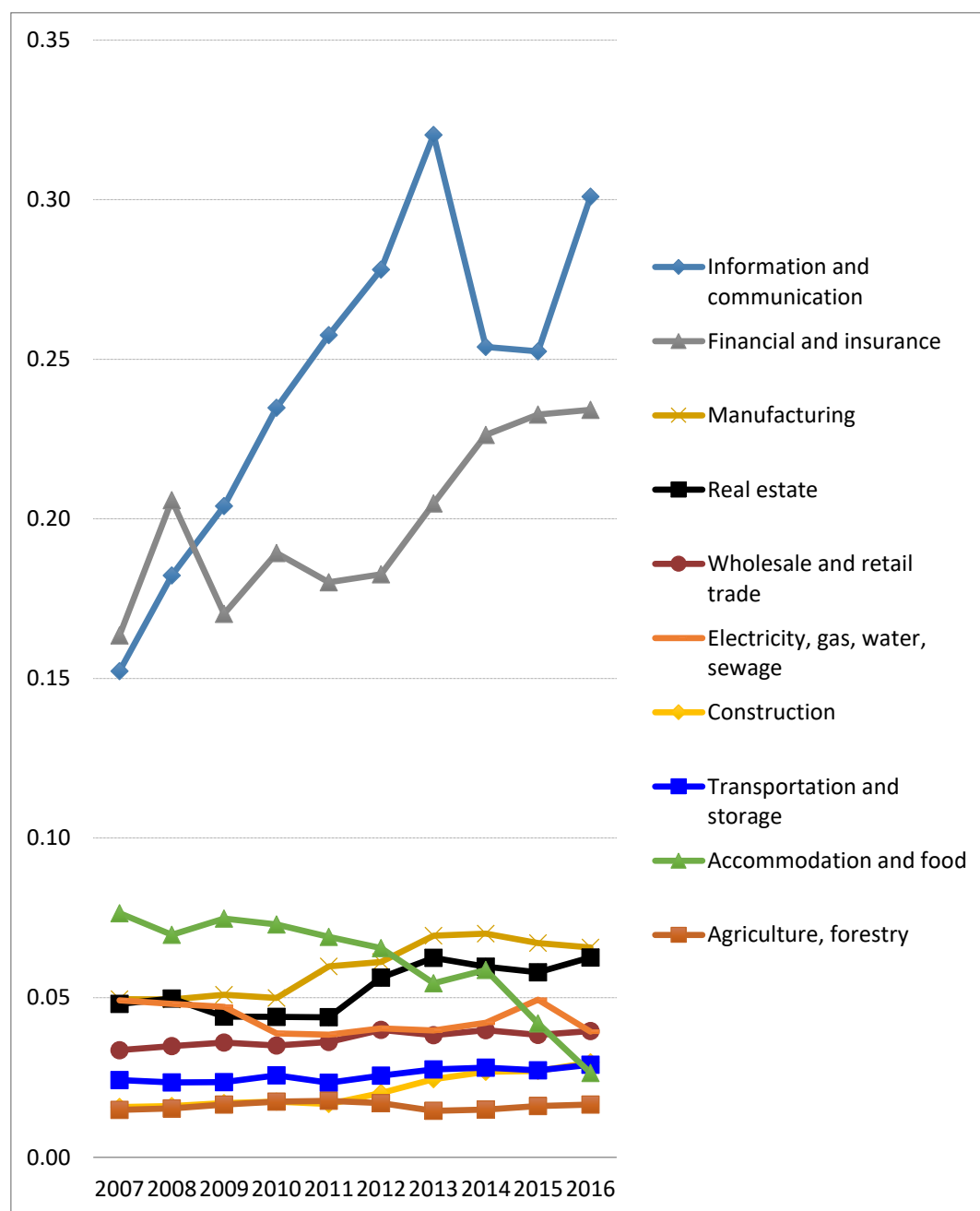


Note: Labour productivity is estimated as the ratio of real GDP and employment by economic activity, fixed prices in 2007.

Source: Authors' calculations based on Ministry of Planning National Accounts and LFS 2007–16.

With the exception of the mining sector (mainly gas and petrol extraction) labour productivity varies across sectors, between 0.02 and 0.4. It is higher in ITC and finance, while agriculture, construction and transportation are the least productive, followed by trade and utilities. As noted above, construction and trade, followed by accommodation and food and transportation, have been the driving sectors for employment in recent years. As a share of total employment ITC and finance are not expanding. Overall therefore, overlaying employment and productivity data, the labour force is shifting from low-productivity agriculture mainly to low-productivity construction and services. Sectoral shifts in employment happen between low-productivity sectors, and thus do not contribute to significant gains in overall productivity.

Figure 19. Ratio of real GDP to employment by economic activity, 2007–16⁷



Source: Authors' calculations based on Ministry of Planning National Accounts and LFS 2007–16.

⁷ The estimates of the ratio of real GDP to employment by sector are limited to the period 2007–16 as figures for 2017 are not consistent with the 2007–16 trend.

2. A more precarious Egypt

“Unemployment is king” is an indicator of everything to do with the labour market. It monopolizes the headlines and is often the sole labour market indicator on the macroeconomic and other policy radars. Labour economists have long challenged the status of unemployment as the unique indicator of the health of labour markets, but the alternative would be to wrestle with a multitude of other indicators. The definition (2013) by the ILCS of labour underutilization can be seen in this perspective as a means of enriching public discourse and policy analyses by synthesizing important dynamics that unemployment rates do not grasp. We propose a statistical definition of precarious work as another synthetic indicator able to capture job quality trends and apply the definition to Egypt in the past decade.

2.1 Measuring precarious work

The ILO has defined precarious work broadly as

work that is low paid, especially if associated with earnings that are at or below the poverty level and variable; insecure, meaning that there is uncertainty regarding the continuity of employment and the risk of job loss is high; with minimal worker control, such that the worker, either individually or collectively, has no say about their working conditions, wages or the pace of work; and unprotected, meaning that the work is not protected by law or collective agreements with respect to occupational safety and health, social protection, discrimination or other rights normally provided to workers in an employment relationship.⁸

In this chapter we propose a statistical definition of precarious work as measured in Egypt. We rely on data from the Egypt Labor Force Sample Surveys (ELFSS, or more simply LFS) for the years 2007 to 2017. The LFS are conducted by the Central Agency for Public Mobilization and Statistics (CAPMAS), the official statistical organization in Egypt. We use the data harmonized by the Economic Research Forum (ERF) through its Open Access Micro Data Initiative (OAMDI). In order to fill in some data gaps we make use of the 2012 and 2018 rounds of the Egypt Labor Market Panel Surveys (ELMPSs), implemented by CAPMAS and the Economic Research Forum on a nationally representative sample. The 2009 data of the LFS featured a number of anomalies and thus have been omitted from our series. Standardized data from the labour force survey for 2018 were not available in time for the study, but the recently released non-standardized data indicate that informal and non-protected work in 2018 remains close to 2017 levels.

We define as being in precarious employment those individuals in waged employment (ILO definitions) who meet any of the following conditions:

- i. Working poverty: this is measured as the number of employed persons within poor households. Poor households are identified as those whose wealth index is below the national poverty line. Official national poverty lines are only available for the years 2013 and 2015. We inflate these lines with the CPI (CAPMAS) to estimate the poverty lines for the years 2007–12, 2014, and 2016–18, using 2010 as base year. The wealth index uses data on assets and durable goods owned by households. We use the wealth index of the LFS when available (2007–11). For the years 2012 and 2018 we use the wealth index drawing of the ELMPS. For other years (2013, 2014, 2015, 2016, and 2017) we produce estimates based on the ELMPS data.

⁸ Non-standard employment around the world: Understanding challenges, shaping prospects. International Labour Office – Geneva: ILO. 2016. The definition follows Rodgers (1989).

-
- ii. Time-related underemployment (TRU). We count against this indicator persons working fewer than 35 hours a week when they also are found to “desire to work more”. This double conditionality can be measured in the LFS from 2007 to 2013. For the years 2013–17 we hold as a constant the average share of those who desire to work among those working fewer than 35 hours and apply it to the observed TRU.
 - iii. Irregular employment. We include under this indicator the employed who are found to be working “part-time”, in “temporary” or in “seasonal” employment. The complete set of observations is available for 2007–17.
 - iv. Unprotected or informal work refers to workers that match any of the following characteristics:
 - a) working with no labour contract;
 - b) working with no old-age pension coverage; or
 - c) working with no health insurance coverage. Data on health insurance coverage are not available prior to 2010. We hold constant the average share of those without health insurance within those working with no contract, to provide an estimate for 2007–08.

A total of six characteristics or elements of precariousness are thus included in our definition. The definition yields descriptive statistics on the incidence of precarious work across genders, educational attainment, occupations and other markers. We then examine degrees of precariousness. Some precarious workers match only one of the above characteristics, but precariousness also “accumulates” and some individuals match several or all of the above characteristics.

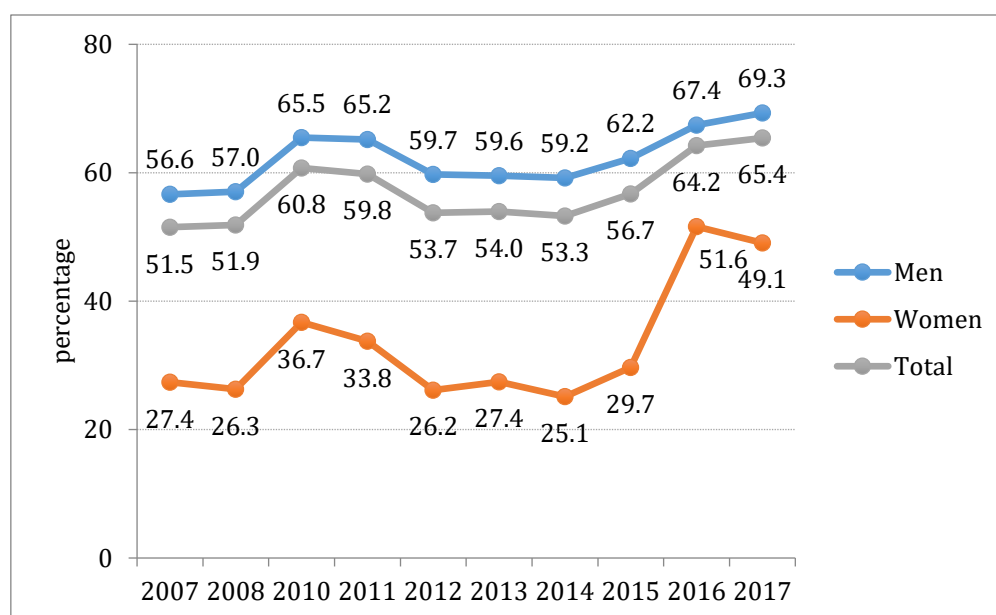
Two measures of the intensity of precariousness are used. The first is a simple cumulative indicator which counts the number of precarious elements that can be matched for any individual. Its value ranges between 0 (no element of precariousness) to 6 (all elements of precariousness matched). The second measure is a composite index constructed on the basis of a principal components analysis (PCA), that generates weights for each of the four components.

2.2 Incidence: more employment has become precarious

Our analysis shows an increase of 30 per cent in the share of persons working in precarious conditions over 2007–17. About half (51.5 per cent) of employees had precarious jobs in 2007; the share is now up to two-thirds (65.4 per cent). The increase has happened in two waves. The first took place over 2008–11, coinciding with the global economic crisis and the 2011 revolution, but precariousness then returned to prior levels. The major surge happened over 2015–17, while the economy was bouncing back and the IMF-backed economic reforms programme was rolled-out.

Precarious employment is more prevalent among male workers: 69.3 per cent of male workers and 49.1 per cent of females matched at least one characteristic of precarious work. The degradation of women’s employment conditions has been much more accentuated, however. The gender gap in precariousness has narrowed from 30 percentage points to 20 percentage points over the past decade (see Figure 20).

Figure 20. Percentage of precarious employment by gender, wage workers, ages 15–64, 2007–08, and 2010–17



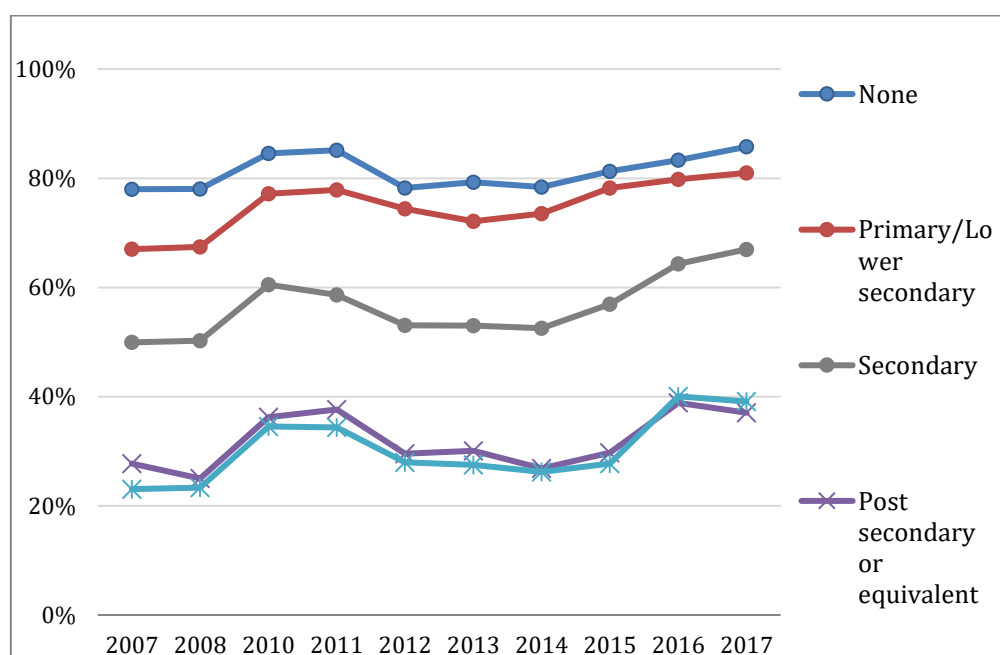
Note: LFS data for 2009 are omitted from our data series.

Source: Authors' calculations based on LFS 2007–08 and LFS 2010–17.

Education

Precariousness is closely linked to educational attainment. In 2017, more than 80 per cent of workers without a degree or a primary or preparatory certificate worked in precarious jobs; workers with tertiary education were half as likely to be precarious. Since 2015, however, precariousness has risen fastest among graduates (see Figure 21).

Figure 21. Percentage of precarious employment by educational attainment, wage workers, ages 15–64, 2007–08 and 2010–17

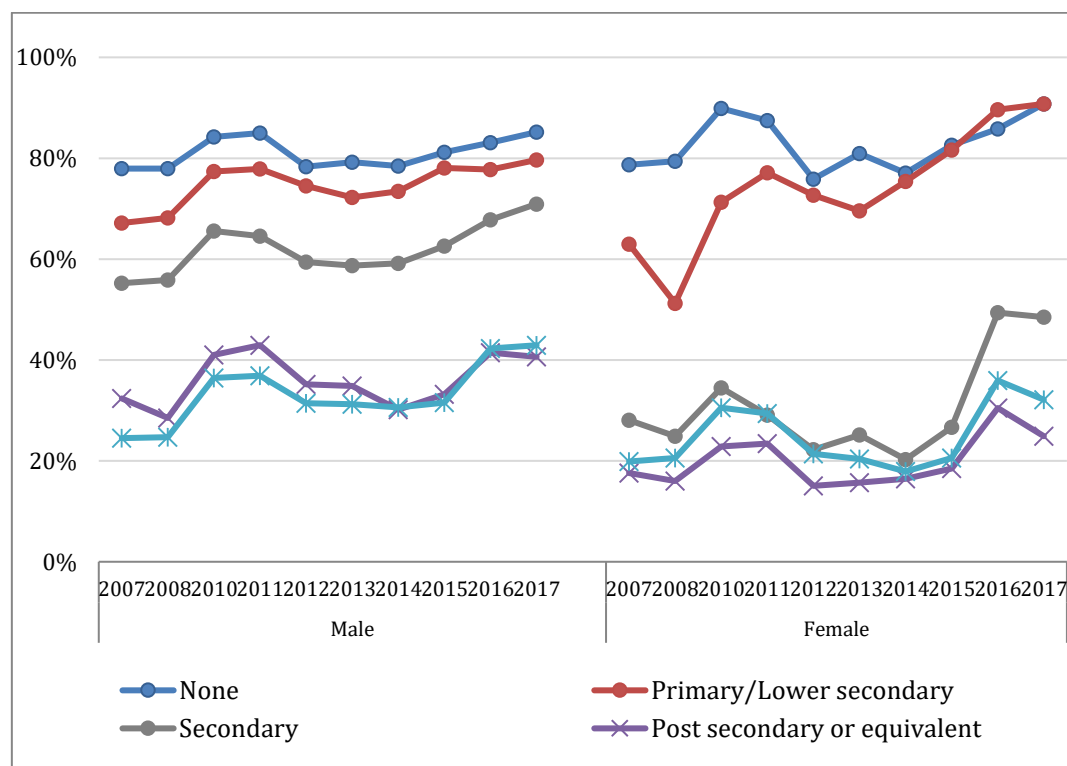


Note: LFS data for 2009 are omitted from our data series.

Source: Authors' calculations based on LFS 2007–08 and LFS 2010–17.

The education–precariousness differential is wider among women than among men. Working women with low levels of education are more precarious than their male counterparts, but women with secondary or higher education are less precarious than their male counterparts. The incidence of precariousness has increased fastest among women with primary or lower secondary education (see Figure 22).

Figure 22. Percentage of precarious employment by educational attainment and gender, wage workers, ages 15–64, 2007–08 and 2010–17



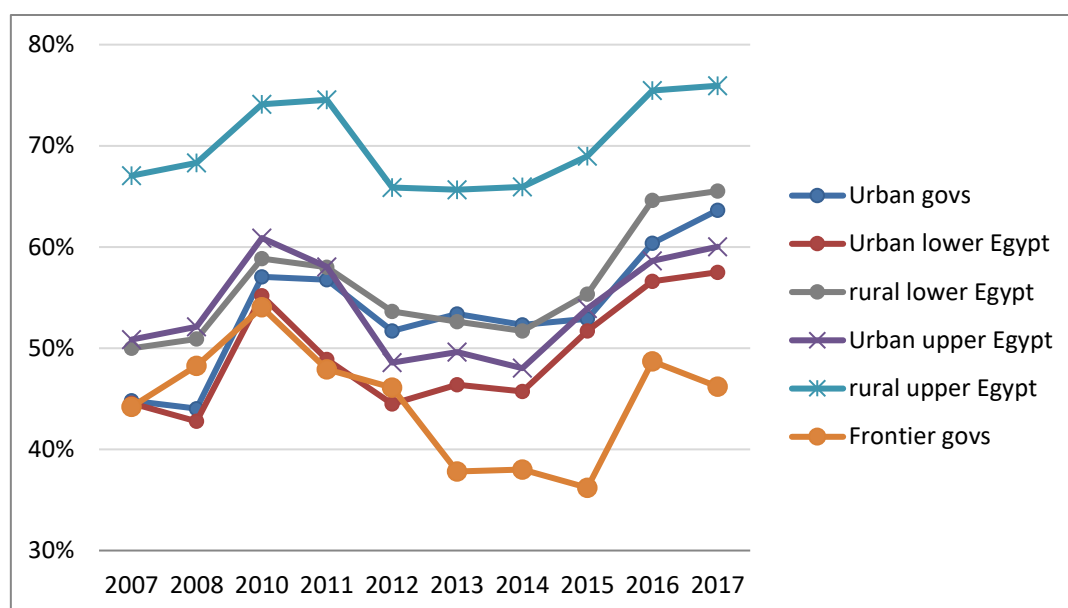
Note: LFS data for 2009 are omitted from our data series.

Source: Authors' calculations based on LFS 2007–08 and LFS 2010–17.

Urban versus rural

Precarious employment is more prevalent in rural than in urban areas, although not by a large margin (69.7 per cent and 60.5 per cent, respectively, in 2017). Rural Upper Egypt features the highest rates of precarious employment (mirroring the distribution of poverty), with over three-quarters of employment in precarious jobs. Between 2007 and 2017 precariousness increased everywhere, but more rapidly in urban areas (see Figure 23).

Figure 23. Percentage of precarious employment by region, wage workers, ages 15–64, 2007–08 and 2010–17



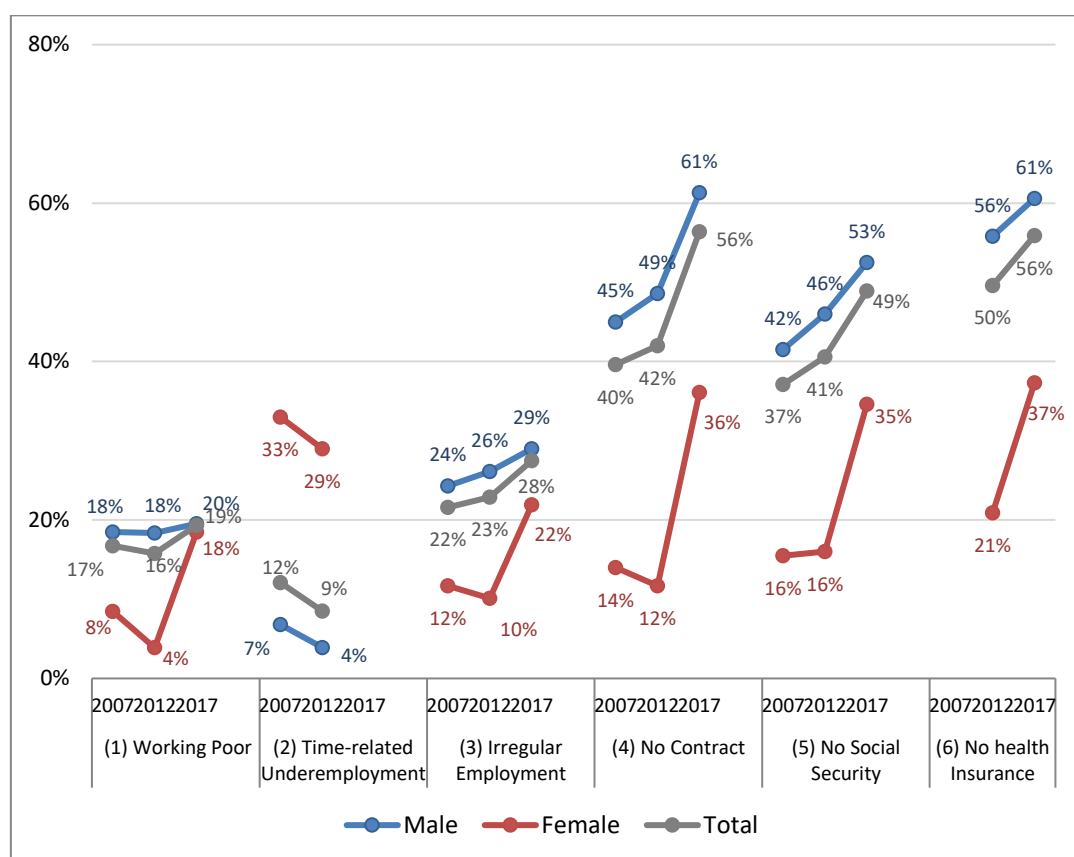
Note: LFS data for 2009 are omitted from our data series.

Source: Authors' calculations based on LFS 2007–08 and LFS 2010–17.

Precariousness by component

The absence of a written contract and the lack of health insurance coverage is the most frequent feature of precariousness (56 per cent of wage workers in 2017, up from 40 per cent in 2007). Half of wage workers lacked old-age pension coverage (social security). Irregular employment also expanded, though at a lower pace, to 28 per cent. Working poverty has remained stable, though a sharp increase is to be noted for females. On the other hand, time-related underemployment has receded. Male workers are worse off on all sub-indicators of precariousness, except for time-related underemployment (TRU). However, the increase in all sub-components is much steeper among women, except for TRU (see Figure 24).

Figure 24. Precarious employment components by sex, ages 15–64, 2007, 2012, and 2017

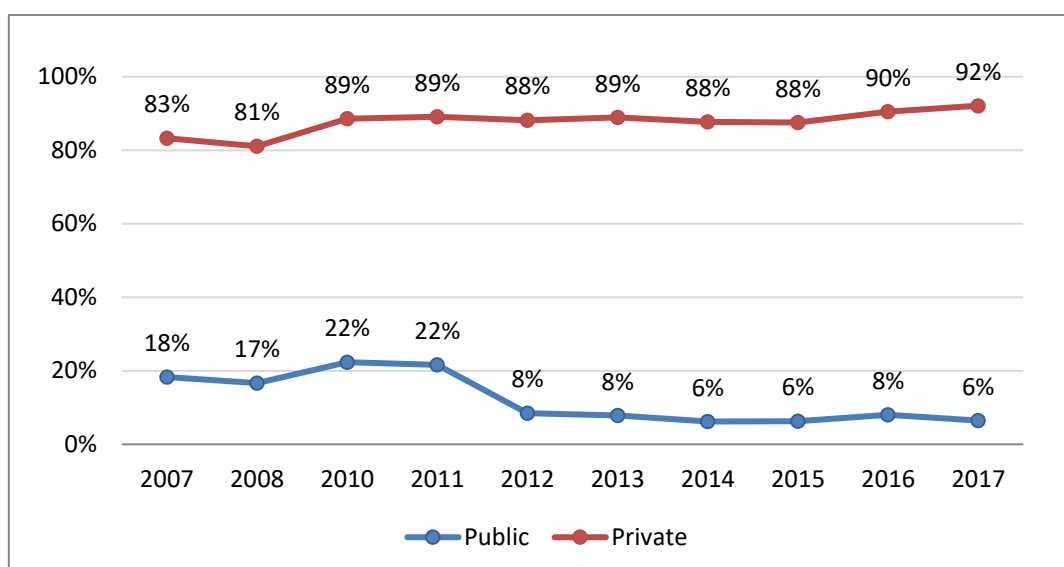


Source: Authors' calculations based on LFS 2007, LFS 2012, and LFS 2017.

Precarious sectors and occupations

Precarious employment is found mainly in the private sector, but it is not entirely absent from the public sector. The share of precarious private employment, which was already very high in 2007 (83 per cent), further increased to 92 per cent in 2017. In the public sector, on the other hand, it decreased sharply, from 18 to 6 per cent. This happened in 2011–12, when the government acceded to the demands of precarious public sector employees (see Figure 25).

Figure 25. Percentage of precarious employment by economic sector, wage workers, ages 15–64, 2007–08 and 2010–17

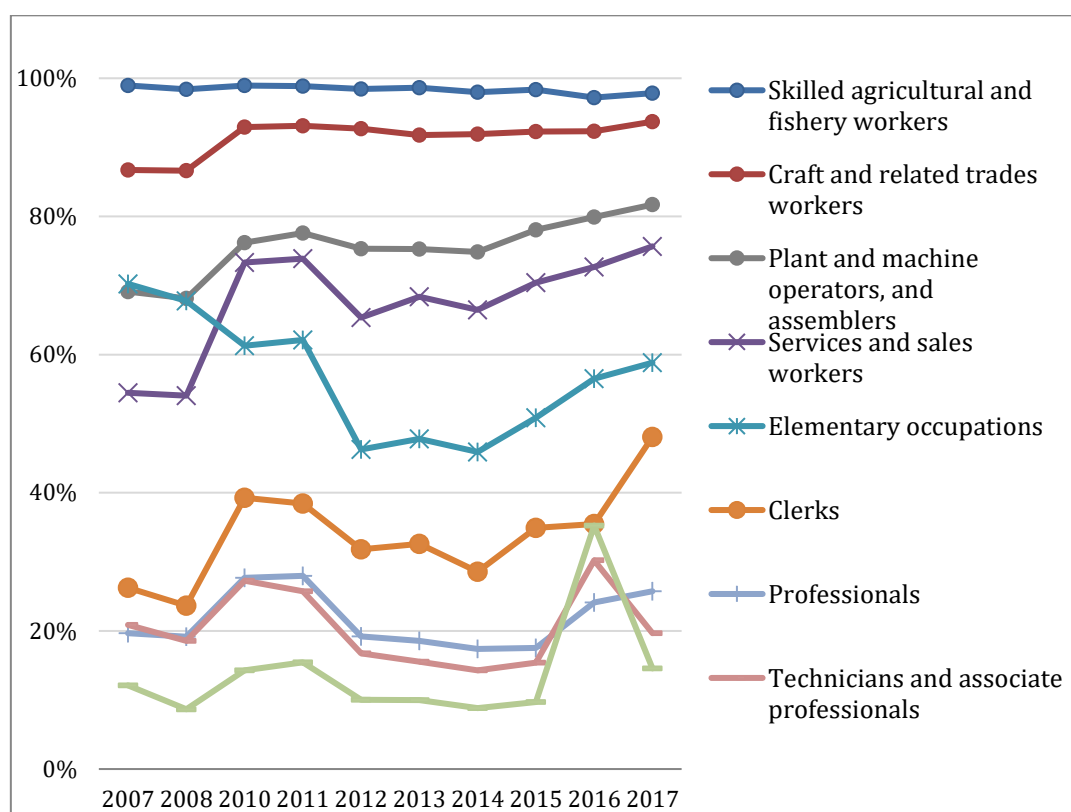


Note: LFS data for 2009 are omitted from our data series.

Source: Authors' calculations based on LFS 2007–08 and LFS 2010–17.

Precariousness closely matches occupational divides. It exceeded 90 per cent among farmers and craft workers; it also reached 75 per cent among plant and machine operators and services' workers; among elementary employment and clerks it stood at nearly 50 per cent; but was below 25 per cent among higher-skilled occupations (senior officials and managers, technicians and associate professionals, and professionals). Trade workers, machinery operators, services and sales workers, and clerks have experienced a particularly significant erosion of their working conditions (see Figure 26).

Figure 26. Percentage of precarious employment by occupation, ages 15–64, 2007–08 and 2010–17



Note: LFS data for 2009 are omitted from our data series.

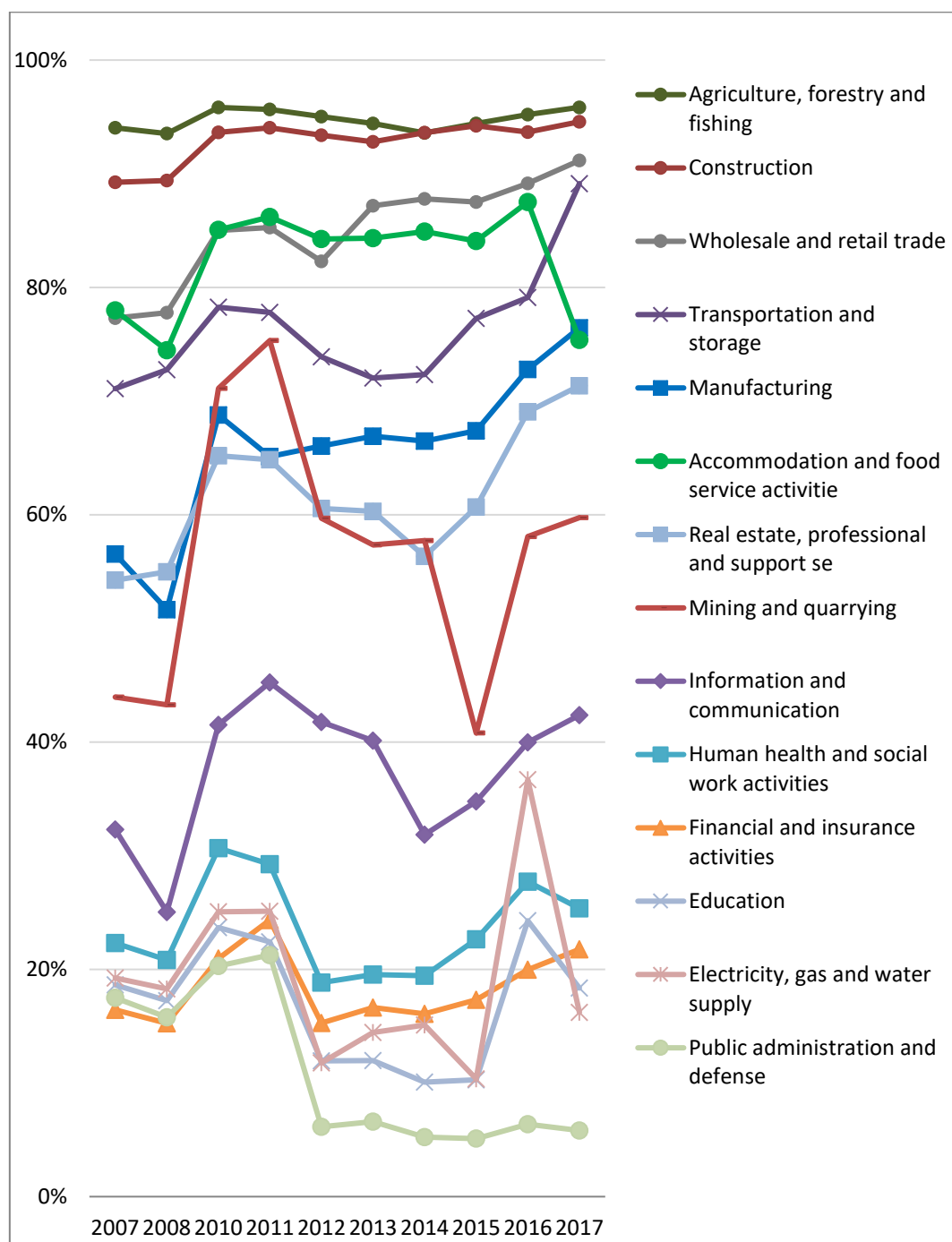
Source: Authors' calculations based on LFS 2007–08 and LFS 2010–17.

There is also a strong sectoral dimension to precarious work. In 2017, it accounted for over 90 per cent of work in agriculture, construction, trade, and transportation, and between 50 and 75 per cent of work in manufacturing, accommodation, real estate, and mining. Work in information and communications, health care, financial and insurance services, as well as in education and electricity commanded better conditions, with less than 25 per cent of employees in precarious jobs.

Between 2007 and 2017 the share of precarious jobs increased in all sectors, except in electricity and education, which remain largely public. Precarious employment increased particularly sharply in manufacturing, mining, and real estate⁹ (see Figure 27).

⁹ Some annual variations in sectoral data may be related to inconsistencies in coding.

Figure 27. Precarious workers by economic activity, ages 15–64, 2007–08 and 2010–17



Note: LFS data for 2009 are omitted from our data series.

Source: Authors' calculations based on LFS 2007–08 and LFS 2010–17.

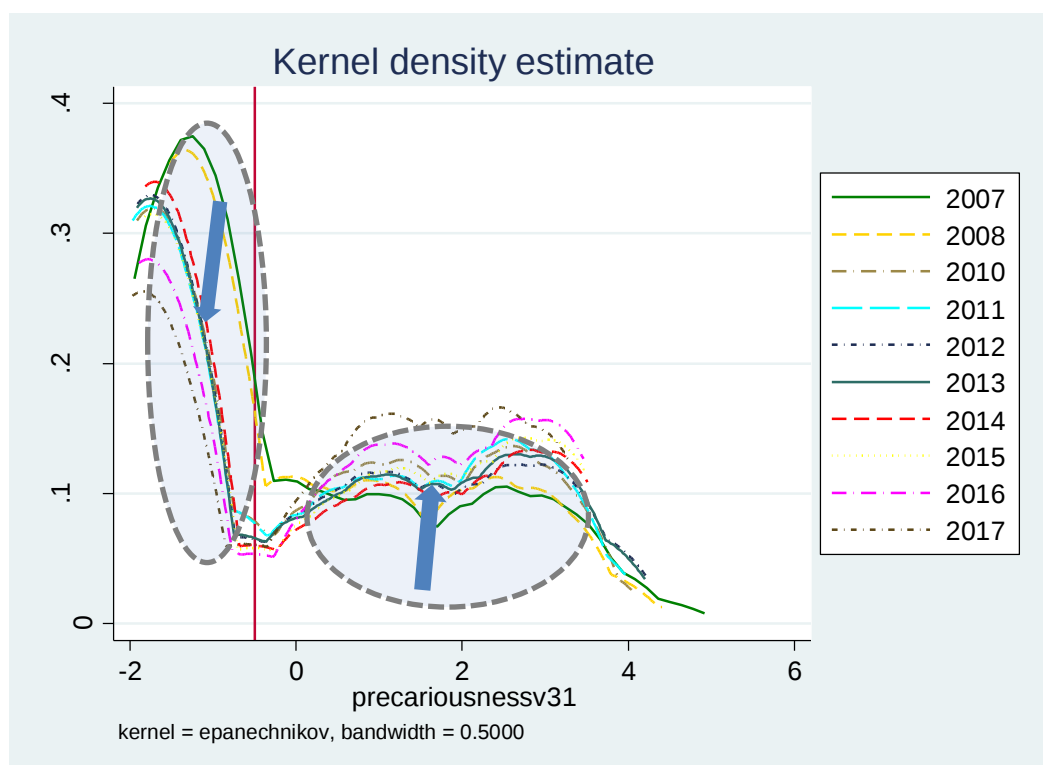
2.3 Intensity: the circumstances of the worst off are getting worse

Some precarious workers accumulate more than one feature of precariousness. We thus turn to examining degrees of precariousness.

Two types of employed persons, going opposite directions

We apply a kernel density distribution to our precariousness composite index. The higher the score, the higher the degree of precariousness. Individuals below the median score of -0.5 are better off. As Figure 28 shows, two typologies of employed people can be observed. Annual density estimates have decreased at the lower end of the distribution for those who are better off, while they have risen for those with higher index scores, who are more precarious. Precariousness is thus deepening for those who are worst off, and inequality of access to good employment conditions is increasing (see Figure 28).

Figure 28. Kernel density estimate of the precariousness composite index, 2007–08 and 2010–17



Note: LFS data for 2009 are omitted from our data series.

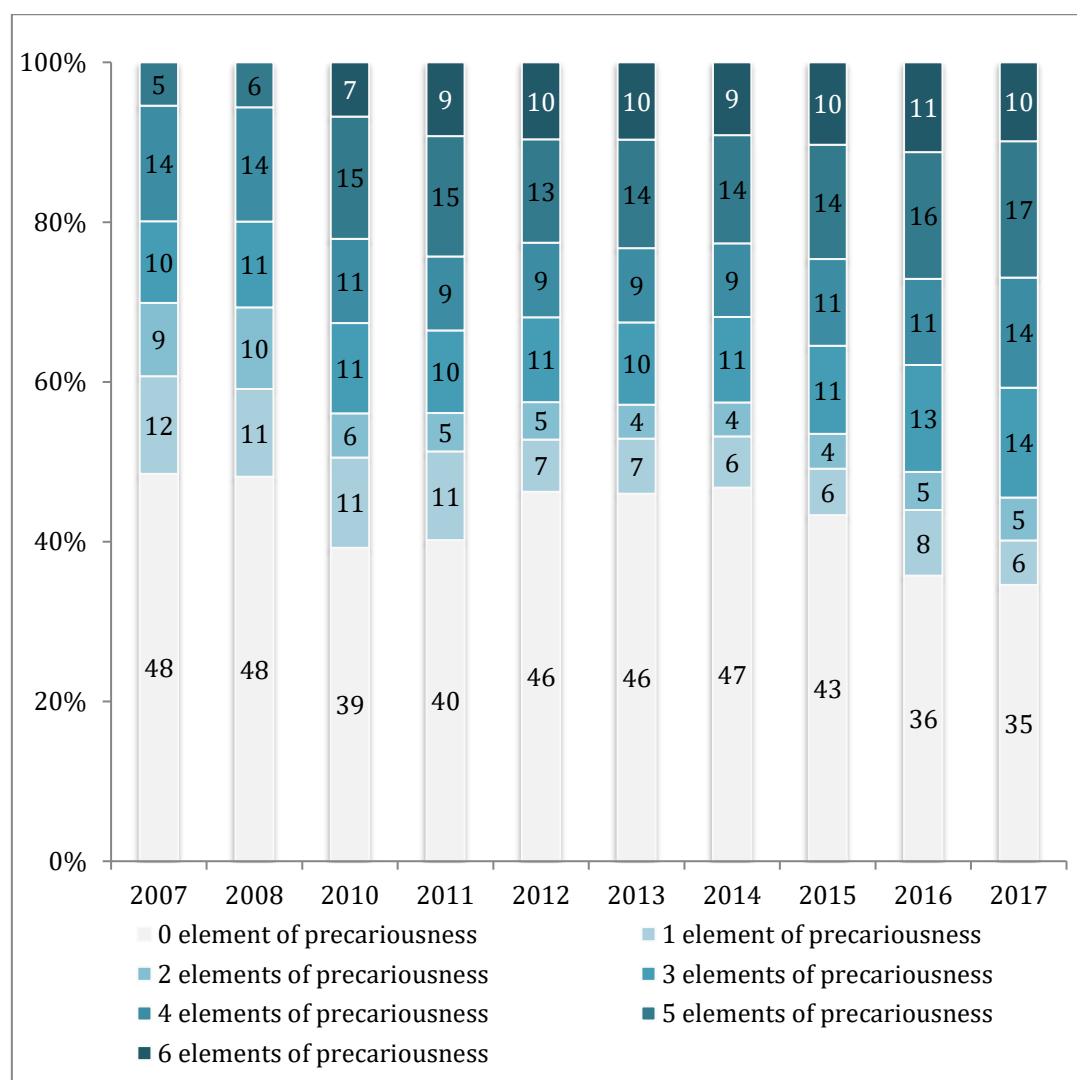
Source: Authors' calculations based on LFS 2007–08 and LFS 2010–17, ELMPs 2012 and ELMPs 2018.

Highly precarious work

The evolution of the cumulative indicator of precariousness shows a substantial intensification of employment situations cumulating three or more elements of precariousness, and a decrease in the share of workers with zero elements. In 2007, workers with “good working conditions”, not matching any feature of precariousness, accounted for about half of employed persons. In 2017, they were down to only a third (a 29 per cent decrease). The share of those cumulating only one or two elements of precariousness also decreased over the period (from 12 per cent and 9 per cent, respectively, in 2007 to only 6 per cent and 5 per cent, respectively, in 2017). On the other hand, the share of workers with

three or more elements of precariousness has increased substantially. Five per cent of workers were “highly precarious” in 2007, cumulating five or all six elements of precariousness. They made up a quarter of wage workers in 2017 (see Figure 29).

Figure 29. Employment distribution by number of elements of precariousness, wage workers, ages 15–64, 2007–08 and 2010–17



Note: LFS data for 2009 are omitted from our data series.

Source: Authors' calculations based on LFS 2007–08 and LFS 2010–17.

2.4 Growth, unemployment, and precariousness

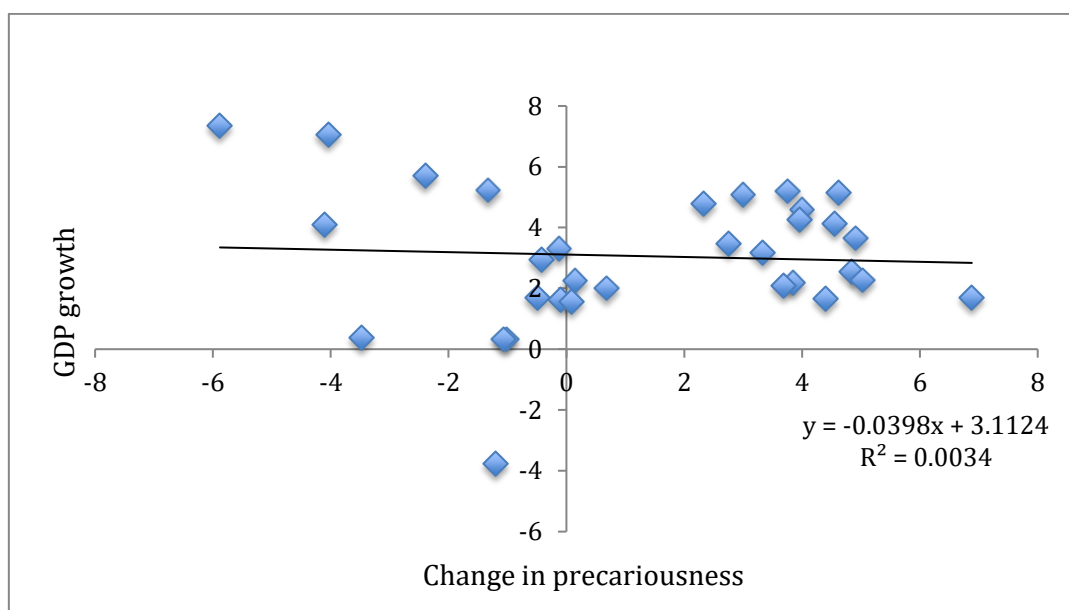
Rising growth rates are, as expected, accompanied by diminishing unemployment, as well as by improvements in overall labour utilization and working conditions. The relationship between growth and unemployment is classically modelled as “Okun’s law”. The Okun’s law regression for Egypt in Figure 30 uses quarterly unemployment rate changes (LFS) and quarterly GDP growth rates over the period 2007–17.¹⁰ An expectedly negative correlation with an R-squared of 0.37 is found, which may be considered to be fairly strong.¹¹

¹⁰ Quarterly GDP growth is from Ministry of Planning National Accounts.

¹¹ By comparison it is slightly higher in the largely deregulated US market (0.4), similar in the United Kingdom (0.3), and lower in Germany and France (about 0.2), see Chamberlin (2011).

Accelerating growth thus brings down unemployment by a factor of 0.37 in Egypt (see Figure 30).

Figure 31. Correlation between real GDP growth and change in precariousness, 2007–17

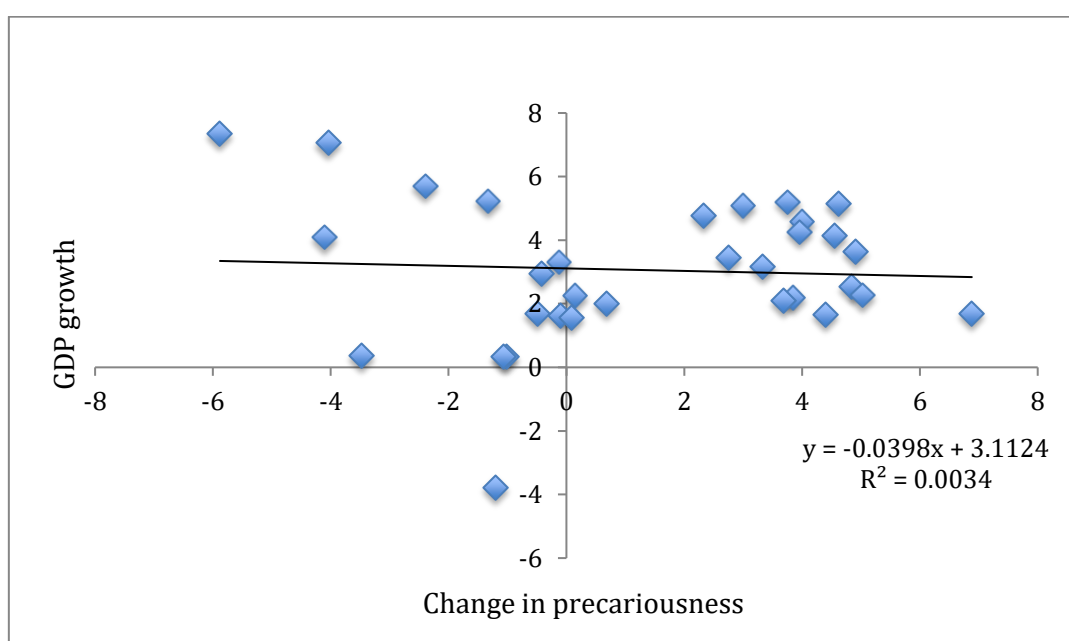


Note: LFS data for 2009 are omitted from our data series.

Source: Authors' calculations based on Ministry of Planning National Accounts and LFS 2007–17.

The same does not hold true with regard to precariousness. A regression of growth rates and changes in precariousness yields an R-squared of 0.003. In short, there was no correlation between growth and precariousness in Egypt during the observation period. The contractions and accelerations of growth during this time were not echoed by changes in precariousness in any discernible pattern (see Figures 31 and 32).

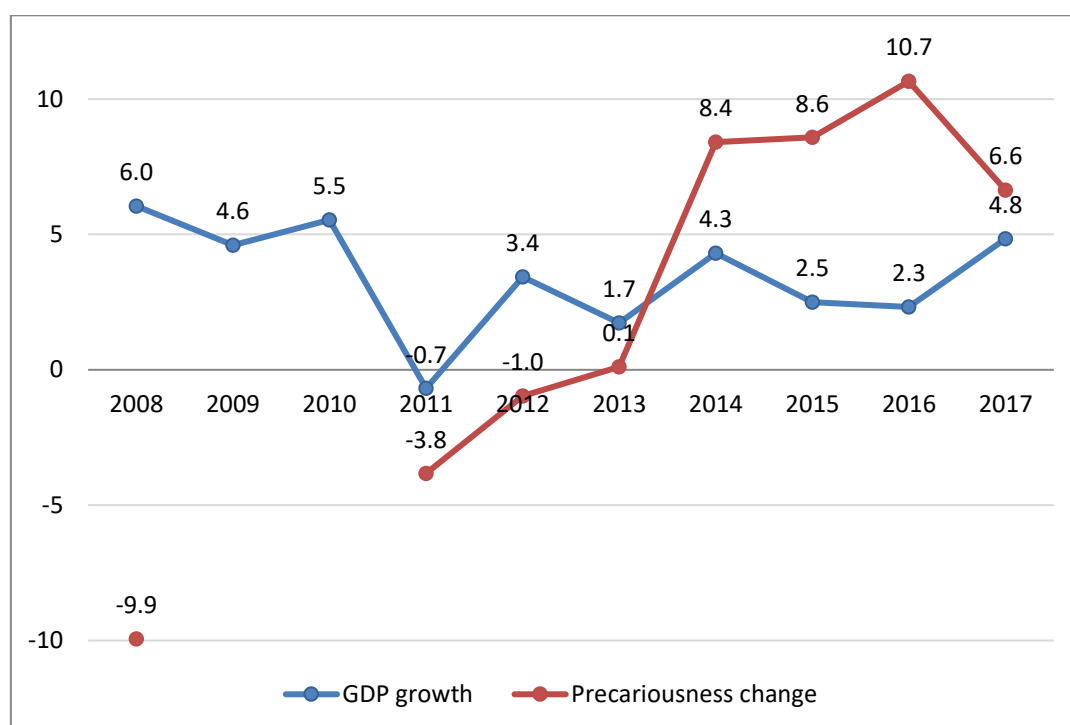
Figure 31. Correlation between real GDP growth and change in precariousness, 2007–17



Source: Authors' calculations based on the Ministry of Planning National Accounts, LFS 2007–2017

Note: LFS data for 2009 is omitted from our data series.

Figure 32. Change in precariousness and real GDP Growth, 2007-2017



Note: LFS data for 2009 are omitted from our data series.

Source: Authors' calculations based on Ministry of Planning National Accounts and LFS 2007–17.

To further test the above correlation, we analyse growth and precariousness, making use of three different analyses of our composite index and additive index:

- i. a logistic model measures a dummy variable that takes the value 1 if the individual in our composite index is considered to be in precarious employment (if the precarious composite index ranges between -0.5 and $+4$), and 0 otherwise (when the score index ranges between -2 and -0.25);¹²
- ii. an Ordinary Least Squares (OLS) regression of the scores of the precarious composite index; and
- iii. an OLS linear estimation of the “additive index” of precarious employment.

Geographic and socioeconomic variables are introduced as explanatory variables. We thus compute the quarterly real growth rates of each sector of economic activity from 2007 to 2017 in terms of:

- region of residence (Cairo, urban Lower Egypt, rural Lower Egypt, urban Upper Egypt, rural Upper Egypt and frontier governorates);
- urban/rural residence;
- gender;
- educational attainment (illiterate, primary/lower secondary, secondary, post-secondary, university and above);
- number of completed years of education;
- marital status (ever married versus never married);
- age;
- occupation at the 1-digit ISCO level; and

¹² The mean value in our kernel density distribution was 0.5 (see Section 3.4).

- institutional sector (public versus private sector).

Table 1 presents the odds ratios of the impact of real GDP growth rates on precarious employment. All explanatory variables are statistically significant at the 1 per cent level.¹³ The results seem consistent as the explanatory variables have the same effect in the three models, and confirm the findings presented above: precariousness is inelastic to GDP growth (see also Table 1A in the annex). The impact of real growth on the incidence of precarious employment varies by economic activity, but is consistently weak. Odds ratios (except for the agricultural sector) are close to 1 (ranging from 0.970 in public administration/public defence and 1.042 in the manufacturing sector).

Table 1. Odds ratios of the determinants of the incidence and intensity of precarious employment

Variables	Logit precariousness binary	OLS precariousness score index	OLS precariousness additive index
lnGDP	1.151***	1.022***	1.138***
Gender = 2, Female (ref. Male)	1.176***	1.060***	1.110***
Married (ref. Not married)	0.700***	0.871***	0.819***
Age	0.909***	0.928***	0.912***
Age squared	1.001***	1.001***	1.001***
Educational level= 2, Primary/Lower secondary (ref. illiterate)	0.984	1.000	0.871***
Educational level= 3, Secondary	0.837***	1.000	0.795***
Educational level= 4, Post-secondary or equivalent	0.714***	0.925***	0.705***
Educational level= 5, University	0.658***	0.859***	0.650***
Number of effective years of schooling	0.958***	0.978***	1.000
region = 2, Urban lower Egypt (ref. Greater Cairo)	1.400***	1.185***	1.199***
region = 3, Rural lower Egypt	0.744***	0.873***	0.938***
region = 4, Urban upper Egypt	1.227***	1.193***	1.246***
region = 5, Rural upper Egypt	0.804**	1.072***	1.197***
region = 6, Frontier govts	0.832***	1.041***	1.077***
Urban/rural residence	0.589***	0.789***	0.846***
Private sector = 2 (ref. Public sector)	15.584***	3.811***	3.613***
ind==Mining and quarrying (Ref. Agriculture)	0.379***	0.502***	0.369***
ind==Manufacturing	0.201***	0.295***	0.207***
ind==Electricity, gas and water supply	0.155***	0.381***	0.328***
ind==Construction	0.763***	1.963***	1.641***
ind==Wholesale and retail trade	0.585***	0.467***	0.368***
ind==Transportation and storage	1.486***	0.919***	0.694***
ind==Accommodation and food service activities	0.472***	0.441***	0.412***
ind==Information and communication	0.400***	0.369***	0.353***
ind==Financial and insurance activities	0.158***	0.392***	0.305***
ind==Real estate, professional and support service activities	0.459***	0.394***	0.339***

¹³ To be more precise, all explanatory variables are statistically significant except for primary education in the incidence and score index models, secondary education in the score index model, and years of schooling in the additive score model.

Variables	Logit precariousness binary	OLS precariousness score index	OLS precariousness additive index
ind==Public administration and defence	0.154***	0.458***	0.270***
ind==Education	0.386***	0.526***	0.500***
ind==Human health and social work activities	0.478***	0.461***	0.412***
ind==Other social activities	0.924*	0.631***	0.704***
occ==Legislators, senior officials and managers (Ref. skilled agri.)	0.157***	0.166***	0.196***
occ==Professionals	0.200***	0.149***	0.177***
occ==Technicians and associated professionals	0.192***	0.146***	0.185***
occ==Clerks	0.199***	0.133***	0.166***
occ==Service workers and shop and market sales workers	0.758***	0.221***	0.289***
occ==Craft and related trades workers	1.382***	0.460***	0.628***
occ==Plant and machine operators, and assemblers	0.505***	0.215***	0.302***
occ==Elementary occupations	0.494***	0.197***	0.287***
occ==Other/unspecified	0.562***	0.246***	0.329***
Constant	4.103***	19.824***	79.370***
Observations	523,281	489,138	523,281
R-squared	0.5692	0.789	0.773

Notes: *** p<0.01, ** p<0.05, * p<0.1

Conclusion

After a deep slump at the turn of the 2010s, Egypt has returned to growth rates of about 5 per cent and unemployment is back in the single digits. Public debt is declining and inflation, after a sharp rise in the wake of the 2016 currency float, is back within central bank targets. The IMF-backed economic reforms programme adopted in 2016 would thus appear to be paying off, at no major cost. Alas, the headline indicators are missing the real story.

Our analysis shows that precarious work increased by 30 per cent over this period. While half of Egyptian wage employment was precarious in 2007, the proportion is now two-thirds. Those at the bottom are becoming even worse off. In 2007, no significant share of wage workers matched all six characteristics in our definition of precariousness, whereas by 2017, 10 per cent qualified. Adding those qualifying for all but one of these conditions, those in “highly precarious employment” represented 5 per cent of wage workers in 2007 and 27 per cent in 2017.

This degradation in job quality happened while unemployment was receding, from 12 per cent in 2015 to 8 per cent in 2018. We interpret the fall in unemployment by and large as a transfer to precarious work. It is among those with a higher education that unemployment has receded the most, while precarious employment has been surging disproportionately. Those with a higher education (i) can afford to remain unemployed for a certain time, (ii) have higher reservation working conditions, and (iii) hold out hope for a “good job”. A sharp reduction of unemployment particularly among tertiary graduates at a time when high-skilled, professional jobs were receding may thus be understood as a tale of lost hopes and lowered expectations.

The increase in precariousness happened as the economy was on the upswing – and thus as workers’ expectations would normally be on the upside. No labour market regulatory reforms were in play. The two main legal instruments, the Labour Code and the trade union law, remained unchanged in the period. The Government has, on the other hand, signaled a freeze in public sector hiring and a firm commitment to reducing public sector jobs in the longer term. Egypt’s public administration wage bill is roughly in line with the average for middle income countries. But a reduction in public employment, alongside major cuts in energy subsidies and the floating of the currency, have been rolled out as part of the economic reform programme. A plan was unveiled to reduce public employment by 38 per cent in 10 years.

In and by itself, the observed public sector downsizing has not been particularly steep since 2015; public employment as a share of total employment has been gradually receding throughout our observation period, prolonging a longer downward trend. But the firm commitment of the (firmly established) Government to freeze hires and cut the wage bill appears to have strongly impacted behaviour. The labour market cost of the economic reforms has translated not into unemployment but into an erosion of job quality.

While there is a rather strong correlation between growth and unemployment in Egypt we find no correlation between precariousness and growth during our observation period. Precariousness dies has recede when growth recovers.

The dearth of good jobs in Egypt needs to be apprehended from a structural-transformation perspective. On average, middle income countries are gaining in overall productivity, adding higher skilled jobs, and seeing excess rural labour absorbed into more productive manufacturing jobs. Egypt, by contrast, is losing ground on all these counts. Total factor productivity has been on the decline since the late 1980s; high-skill employment is shrinking and the manufacturing share of GDP is sliding. The floating of the currency in

2016 and its depreciation by more than 50 per cent against the dollar has not engendered the boost in (manufactured) exports that may have been expected. While agriculture and public administration will continue to shrink in employment terms in the foreseeable future, the recent economic recovery generated mostly low-productivity, precarious jobs in construction and trading.

The degradation of working conditions, particularly among the middle classes, is the labour market aspect of a broader degradation of living standards. Poverty increased by 4 percentage points (from 28 to 32 per cent) between 2015 and 2018, a relatively limited increase given the extent of subsidy cuts and inflation over the period. Cash transfers introduced since then may be credited with having mitigated their effects. But beyond (temporary) income support to the poorest, policies need to tackle more actively the larger questions of income distribution and the financing of public services, including for higher quality education and skills training. Egypt also needs the resolve to address its arrested industrialization, beyond the current focus on investment zones. Higher returns in employment and decent jobs will thus result from a rethinking of the (macro) economic agenda, beyond a concentration on rapid stabilization and debt reduction, and secure space for critical investments in Egypt's long-term productive potential.

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Annexes

Table 1A. Odds ratios of the determinants of the incidence of precarious employment by economic activity

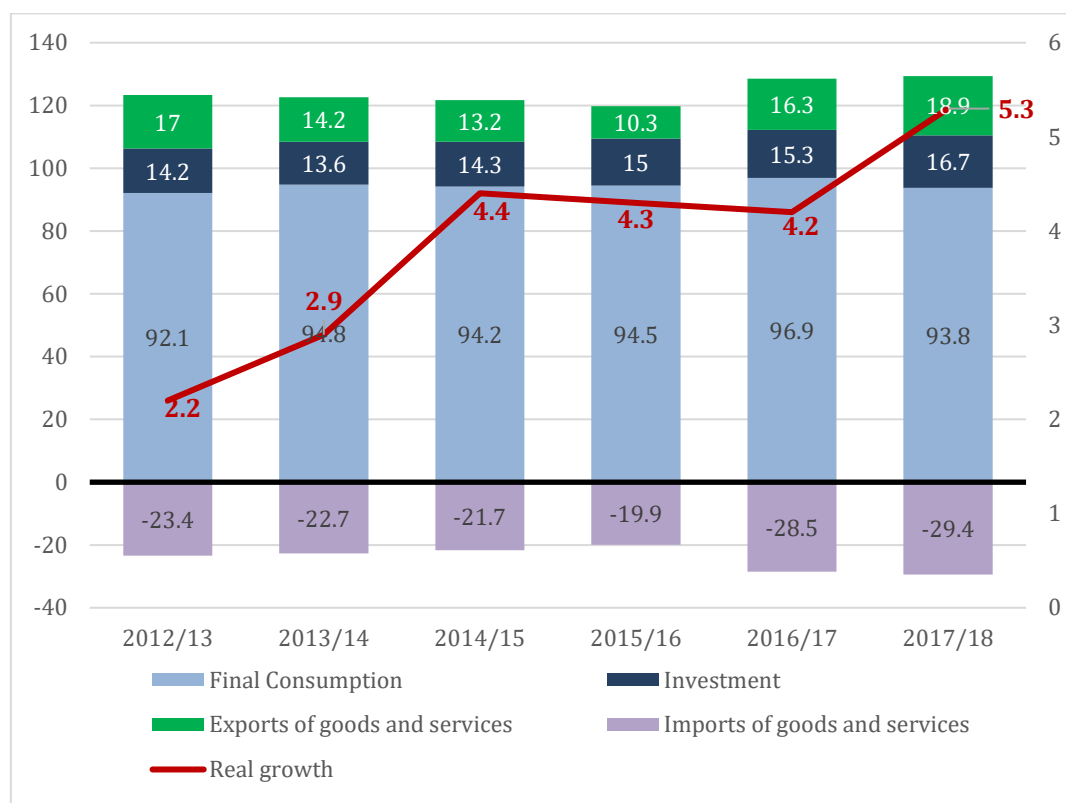
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Agri	Manuf.	Elec. gas water	Constr		Trans	Accom/ Food	Info Comm	Real estate	Public Adm	Edu	Health Social work	Other Social activities
real_gdp_rate	0.846***	0.989***	1.042***	1.041***	1.001	1.009	0.994***	0	1.012	0.970**	1.034*	1.019	1.037***
Gender = 2, Female	0.403***	1.099**	1.052	0.915	1.222***	0.965	0.492***	1.216*	1.253***	1.623***	1.307***	1.747***	1.054
marital	0.	0.657***	0.900	0.764***	0.678***	0.657***	0.857***	0.532***	0.674***	0.672***		0.716***	0.711***
Age	0.983**	0.837***	0.722***	1.028***	0.915***	1.045**	0.918***	0.826***	0.893***	0.852***	0.845***	0.878***	0.865***
agesqr		1.002***	1.003***	0.999**	1.001***	0.999***	1.001***	1.001***	1.001***	1.001***	1.001***	1.001***	1.001***
Edu= 2, Prim./Lower Sec.	1.076	0.806***	0.742	0.922	0.801**	1.690***	0.693**			1.288	1.174	0.599**	1.100
Edu = 3, Secondary	0.947	0.498***	1.266	0.863	0.578***	2.064***	0.280***	1.337	0.882	2.411**	1.145	0.531***	1.110
Edu = 4, Post secondary	0.925	0.456***	1.491	0.690**	0.483***	1.889**	0.183***	1.298	1.060	0.711	0.711	0.433***	1.070
Edu = 5, University		0.550***	2.122	0.816	0.418***	2.052**	0.162***	0.586	0.845	2.741*	0.556	0.350***	0.669
No. of years of schooling	0.995	0.988	0.960	0.983	0.989	0.913***	1.024	0.973	0.946*	0.881***	0.954	0.992	0.923***
region = 2, Urban lower Egypt	1.300**	1.353***	1.262	1.091	1.794***	1.876***	1.402***	1.669***	1.623***	1.115	1.219**	1.774***	0.887*
region = 3, rural lower Egypt		0.534*	5.392	0.910	0.669	2.820***	0.514*	1.993	0.411*	0.426**	0.326**	0.870	0.419**
region = 4, Urban upper Egypt	0.805*	1.243***	1.110	1.171***	1.320***	1.320***	0.901*	1.106	1.121*	1.271**	1.231**	1.343***	0.860**
region = 5, rural upper Egypt	1.690	0.827	3.153	0.857		2.599***	0.394***	1.695	0.362**	0.526*	0.360**	0.953	0.439**
region = 6, Frontier govs	2.238***	1.615***	0.445*	2.280***	1.389**	1.115	0.263***	0.572	0.612***	0.466***	0.596*	0.610	0.477***
Urban/Rural residence	1.756*	0.508*	5.168	0.715	0.385**		0.442**	1.493	0.246***	0.358***	0.266***	0.375	0.768
sector = 2	35.750***	10.271***	7.301***	48.987***	10.081***	120.052***	4.861***	10.116***	17.588***	16.140***	4.130***	17.451***	49.679***
occ==Legislators..	0.362***	0.406***	0.284	0.220**	0.193***	0.593	1.437	0.279	0.427**	0.132***	1.460	2.047	0.560
occ==Professionals	0.064***	0.305***	0.325	0.303*	0.196***	0.586	2.138**	0.352	1.032	0.096***	1.317	2.983	0.535*
occ==Tech./Ass. Profes.	0.080***	0.599	0.640	0.840	0.186***	1.465	1.453	0.339	1.411	0.140***	0.193***	1.716	1.096
occ==Clerks	0.049***	0.566*	0.593	0.703	0.191***	1.435	2.024**	0.551	1.058			3.593	0.440**
occ==Service workers			2.045	0.638	1.343	1.823	10.117***	0.911	0.905	0.098***	1.462	4.323	2.880***

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Agri	Manuf.	Elec. gas water	Constr		Trans	Accom/ Food	Info Comm	Real estate	Public Adm	Edu	Health Social work	Other Social activities
occ==Craft/trades workers	0.079***	4.238***	1.363	10.177***	1.381	1.492	1.331	0.251	1.470	0.161***	0.416		
occ== Operators/assemblers	0.269***	1.309	0.866	1.549	0.228***	31.376***	2.768***	0.136*	0.619	0.241***	0.986	1.594	1.432
occ==Elementary occupations	0.284***	1.495	3.871	3.943**	0.911	12.323***	3.260***	0.565	0.960	0.243***	1.053		
occ==Other/unspecified		0.985			2.393	63.565***	46.987***	2.582	4.903	0.103***			2.276**
Constant		13.248***	8.466	0.027***	14.782***	0.003***	3.034**	12.840*	5.981***	76.884***		1.125	3.325**
Observations	60,367	76,623	14,499	77,475	38,576	39,364	14,986	5,513	12,054	69,592	12,674	5,867	24,218

Robust see form in parentheses

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

Figure 1A. Composition of GDP by major expenditure components. Current prices, at market prices



Source: Ministry of Finance, Financial Monthly Bulletin, March 2019.

Table 2A. Inflation rate, CPI, 2011-19

January- 19	12.714
January- 18	17.068
January- 17	28.138
January- 16	10.098
January- 15	9.658
January- 14	11.362
January- 13	6.274
January- 12	8.602
January- 11	9.068

Source: Central Bank of Egypt, 2019.

Table 3A. Overall deficit as a percentage of GDP

2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
6.9	8.2	9.8	10.5	12.9	12.0	11.4	12.5	10.9	9.0

Source: Central Bank of Egypt, 2019.

Table 4A. Labour force participation by sex and age group, ages 15-64, 2007-17

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Average annual growth rate 2007-17
Male												
15-19	28.9	30.9	29.8	30.4	26.3	26.6	25.8	25.7	24.5	24.1	21.3	-3.0
20-24	66.3	68.7	67.3	68.8	70.6	71.7	74.1	69.6	62.9	64.6	56.8	-1.5
25-29	94.1	95.3	95.4	96.5	97.2	97.1	96.1	95.6	92.7	91.0	89.5	-0.5
30-34	98.2	98.1	98.2	98.2	98.5	98.4	98.3	98.0	96.8	95.7	94.7	-0.4
35-39	98.6	98.3	98.5	98.5	98.7	98.6	98.7	98.5	97.5	97.0	96.8	-0.2
40-44	98.4	97.9	98.2	97.9	98.3	97.8	98.0	98.0	97.2	95.9	94.2	-0.4
45-49	96.6	96.8	96.5	96.6	97.0	96.5	96.6	96.6	95.8	89.6	92.4	-0.4
50-54	91.2	91.2	92.2	92.2	93.2	93.3	92.7	94.9	93.1	91.7	88.1	-0.3
55-59	86.0	85.7	85.8	86.4	86.3	86.8	87.4	88.0	84.7	85.5	84.7	-0.2
60-64	47.5	47.5	48.3	51.7	50.6	47.6	45.7	43.1	42.3	45.5	41.4	-1.4
Total	75.4	76.1	76.1	78.5	78.1	77.9	77.7	76.7	73.6	72.9	69.5	-0.8
Female												
15-19	9.7	9.3	9.8	8.5	6.6	6.2	7.5	8.5	11.0	10.5	9.1	-0.6
20-24	29.1	30.6	31.8	29.4	28.4	29.6	32.3	32.4	30.7	31.1	29.2	0.0
25-29	29.6	28.4	30.1	29.6	27.7	31.1	32.0	31.2	31.7	32.8	31.7	0.7
30-34	28.1	25.2	26.1	27.2	26.5	29.9	33.9	35.0	28.8	26.8	25.9	-0.8
35-39	30.7	26.1	27.8	28.6	27.4	26.6	26.2	25.6	25.3	27.8	26.9	-1.3
40-44	31.0	28.2	27.8	29.5	32.3	28.4	28.5	32.1	27.4	28.7	26.0	-1.7
45-49	30.6	29.0	31.4	31.3	32.4	28.3	27.1	25.2	23.3	22.1	23.6	-2.6
50-54	24.3	24.5	25.6	26.6	26.4	28.0	27.2	28.4	24.7	26.3	25.5	0.5
55-59	19.1	18.3	22.9	23.7	22.6	22.5	20.6	20.7	21.4	23.5	23.2	2.0
60-64	8.8	9.4	8.8	8.4	8.3	6.9	5.7	6.3	5.4	7.7	6.9	-2.4
Total	24.5	23.2	24.4	24.6	23.9	24.0	24.6	24.9	23.7	24.2	23.1	-0.6

Source: Authors' calculations based on LFS 2007-17.

Table 5A. Unemployment rate by age group and sex, ages 15-64, 2007-2017 (%)

Male	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
15–19	12	13	11.7	9.6	16.6	21.2	20.6	24.2	20.3	19.0	15.6
20–24	19	16	16.1	16.0	23.5	29.5	31.2	27.8	31.6	34.0	29.9
25–29	11	9	8.5	6.5	12.2	11.3	10.4	11.3	13.5	13.2	13.2
30–34	3	2	2.3	2.1	5.8	7.8	6.0	7.4	4.6	3.9	3.8
35–39	1	1	0.7	0.8	4.5	3.4	4.6	2.3	1.8	2.4	1.8
40–44	0	0	0.4	0.9	4.3	3.3	6.0	9.2	2.4	1.4	1.2
45–49	0	0	0.2	2.2	2.4	1.4	2.7	1.9	1.2	1.4	1.0
50–54	0	0	0.3	0.6	2.3	1.0	3.8	4.6	1.9	1.0	0.8
55–59	0	0	0.1	0.3	1.7	0.4	0.9	1.2	0.7	1.3	0.5
60–64	0	0	0.0	0.3	2.4	0.3	0.2	0.8	0.6	0.6	0.2
Total	6	5	5.0	4.8	8.7	9.2	9.9	9.8	9.4	9.7	8.4
Female			2009	2010	2011	2012	2013	2014	2015	2016	2017
15–19	41	47	50.1	46.1	40.5	42.6	41.9	41.6	28.8	27.3	24.9
20–24	49	51	53.9	53.4	52.2	55.8	53.1	50.0	40.6	42.8	43.0
25–29	31	26	29.4	32.8	29.4	37.1	43.3	37.7	34.5	33.7	33.8
30–34	14	10	12.7	19.1	18.9	25.7	22.5	24.2	27.8	27.0	29.3
35–39	6	4	4.0	4.6	7.3	8.7	11.3	15.6	16.7	17.3	14.4
40–44	1	1	3.4	5.2	16.9	8.9	4.6	13.6	10.5	9.4	8.8
45–49	0	0	2.8	2.7	8.2	1.6	1.9	4.3	3.5	4.7	3.1
50–54	0	0	6.6	1.6	0.1	0.1	5.5	8.4	3.1	0.7	1.2
55–59	0	0	2.7	0.4	3.2	0.1	0.2	0.9	0.1	1.6	0.1
60–64	0	0	0.4	0.3	0.2	0.0	0.0	0.0	0.0	1.0	0.0
Total	18	18	20.4	21.8	21.5	22.8	23.7	23.8	24.1	23.9	23.2

Source: Authors' calculations based on LFS 2007-17.

Table 6A. Male labour force by educational attainment, ages 15-64, 2007-17 (%)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Average annual growth 2007-17
None	37.6	36.9	34.7	32.9	32.7	30.9	31.8	31.4	29.0	28.1	28.4	-2.8
Primary/lower secondary	9.9	10.4	11.7	12.4	12.4	13.3	13.5	14.0	14.9	15.7	14.7	4.1
Secondary	33.2	33.7	33.3	34.0	34.0	34.8	34.6	34.6	35.5	35.6	36.0	0.8
Post secondary or equivalent	4.1	4.1	4.2	4.4	4.4	4.3	4.2	4.4	4.5	4.6	4.6	1.2
University	14.9	14.5	15.8	15.9	16.2	16.4	15.6	15.3	15.8	15.5	15.9	0.6
Postgraduate	0.4	0.4	0.3	0.4	0.3	0.4	0.4	0.3	0.4	0.5	0.3	-0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors' calculations based on LFS 2007-17.

Table 7A. Female labour force by educational attainment, ages 15-64, 2007-17 (%)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Average annual growth 2007-17
None	36.2	34.8	33.9	31.8	31.3	27.8	30.5	32.6	21.4	23.2	22.2	-4.8
Primary/lower secondary	2.5	2.7	3.9	3.6	3.7	4.2	4.7	4.6	10.6	10.5	10.3	15.1
Secondary	32.4	31.9	30.6	29.9	29.9	31.5	31.4	30.9	33.4	32.6	32.9	0.2
Post secondary or equivalent	6.2	5.8	5.7	6.3	5.7	5.6	4.5	4.6	5.0	5.1	4.8	-2.5
University	22.3	24.2	25.3	27.9	28.7	30.2	28.2	26.7	28.9	27.8	28.8	2.6
Postgraduate	0.4	0.7	0.7	0.6	0.7	0.8	0.7	0.7	0.8	0.9	0.9	8.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors' calculations based on LFS 2007-17.

Table 8A. Male employment by educational attainment, ages 15-64, 2007-17

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Average annual growth 2007-17
None	39.7	38.7	36.4	34.3	34.2	33.0	33.2	32.8	30.7	30.1	30.3	-2.6
Primary/lower secondary	10.2	10.7	12.1	12.8	12.5	13.3	13.6	13.7	14.9	15.2	14.9	3.8
Secondary	32.0	32.7	32.5	33.4	33.3	33.8	34.0	34.1	34.7	34.9	35.0	0.9
Post secondary or equivalent	4.0	3.9	4.0	4.2	4.2	4.2	4.1	4.5	4.6	4.8	4.8	1.8
University	13.8	13.5	14.6	14.9	15.4	15.3	14.6	14.6	14.7	14.5	14.7	0.7
Postgraduate	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	-0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors' calculations based on LFS 2007-17.

Table 9A. Female employment by educational attainment, ages 15–64, 2007–17

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Average annual growth 2007–17
None	44.0	42.2	41.8	40.2	39.2	35.8	38.1	38.5	27.0	28.1	27.9	–4.5
Primary/lower secondary	2.9	3.0	3.8	3.9	4.0	4.4	5.3	5.3	12.7	12.7	12.7	15.9
Secondary	26.9	26.3	25.4	25.8	25.4	26.6	26.8	26.9	28.9	28.4	28.1	0.5
Post secondary or equivalent	5.7	5.3	5.2	5.4	5.3	5.5	4.6	4.6	4.7	4.8	4.7	–2.0
University	20.1	22.4	23.0	24.1	25.2	26.8	24.6	24.0	25.8	25.1	25.7	2.5
Postgraduate	0.5	0.8	0.8	0.7	0.8	0.9	0.8	0.8	0.9	0.9	1.0	7.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

Table 10A. Male employment distribution by economic activity, ages 15–64, 2007–17 (%)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Average annual growth
Agriculture	27.8	27.4	25.2	24.0	25.0	23.6	23.3	22.5	21.3	21.2	21.1	–2.7
Mining/utilities	1.6	1.8	1.8	2.3	2.5	2.2	2.4	2.4	2.1	2.7	1.9	1.8
Manufacturing	12.8	13.3	13.4	13.9	11.1	12.8	12.3	13.2	13.0	13.3	13.8	0.7
Construction	12.0	12.6	13.5	14.3	14.8	15.0	14.6	14.4	15.4	15.2	16.5	3.2
Trade	12.0	11.8	12.0	12.5	12.4	11.9	12.4	12.2	12.6	12.5	13.3	1.0
Transp.	7.4	7.8	8.1	7.7	8.6	8.7	8.9	9.1	9.6	9.5	8.9	1.8
Other Services	6.0	6.1	6.5	6.7	6.6	6.6	6.5	6.9	7.4	7.3	7.9	2.9
Pub. Adm.	8.9	8.1	8.1	7.6	7.8	7.7	7.7	7.7	7.1	6.8	6.2	–3.5
Edu. & Health	8.4	7.8	7.9	7.4	7.5	7.7	7.9	7.6	7.4	7.7	6.4	–2.6
Other	3.1	3.2	3.6	3.7	3.7	3.8	4.0	4.0	4.0	4.0	4.0	2.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

Table 11A. Female employment distribution by economic activity, ages 15–64, 2007–17 (%)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Average annual growth
Agriculture	27.8	27.4	25.2	24.0	25.0	23.6	23.3	22.5	21.3	21.2	21.1	–2.7
Manufacturing	12.8	13.3	13.4	13.9	11.1	12.8	12.3	13.2	13.0	13.3	13.8	0.7
Trade	12.0	11.8	12.0	12.5	12.4	11.9	12.4	12.2	12.6	12.5	13.3	1.0
Public Administration	6.0	6.1	6.5	6.7	6.6	6.6	6.5	6.9	7.4	7.3	7.9	2.9
Education	8.4	7.8	7.9	7.4	7.5	7.7	7.9	7.6	7.4	7.7	6.4	–2.6
Health/Social work												
Other	3.1	3.2	3.6	3.7	3.7	3.8	4.0	4.0	4.0	4.0	4.0	2.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

Source: Authors' calculations based on LFS 2007–17.

Table 12A. Distribution of male employment by occupation, ISCO 1 digit, ages 15–64, 2007–17 (%)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Legislators, senior officials and managers	9.2	8.6	5.9	5.9	6.1	12.8	16.4	17.5	15.5	14.2	12.9
Professionals	10.9	10.4	11.1	10.6	11.0	10.4	10.1	9.5	9.2	8.2	8.5
Technicians and associate professionals	7.6	6.8	7.0	7.0	7.2	7.3	7.3	7.2	6.6	7.5	6.2
Clerks	2.8	3.1	2.9	2.7	2.8	2.7	2.7	2.6	2.6	2.4	2.8
Service workers and shop and market sales workers	10.8	11.2	8.6	9.3	8.8	8.4	9.4	9.8	10.7	11.4	11.4
Skilled agricultural and fishery workers	26.8	26.5	23.6	23.0	23.7	18.2	12.7	11.7	12.2	12.3	13.2
Craft and related trades workers	18.8	19.0	21.2	22.1	20.8	20.6	20.9	20.7	21.5	21.5	22.3
Plant and machine operators and assemblers	8.6	9.2	10.5	10.8	10.6	10.9	11.0	11.4	12.3	13.5	13.3
Elementary occupations	4.1	4.6	8.8	8.4	8.5	8.4	9.2	9.5	9.2	9.0	9.3
Other/not stated	0.5	0.6	0.5	0.4	0.6	0.4	0.3	0.2	0.2	0.2	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors' calculations based on LFS 2007–17.

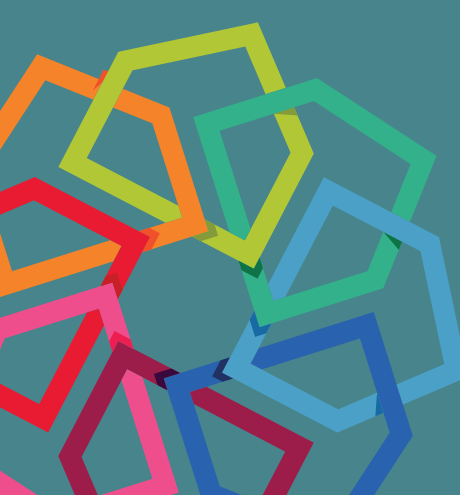
Table 13A. Distribution of female employment by occupation, ISCO 1 digit, ages 15–64, 2007–17

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Legislators, senior officials and managers	4.1	4.6	3.8	3.9	3.8	5.7	5.1	4.9	4.3	4.3	3.6
Professionals	20.4	21.6	21.2	22.8	23.8	25.4	23.5	23.0	23.3	21.4	22.8
Technicians and associate professionals	14.5	12.4	12.4	13.6	14.5	14.9	13.6	13.7	13.1	14.8	11.8
Clerks	4.3	5.7	5.1	4.6	4.0	4.3	4.4	3.7	3.9	3.8	4.4
Service workers and shop and market sales workers	4.6	4.7	3.7	4.3	3.6	3.6	4.4	5.3	7.2	8.5	8.5
Skilled agricultural and fishery workers	45.6	44.0	43.8	42.0	42.0	37.2	38.4	37.9	29.2	37.6	38.4
Craft and related trades workers	2.5	1.6	1.2	1.4	1.3	1.2	1.1	0.9	1.1	1.7	2.1
Plant and machine operators and assemblers	1.4	1.8	1.9	2.2	1.8	2.0	3.8	2.2	2.7	2.4	2.4
Elementary occupations	1.5	1.5	3.0	3.6	3.1	3.6	4.4	7.8	14.7	4.6	5.8
Other/not stated	1.1	2.2	3.8	1.7	2.1	2.3	1.4	0.7	0.6	0.9	.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0



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