



Positioning of Egypt's Labor Market: Dynamics, Sectoral Decomposition, Key Constraints & Future Trends

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This study was prepared by the Egyptian Center for Economic Studies (ECES) as part of its project on labor market dynamics of the Egyptian economy. The lead researcher is Salma Bahaa, Senior Economist, at (ECES). Thanks are also due to Marian Adel, Economist at (ECES) as a supporting team member.

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Abstract

Over the past decade, the Egyptian economy has undergone significant negative structural shifts, skewing job creation towards lower productivity sectors. COVID-19 has further revealed Egypt's labor market bottlenecks, vulnerability, and segmentation. This paper presents a holistic diagnosis of the labor market dynamics in Egypt, as well as at the sectoral level, in the crucial decade between 2010 and 2020. Among its key findings, the paper stresses institutional weaknesses and skill mismatch out of top 10 key constraints, as deep running roots for the subsequent challenges facing the Egyptian labor market.

المخلص

شهد الاقتصاد المصري على مدار العقد الماضي عدة تحولات هيكلية أدت إلى انحراف خلق فرص العمل نحو قطاعات منخفضة الإنتاجية. وقد كشفت أزمة كوفيد-19 كذلك عن الهشاشة الاقتصادية، وضعف مرونة التشغيل، وأنماط استقطاب العمالة التي تعاني منها سوق العمل المصرية. تقدم هذه الورقة تشخيصاً شاملاً لديناميكيات سوق العمل في مصر، وكذلك على المستوى القطاعي خلال الفترة 2010-2020. استطاعت الدراسة أن تحدد عشرة تحديات رئيسية تواجه سوق العمل المصرية، أثبت من بينها كل من الضعف المؤسسي واتساع فجوة المهارات أنهما بمثابة جذور عميقة لسلسلة التحديات اللاحقة التي ترتبت عليهما.

Introduction

The Egyptian economy has undergone serious structural, political, and economic shifts and turnovers over the past decade. This transformation caused a severe deterioration in working conditions in several areas. The nature of economic reform programs, employment policies, macroeconomic policies, as well as local and global shocks, have all reshaped the structure of Egyptian economy, and eventually segmented the labor market. COVID-19 has further revealed the economic vulnerability of Egypt's labor market and showed how fragile it was in the face of the pandemic and its repercussions. The objective of this paper is first to provide a diagnostic analysis of the different sectors and dynamics in Egypt's labor market. Second, to capture the key constraints hindering its resilience towards a better future of work, and the potential impact of dealing with each of them. The analysis will cover the last decade between 2010 and 2020¹, according to the availability of latest data.

Section I of the study focuses on the impact of events and developments that unfolded during this period, and how dramatically they led to a structural transformation in labor market dynamics in different sectors, with a brief delineation of the key factors that contributed to this transformation. Section II draws a macro picture of the Egyptian labor market in terms of key dynamics and labor market characteristics, namely: employability and economic growth, unemployment structure and the dilemma of Egypt's inverted pyramid of unemployment, and economic vulnerability with a focus on the most vulnerable segments in the market.

¹ ECES contributed a full chapter, with detailed analysis of the labor market dynamics and its different waves that took place during the past three decades, to the volume "Sectoral Analysis of the Impact of COVID-19 on the Egyptian Economy - Part 2", chapter 2 "Labor Market".

Section III provides a sectoral view of the Egyptian economy and the structural shifts it has undergone over the past decade, followed by a detailed sectoral decomposition of Egypt's labor market, including job creation, informality, labor productivity, blue-white collar workers' situation, skill mismatch and gender distribution. The new dynamics of the labor market as coined in the "future of work" global mega trends, are presented briefly in Section IV, setting forth Egypt's position in coping with the new normal of the labor market.

Finally, Section V concludes, drawing out the most predominant constraints facing Egypt's labor market, classified based on detailed assessment for each.

1. Brief Overview of Egypt's Labor Market and How it Operates

The Egyptian labor market hosts a labor force of 28.45 million, representing 41.5 percent of the total population, with 26.2 million employed and 2.25 million unemployed, during 2020. Female participants make up only 16.8 percent of the labor force. Youth² represent around 35 percent only of the labor force, of which 16.3 percent only are females. This reflects that the market prefers to employ experienced labor and indicates that jobs for new entrants are minimal.³

Over the past decade, Egypt's labor market has witnessed waves of structural fluctuations and shifts that changed the way it operates differently according to the concurrent events. The first wave began by the end of the 2000s, with the repercussions of the January 25th Revolution, which lasted until 2015. This was followed by the period 2016-2019, which although was short in time, had several unconventionalities that led to a structural transformation in labor market dynamics. The last wave examined the consequences of COVID-19 pandemic,

² Refers to males and females between the ages of 15 and 29, according to CAPMAS.

³ Central Agency for Public Mobilization and Statistics, Annual Bulletin of the Labor Force Survey 2020, April 2021.

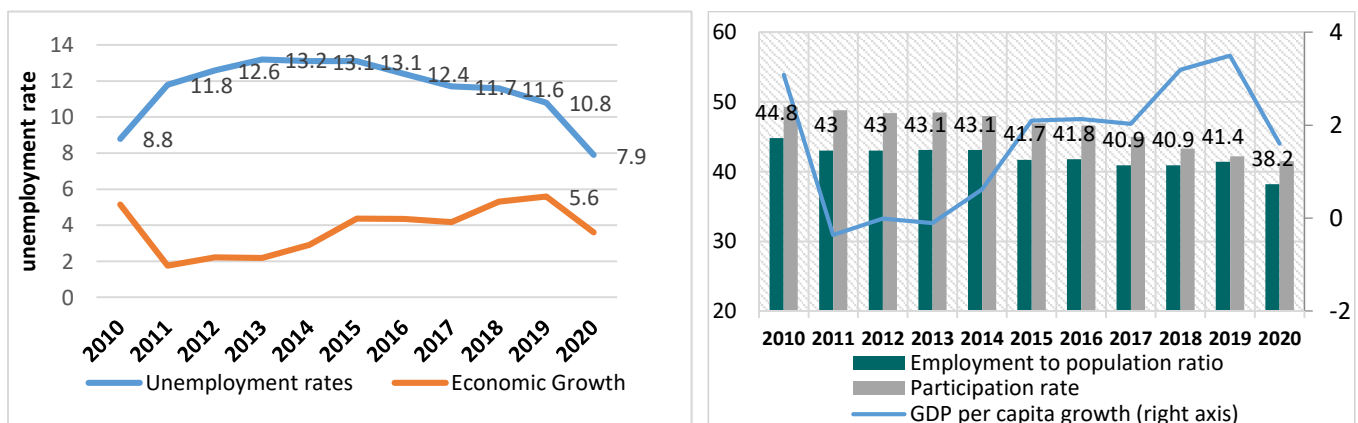
which had a global negative impact, while revealing the pre-existent labor market distortions domestically.

In the following two subsections, the paper briefly describes labor market developments in Egypt and outlines the key events affecting its dynamics, first throughout the ten years between 2010-2020, and second from 2020 to date, i.e., post Covid-19.

1.1. Labor market characteristics over the period 2010- 2020

The Egyptian labor market experienced a turning point in the aftermath of the January 25th Revolution, which markedly hiked unemployment to its highest rate since the early nineties. With more than 4 times increase between the years 2010 and 2015, unemployment rates hit double digits, moving beyond 10 percent, and remained as such since 2011. Employment and economic participation rates thus have not recovered since they started to decline in 2011, as shown in Figure 1.1 below.

Figure 1.1. Evolution of Main Labor Market Characteristics, 2010-2020



Source: Central Agency for Public Mobilization and Statistics; Annual Bulletin of the Labor Force Survey, several issues. World Development Indicators, the World Bank.

The next four years between 2016 and 2019 have witnessed an increase in the expansion of construction activities, becoming the key driver of Egypt's economic growth. Unemployment started to go down since 2015; however, this decline cannot be attributed to economic recovery alone, as the employment rate also fell and economic participation continued to decline, given that labor force also declined over this period. Moreover, employment growth lagged behind GDP per capita growth, especially after 2015, as shown in Figure 1.1 above.

Based on CAPMAS data in 2014-2016 (Kamal 2018), results support this argument after calculating the contribution of the construction sector to GDP at 6 percent, while its contribution to Egypt's employment is double this figure at 12 percent. Obviously, this reflects a clear pattern of irregular temporary jobs prevailing in the labor market and thus temporarily lower unemployment rates. Moreover, this expansion in construction activities has consequently led to a skewed labor market towards low skilled workers. The relative educational levels and age groups these jobs demand have clearly created an additional bias in the labor market.

1.2. Labor market trends from 2020 to date

The period starting from 2020 onwards witnessed the emergence of the COVID-19 pandemic and its repercussions across almost all labor segments. Economic growth examined a sharp downturn from 5.6 percent in 2019 to 3.3 percent in 2021. The labor market was paralyzed for more than 10 months, and until now in some activities, in addition to those who have permanently closed as a direct result of the lockdown. Official figures, though, pointed out a non-change in unemployment between 2019 and 2020, a decline of only 0.4 percent in 2021, and a rising tendency in employment and economic participation since 2020.

One explanation for this might be the observed expansion in construction activities since 2016 that even has slowed down, it is still responsible for the declining unemployment and higher temporary employment during the past few years. Another explanation could be the higher percentages of discouraged job seekers that surged rapidly during the last few years, especially among women. According to ILO statistics in 2020, the share of discouraged job seekers in Egypt is considered relatively high compared to other countries. Furthermore, it could be attributed to the demographic changes during the period 2012-2018, as it has seen a slowing growth of youth and young adult populations. However, this slowdown in working age population growth will not last, as will be seen in the coming section.

On the other hand, it is not clear whether these declared unemployment rates reflect the unemployed in the formal sector only, or informal workers were accounted for as well. Knowing that informal employment represents approximately 83 percent of workers outside the government sector and public business sector, it has the largest weight when calculating unemployment in Egypt; as informal workers are the most vulnerable to unemployment, being the first to be laid out in times of crises.⁴

To conclude, economic growth has not generated jobs in Egypt over the last 10 years especially for women but has contributed to a deterioration in the quality of jobs. Several key challenges in Egypt's labor market have contributed to this deterioration. **The first** is the simultaneous excess of labor supply and demand, a fact that reflects severe structural weakness of the labor market and a widening skill gap. **The second** is the rigidity of the labor market in facing external and internal shocks, which reveals the weak institutional and legislative frameworks

⁴ Egyptian Center for Economic Studies, 2020, Sectoral Analysis of the Impact of COVID-19 on the Egyptian Economy - Part 1, chapter 8 "Informal Economy", Publication NumberBK15A.

governing the Egyptian labor market, and that the economic policies in general, and employment policies in particular are not geared towards resolving the structural challenges facing the Egyptian labor market. **The third** is that low unemployment does not necessarily reflect proper patterns of the labor market; as these rates disregard large segments such as underemployment, discouraged employment, informal employment, or hidden unemployment as well as other types of unemployment that may affect the significance of the index.

To elaborate more on Egypt's labor market and its current layout, the following part dissects its dynamics in the aforementioned period, predominantly: employment trends and economic growth, unemployment structure, economic vulnerability and vulnerable segments.

2. Macro Lens on the Labor Market: Dynamics and Vulnerable Segments

Egypt's labor market is highly characterized by low employment elasticity, inverted unemployment structure and higher economic vulnerability. This section sheds light on these dynamics over the past decade with an in-depth breakdown analysis of the main segments of the labor market.

2.1. Employment elasticity: Employability and economic growth

Employment elasticity can reveal much about labor markets. It serves as a convenient tool to examine how economic growth and employment evolve together over time.⁵ It can also help detect and analyze structural changes in employment over time, and for different demographic subsets (Kapsos, 2006).

⁵ It measures the responsiveness of employment to changes in growth of economic output during a certain period. If the resulted rate is greater than one it is considered elastic, if it is less than one it is considered inelastic, if it is equal to one it is unit elastic.

Employment elasticity, which is sometimes called employment intensity of growth, could further work as a tracker for the sectors' potential to create jobs or as a predictor for the future growth of employment.⁶

Using aggregate data on employment and GDP from 2000 to 2017, Assaad et al. (2019) applied a simple ordinary least squares regression to estimate the employment elasticity in Egypt with respect to GDP and suggested that employment does have a delayed response to economic growth.

Figure 2.1 below plots the employment elasticity⁷ in Egypt's labor market over the past decade. The highest elasticity has been witnessed in 2010, which still denotes highly inelastic employment, right before it remarkably declined to its lowest record (negative level) in 2011 in the aftermath of Jan 25 Revolution and its economic consequences on levels of economic growth.

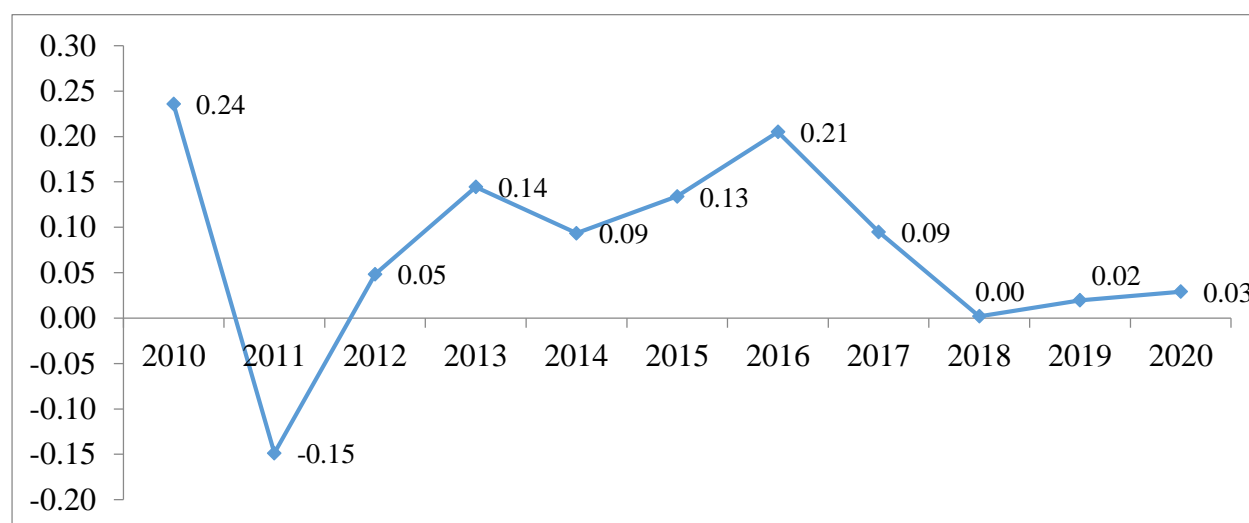
The negative employment elasticity implies that employment continues to shrink as the economy grows. According to retrospective data from ELMPS 2018, annual net employment growth fell by 100 thousand jobs between 2010 and 2011 (Assaad et al. 2019).

The zero employment elasticity, or the perfectly inelastic employment, indicates that employment did not grow at all regardless of the level of economic growth. The Egyptian labor market approached the zero-level elasticity of employment in 2014. Although it recovered at a slower pace in 2016, it deteriorated again and stayed between 0 and 0.03 since 2018. Assaad et al. (2019) highlighted that the apparent de-linking between economic growth and employment growth observed since 2014 in Egypt is somewhat concerning.

⁶ It should be noted that the relation between employment and economic growth is not unidirectional, and that economic growth only is not enough to explain changes in employability in the labor market.

⁷ Measured by the percentage change in employment with respect to percentage change in GDP growth on an annual basis.

Figure 2.1. Employment Elasticity in Egypt, 2010-2020



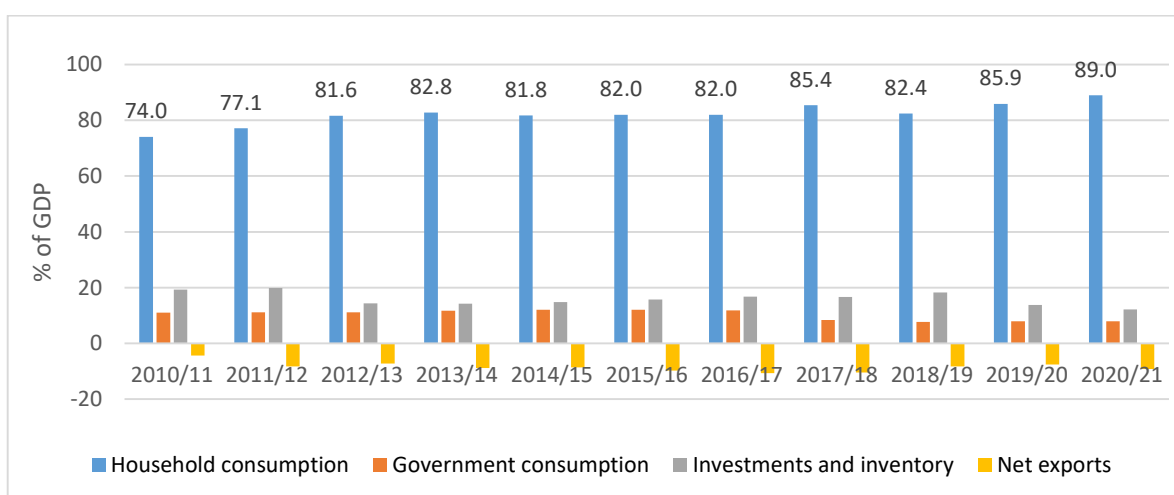
Source: Author calculations based on CAPMAS data, *Statistical Yearbook*, different issues.

By analyzing the trend of Egypt's economic growth, to understand its jobless nature, it is obvious that it has been steadily increasing over the past decade but dropped significantly during the last two years in the wake of Covid-19 repercussions (see Figure 1.1 above).

Although economic growth has recovered, it was volatile, highly dependent on capital-intensive sectors with lower modernization level, skewed towards public investments and relatively jobless. Furthermore, with the surge in government debt, the private sector has limited access to credit, leading to a decrease in private investment and an increase in public investment, largely in public utilities and infrastructure. The Egyptian economy has further increased its dependency on services. The industrial sector is dominated by construction and oil industries, while the share of manufacturing in employment and in GDP has contracted (Amer et al. 2021). These trends of sectoral decomposition of employment will be discussed in-depth in Section III of the study.

Moreover, Egypt's household consumption is the main contributor to GDP growth for the past 10 years, and net exports have the least share, with a slight increase in the share of investment in output, however it fell largely in FY2019/20 due to the pandemic lockdown (Figure 2.2).

Figure 2.2. Sources of GDP Growth in Egypt over the Past Decade



Source: ECES, Egypt's Economic Profile and Statistics, 2021.

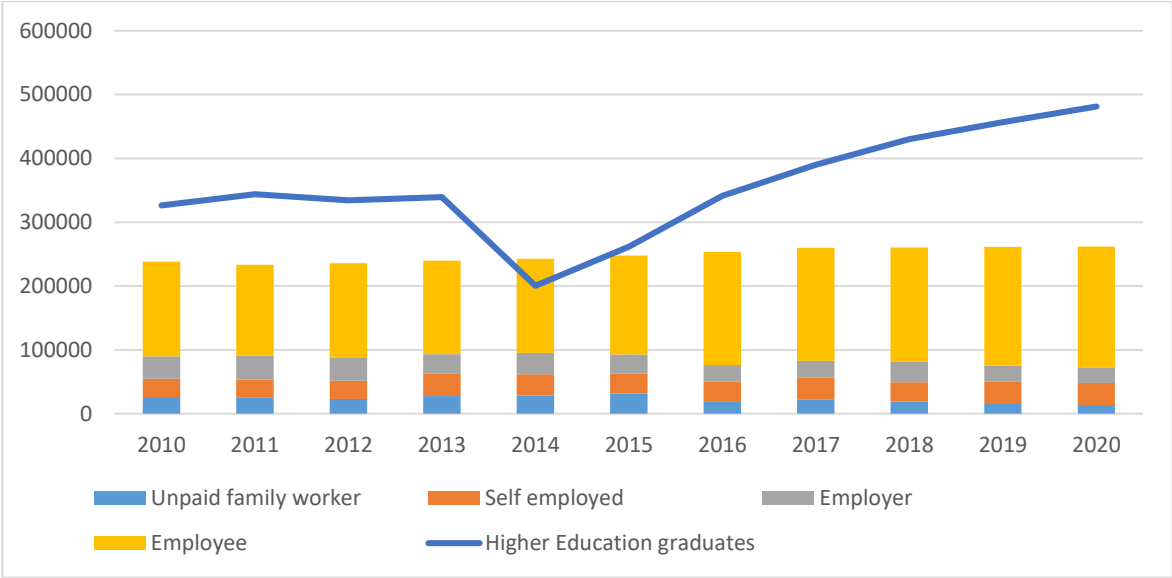
On the other side, employment composition has also witnessed a structural change over the same period. The share of employees and self-employed workers in total employment was slowly growing at a rate of about 9 percent and 19 percent, respectively. Unpaid workers and employers, however, have seen a substantial drop by about 52 percent and 43 percent from the total employment respectively, as shown in Figure 2.3 below.

Moreover, population growth for the working age was faster than employment growth rate. Over the past decade, the working age population has grown at a rate of 20 percent. Higher education graduates, though, have rapidly grown by 47.4 percent. Yet, this is double the increase in Egyptian employees, who represent the biggest share from total employment in Egypt (almost 73 percent in 2020), as it has grown only by 28 percent between 2010-and 2020.⁸

⁸ Based on data from CAPMAS annual bulletins of labor force survey, 2010-2020.

Notably, the gap between new graduates and new jobs created annually is becoming wider over time.

Figure 2.3. Employment by Status vs. Higher Education Graduates Growth between 2010 and 2020



Source: Made by the author based on data from CAPMAS annual bulletins of labor force survey and higher education graduates and scientific degrees, 2010-2020.

Over and above, the overall employment situation in Egypt has worsened from 2012 to 2018. Not only was job creation anemic during this period, but new ones were also of low quality, informal, inhospitable to women, and subject to vulnerability to economic shocks (Assaad and Krafft, 2022).

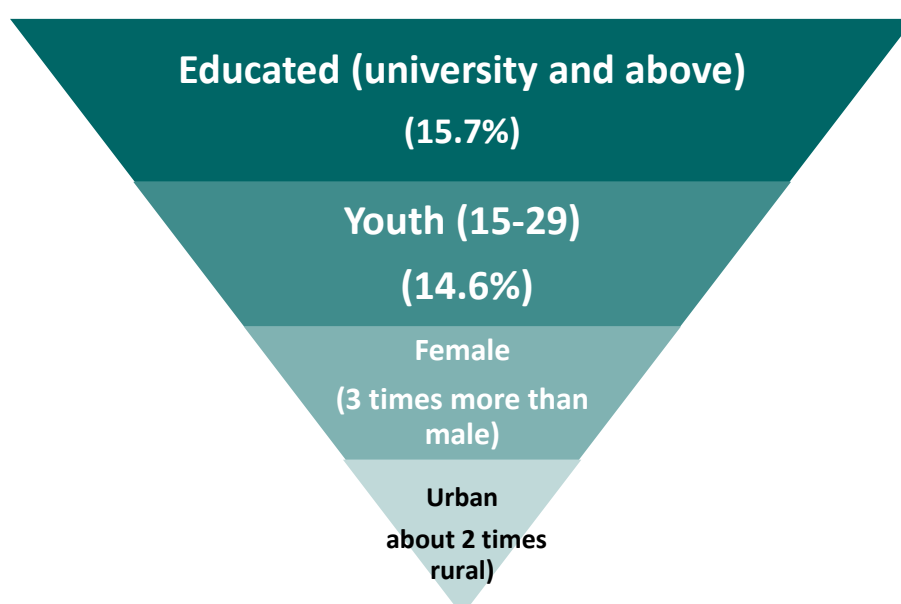
The above patterns of economic growth and employability reveal *highly inelastic employment* of the Egyptian labor market. This means lower ability of economic growth to cover the needed job opportunities, and that the gap between output growth and responsiveness of labor market is becoming wider over time. This could be attributed to more than one factor. The first relates to the characteristics of economic growth itself, how inclusive, sustainable, or smart it is, and the key sources of the GDP growth. Second, the mismatch between labor supply and demand as we will see in the next

section. Third, the structure of the economy in terms of dominant activities and key players/public-private sectors. Fourth, the demographic structure of the population and labor force variations. In addition, other hidden and/or external factors might have an impact on the rigidity of employment such as informality, productivity levels, type of unemployment, labor market policies, economic or political shocks, etc.

2.2. Unemployment Structure: The Dilemma of Inverted Pyramid

The unemployment structure in Egypt reflects an inverted pyramid of socioeconomic characteristics among job seekers. As shown below in Figure 2.4, unemployment rates are higher among the most educated, youth, females, and in urban areas. This contradicts the usual structures of proper unemployment pyramids in which the educated youth get better job opportunities in urban areas, with a reasonable female participation in labor market. A detailed analysis of this structure will follow.

Figure 2.4. Unemployment Inverted Pyramid in Egypt



Source: (Bahaa, 2020).

2.2.1. The first wide top of the Egyptian unemployment pyramid clearly reflects the **mismatch between job requirements and education outcomes** in the labor market. Such imbalance in the “school to work” transitioning system has two indispensable sides. The first concerns the *quantitative* perspective associated with the supply-driven nature of education system. A huge workforce is annually injected into the labor market exceeding its ability to generate new job opportunities, as seen before in Figure 2.3. Youth in the 20-24 age group, mostly new graduates, represent only about 11 percent of the total employed compared to more than twice this percentage (26.6 percent) for the 30-39 age group. Moreover, the employment rate among the former group is half that of the latter (28 percent versus 55 percent, respectively)⁹.

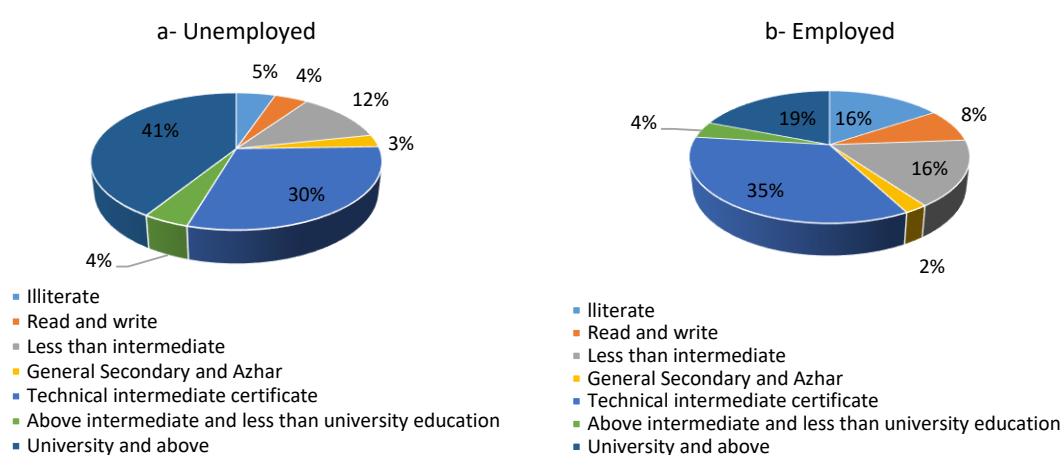
⁹ Central Agency for Public Mobilization and Statistics, *Annual Bulletin of Labor Force survey 2020*.

Evidently, the main challenge is facing the new unemployed individuals entering the labor market. Around 60 percent of unemployed belong to those who have never worked before, especially females. Around 73 percent of the unemployed females have never worked before compared to 44 percent between males.

The second side concerns the *qualitative* perspective, where not only high unemployment rates prevail among educated, but also surge with rising educational levels. This has roots in the education system's failure to meet labor market demand and required qualifications, especially by the private sector. As seen in Figure 2.5 below, those with university education and above represent the largest share of the unemployed, at nearly 40 percent. Among them, unemployment rates are 1.5 times those among General Secondary and al-Azhar graduates, and more than double compared to those with an intermediate technical education. In contrast, rates are significantly lower among the illiterate and those below secondary education level.

Also, the share of university graduates in employment is significantly low, and even approaches that of those who can read and write! The number of those holding a technical certificate is double that share, and 8 times higher than those who are above intermediate and less than university education. This widening skill gap might be a direct result of the labor market's strong bias towards certain sectors, such as building and construction that heavily employ these groups.

Figure 2.5. Percentage Distribution of Employed and Unemployed Persons by Education in 2020



Source: Central Agency for Public Mobilization and Statistics, Annual Bulletin of Labor Force Survey, 2020.

It is worthy of note that low quality educational outcomes that led to this skill mismatch mostly belongs to government education schemes, especially the weak TVET system that significantly contributed to the growth of the informal sector. Although data are not available on unemployment or employment by type of education, it has become a common phenomenon in the Egyptian labor market that only graduates of high-quality pre-university education are qualified to high quality university education and in turn to decent sustainable jobs upon graduation. Yet, this could have some evidence in empirical studies that examined impact of background characteristics on labor market outcomes. For instance, in a recent study by Alazzawi and Hlasny (2022), family wealth, parental education and father's occupation were found to be important determinants of labor market outcomes and vulnerability, even

after a long period of work experience. Such factors play a crucial role in determining the type of education children pursue.

2.2.2. The second layer of the pyramid strongly relates to **the demographic structure** or the proportion of population in the working age. Unemployment rates among the age group 20-24 are about 3-fold that prevailing among the age group 30-39. According to the results of the latest population census in 2017, percentage of population in the age groups 15-35 has reached about 61 percent.¹⁰ Although this represents a demographic dividend that should be utilized to mobilize economic activities and boost the economic growth, it places an additional pressure on the available job opportunities.

The inverted pattern here could be further observed from the upturned demographic structure shown in Table 1 below. Although young age group 15-39 represents 60 percent of the labor force, they participate with an average of only 40 percent in economic activity. On the other hand, the age group 40-49 represents only one-fifth of the labor force but contributes almost 60 percent to economic activity. Worthy of note is that the two older age groups (50-64) are heavily overwhelmed in the labor market despite their minor representation in the labor force. They represent around 17 percent only of the labor force, but contribute an average of 57 percent, i.e., their contribution is almost similar to that of the young age groups!

¹⁰ Central Agency for Public Mobilization and Statistics, *population census*, 2017.

Table 1. Percentage Distribution of the Labor Force and Participation Rates in Economic Activity among Age Groups and Gender, 2020

Age Groups	Labor force (%)	Participation rates in economic activity (%)		
		Male	Female	Total
15-19	5.2	22.3	2.4	12.6
20-24	12.8	53.4	12.7	33.7
25-29	16.8	90.5	18.5	54.3
30-39	26.2	95.3	19.7	58.3
40-49	20.2	94.8	21.9	59.5
50-59	15	86.4	20.7	54.6
60-64	2.3	36.9	4.7	21.4
65+	1.4	18.1	1.9	10.4
Total	100	67.4	14.3	41.5

Source: Central Agency for Public Mobilization and Statistics, *Annual Bulletin of Labor Force Survey*, 2020.

According to latest projections by Assaad (2022), working age population will resume its rapid growth in 2025-2030 and will remain high through 2035 as the echo of the youth bulge generation makes its way to the labor market. Such demographic dividend, if not utilized and invested well, is going to add more pressure to the unemployment burden in the Egyptian labor market. Panel B in Figure 2.6 below shows the estimated and projected labor force figures between 2000 and 2050 by gender. It exhibits that labor force growth will increase from fewer than 600 thousand workers per year in 2020-25 to nearly 800 thousand per year in 2030-40, with females representing only one-fourth of this increase in labor force.

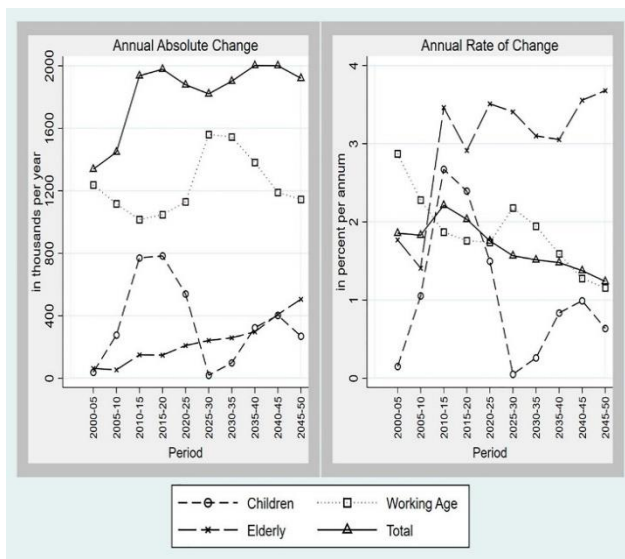
Eventually, these patterns are expected to resume in the second half of this decade and reverse shortly after.

Moreover, the bulk of elder groups (65-74 and 75+) and children (0-15) embodies a rising dependency burden compared to the working age groups. Dependency ratio has witnessed a rising tendency in Egypt over the past decade, from 60 percent in 2010 to 65 percent in 2020, compared to 49 percent in Turkiye and only 19 percent in the United Arab Emirates in 2020. According to latest population estimates by CAPMAS in January 2022, dependency ratio reached 61.5 percent. However, this decline does not necessarily imply an increase in the number of workers, but could rather be attributed to the increasing death rate, especially among elder people due to COVID-19 pandemic during the last two years.

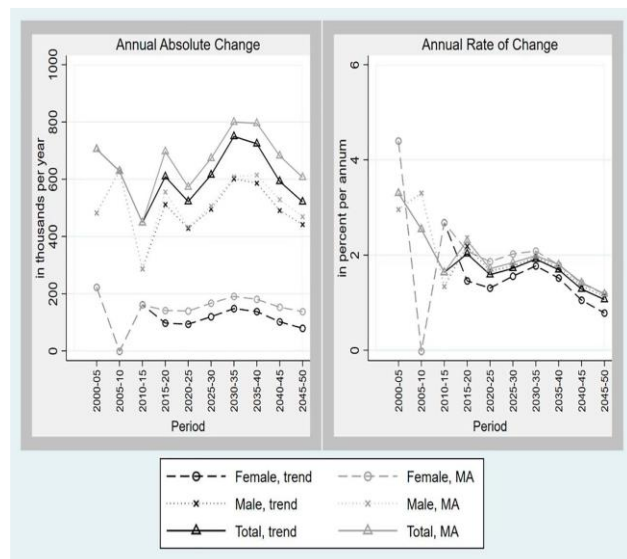
Yet, dependency in Egypt is also expected to rise again with the numbers of children and elder people disproportionately growing between 2025-30 and 2040-45, as shown in panel A of Figure 2.6 below.

Figure 2.6. Estimated and Projected Population Growth and Labor Force

A. Population Growth by Broad Age Category, 2000-2050



B. Labor Force Growth by Gender, 2000-2050



Source: Assaad (2022).

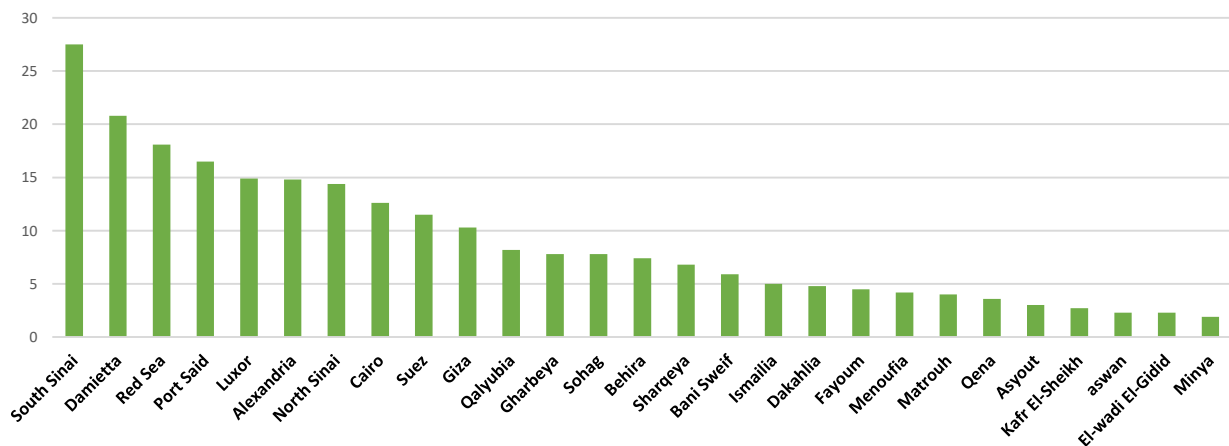
2.2.3. The recede in demographic pressures is associated with the third layer of the inverted pyramid, the expected increase in **female participation rates** in the labor force. **Female unemployment** is 3 times higher than among males; it reaches about 46 percent in the female age group 20-24 and 31 percent in the female age group 25-29. Although females represent nearly half the population in working age, they account for only one sixth of the labor force. Table 1 above shows the lower female participation in economic activity compared to males, especially in the younger age groups, where males' contribution is 4-5 times higher than females. However, these differences increase in older age groups.

Female participation relates to diminishing reproduction rates, which contribute in turn to growth of the labor force. According to the latest Egypt Demographic and Health Survey (EDHS) in 2014, total fertility rate reached 3.5 live births compared to 3 live births per woman in 2008. This led live births to increase by 40 percent during this period. Fertility rates are higher among illiterate poorer women (3.8, 3.5 live births, respectively) than among those with some primary education and above and wealthier women (3.5 and 2.8 live births, respectively). Furthermore, age-specific fertility rates clearly point out a shift in the peak from the age group 25-29 to 20-24 since late 1970s. As the highest increase (almost 25 percent) was observed in the second age group (20-24) (UNFPA 2016). This has also been reflected in the labor market, as young women aged 20-24 have smaller contribution than their peers in the age group 25-29 (Table 1). Yet female participation could increase GDP over the next decade in Egypt by 34 percent if the number of men is equal to the number of women in the labor market (Seif El Dien 2020).

2.2.4. The **geographical disparities** of unemployment distribution represent the last dilemma at the bottom of the inverted pyramid. It reflects great disparities between urban and rural areas nationwide, with urban regions having the largest share of unemployment compared to rural areas, whereas most industrial activities are located in the urban regions.

On the regional level, unemployment in Lower Egypt governorates is mostly higher compared to Upper Egypt governorates. However, there are exceptions, such as South Sinai, which has the highest unemployment rate of 27.5 percent, Red Sea governorate at about 18 percent and Luxor governorate at nearly 15 percent (Figure 2.7). This could mainly be attributed to the decline in tourism activity during 2020 due to the COVID-19 lockdown measures, as one year earlier; South Sinai, for instance, achieved zero unemployment rate. In addition to the relatively lower numbers of labor force in these governorates.¹¹

Figure 2.7. Unemployment rate 15-64, by governorates 2020



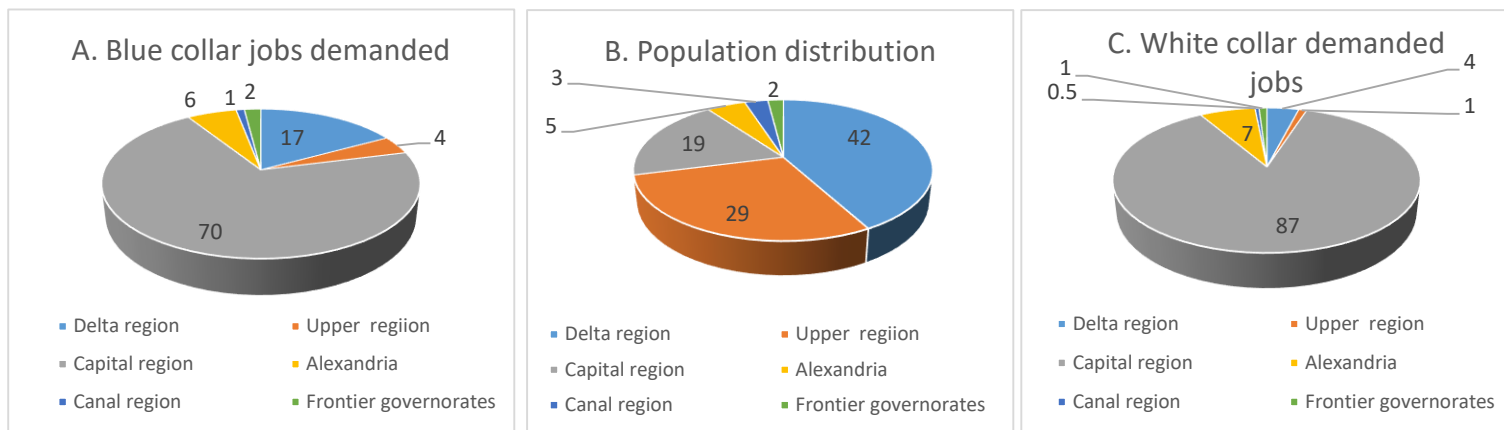
Source: Central Agency for Public Mobilization and Statistics, Annual Bulletin of Labor Force Survey, 2020.

The inverted pyramid could even be seen in labor demand and supply dynamics on the regional level. More precisely, in the distribution of job

¹¹ Central Agency for Public Mobilization and Statistics, *Annual bulletin of labor Force Survey*, 2020.

opportunities versus working age population. Not only are the industrial activities concentrated in urban areas, but also the jobs of higher demand are prevailing more in urban governorates with lower population densities and lower participation rates. Figure 2.8 below describes this dilemma. It shows how job opportunities are three times—or more in case of white-collar jobs—the population in the capital region. While in the delta region, the demand on blue-collar jobs is less than half the population and much less for the white-collar jobs. As for the upper region, demanded jobs are extremely negligible relative to the population distribution and participation rates.¹²

Figure 2.8. Geographical Job Opportunities vs. Population Distribution in 2022



Source: ECES Labor Demand Database, 2022.

The geographical distribution of labor demand versus unemployment rates clearly reflects a pattern of geographical skill mismatch and human resource waste all over the regions, as well as an imbalance in the spatial concentration of economic activities.

¹² Capital region: Cairo and Giza. Delta region: Damietta, Qalyubia, Gharbeya, Behira, Sharqia, Dakahlia, Menoufia, and Kafr El-Sheikh. Canal region: Port Said, Suez, and Ismailia. Upper region: Luxor, Aswan, Sohag, Bani Sweif, Fayoum, Qena, and Asyout. Frontier governorates: Red Sea, El Wadi El Gedid, Matrouh, North Sinai and South Sinai.

2.3. Economic Vulnerability: Informality and Access to Labor Market, and Vulnerable Segments

Vulnerable employment is defined in terms of access to labor market. Other writings define it as the level of employment outcomes in the labor market in terms of working conditions and protection schemes provided to workers. The World Bank has defined economic vulnerability as the total number of unpaid family workers and self-employed without employing others. Amer and Atallah (2019) and Azzawi and Hlsany2020 (2022) added to these, irregular wage workers. Irregular wage workers are seasonal or nonpermanent workers, while informal workers are those without social security or official contracts. They demonstrated that common unfavorable working conditions in those jobs, represented in lack of contract, health and social insurance and paid leave, make them exceedingly vulnerable to any external shocks.

In Egypt, vulnerable jobs accounted for around 16.5 percent of employment in 1998, rising to 24 percent in 2012 (Constant et al. 2020), and continues to be a key feature of the Egyptian labor market. Overall employment vulnerability rose from 43 percent to 56 percent of workers over the past two decades, especially among young women who witnessed a severely growing vulnerability between 2012 and 2018 (Amer et al. 2021).

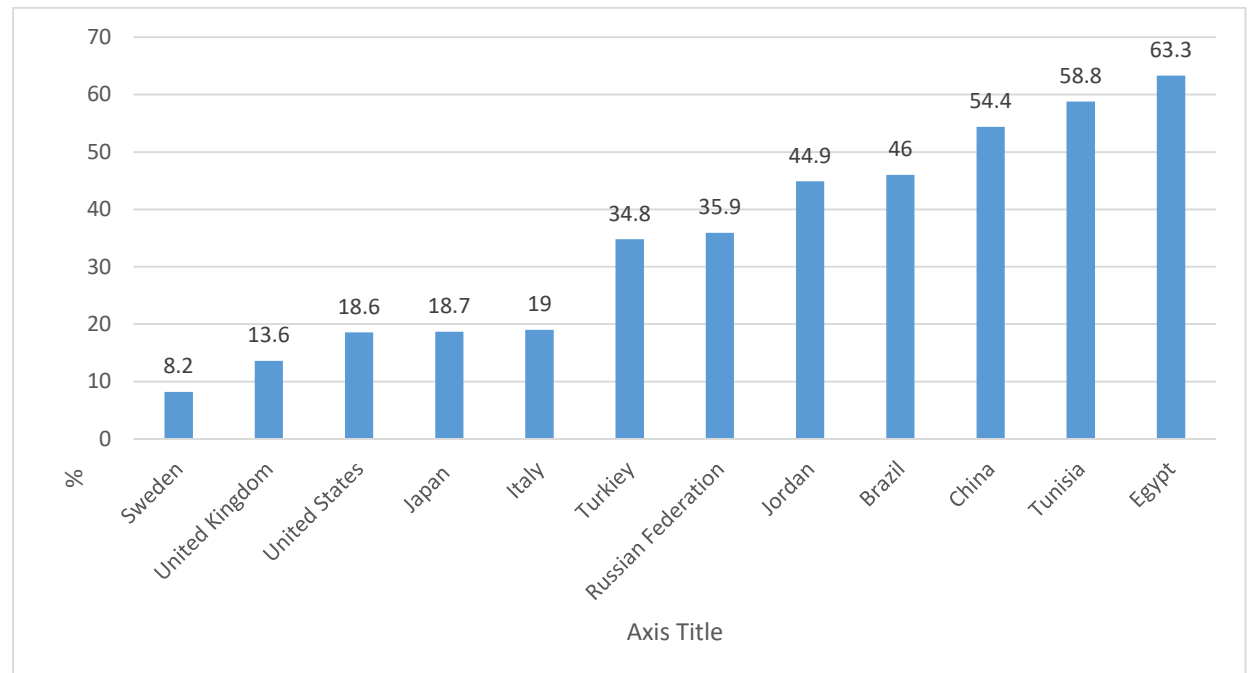
In the following two subsections, the study presents key developments of informal jobs in Egypt in terms of access to labor market, followed by identifying the most vulnerable segments in terms of employment.

2.3.1. Informality and access to labor market

The informal sector in Egypt employs about 63 percent of the total employed in all sectors, contributing 30-40 percent to the GDP. The alarming fact is that 60.4 percent of workers work in the informal sector, while the rest (39.6 percent), work in the formal sector under informal arrangements without contracts or insurance (Dawoud 2020). The proportion of informal wage employment has particularly increased as a percentage of total employment from 31 percent in 2012 to 39 percent in 2018. It is supposed that the irregularity of employment among these workers has declined with the relative improvement in economic conditions in Egypt, but they remain increasingly vulnerable and fragile in the face of any economic downturn. While informal workers inside establishments are more secure and work in safer conditions, they are though subject to long working hours (46 weeks), over-qualification, and limited access to benefits such as health insurance and paid leave (Assaad et al. 2019).

The informal sector in the Egyptian economy is considerably sizable compared to neighboring and competitor countries. Egypt's informal employment is about 1.5 times its size in Jordan, and double that of Turkish economy. The same applies in comparison with developed countries, such as Britain (4.6 times) and Sweden (7.7 times) as shown in Figure 2.9 below.

Figure 2.9. Size of Informal employment (percentage of total employment) in Egypt and Selected Countries*



Source: ILO, 2018.

* Latest available year

Several factors have added to this accumulation of informal workers in Egypt since the 1990s: the implementation of the 1990s economic reform program, specifically the privatization schemes, the cancellation of the 1960s policy of government job guarantee scheme, along with Egypt's industrial policy bias towards capital intensity not labor intensity, all pushed about 81.6 percent of the unemployed in Egypt to queue waiting for the government job. Accordingly, they have been forced to accept informal jobs.

In addition, the global financial crisis of 2008, and the Revolution of January 25, 2011, have absorbed about 1.6 million new workers, during the period 2008-2011, compensating for the weak employment ability of both the government and the formal private sector. Moreover, absence of any insurance coverage led to further deterioration of the conditions of informal workers during these two crises.

They were required to take greater risks and work for longer periods to achieve weak returns that are not sufficient for their needs. Over and above, they were exposed to severe internal competition due to the inflow of more workers to the informal sector at times characterized by declining demand, which resulted in a significant decrease in their incomes. Both crises have led to reduced job stability in the informal sector, which means shifting from regular to irregular informal employment (Dawoud 2020).

Undoubtedly, sector productivity in Egypt has a critical role as well to play in this regard. Over the past decade, labor has shifted to industries with lower productivity growth, indicating a negative structural shift. Workers were redirected away from higher-productivity sectors like manufacturing and tradable services to sectors with lower-than-average productivity growth, such as construction, wholesale, retail trade, and transportation (Morsy et al. 2014). This pattern of structural change between sectors could be an obstacle facing the level of real wages, living standards of workers, and jobs quality in those less-productive sectors. In particular, the construction sector, with almost double its share of employment between 2003 and 2017, has strongly contributed to the most vulnerable types of jobs (Amer et al. 2021). The Egyptian economy's expansion in construction and transportation sectors is clearly reflected in the surging employment outside the fixed establishments (Assaad et al. 2020). It further contributed, to a large extent, to the increasing incidence of child labor. A higher percentage of children between 11-15 years old have been working informally and precariously in these jobs.

Considered as one of the most vulnerable types of employment in Egypt, informal and irregular jobs technically quadrupled their overall employment share from 12 percent in 2006 to 23 percent in 2018. Subsequent research has shown that this segment was exceptionally vulnerable to shocks, job losses and income losses during the COVID-19 pandemic since 2020 (Assaad and Krafft, 2022).

Yet, informal workers' vulnerability has become more acute with the emergence of the COVID-19 pandemic. Essentially, they have been affected as much as the formal workers. The formal sector has lost its main feature, which is the ability to compensate for the decline in employment in the formal private sector during crises. In addition, informal workers were the most vulnerable to infection and transmission of the virus, given that the absence of insurance coverage or paid leave limit the ability of informal workers to adhere to the lockdown, as well as the fact that their workplaces often lack health and occupational safety standards (Dawoud, 2020).

2.3.2. Vulnerable segments

Vulnerable segments are the most vulnerable to informal working conditions in the labor market, and thus exposed to shocks, job losses and income losses as strongly revealed by COVID-19 pandemic. Table 2 below frames the vulnerable segments covered in the analysis and briefly describes the situation behind being economically vulnerable.

Table 2. Vulnerable Segments and Vulnerability Status

<i>Vulnerable segments</i>	<i>Vulnerability status</i> (Why they are economically vulnerable?)	<i>Source</i>
<i>Youth</i>	<ul style="list-style-type: none"> - Two-thirds of the total jobs young people occupy are informal jobs. - The incidence is accelerating among the most educated youth. 	<ul style="list-style-type: none"> - Amer and Atallah, 2019. - Amer et al. 2021
<i>Women</i>	<ul style="list-style-type: none"> - Women have higher tendencies of job precariousness and/or informality. - Working poverty and lower wages are further prevailing among women. - Not Educated, Employed nor Trained (NEET) women are far exceeding men. 	<ul style="list-style-type: none"> - Amer et al. 2021 - ECES, 2020
<i>Working poor</i>	<ul style="list-style-type: none"> - Poor workers (lowest quintile) never had considerable access to formal employment. - Near to half of employment are from the poorest men, declining to only 8% for the richest. 	<ul style="list-style-type: none"> - Assaad et al. 2019 - Amer et al. 2021

Source: Prepared by the author.

- *Youth*

Young people continue to face difficulty entering the labor market as revealed before in the inverted unemployment structure of the labor market. In addition to the high levels of unemployment among them, a considerable portion of the unemployed stopped looking for jobs as the quality of jobs worsened. The ILO has defined this category of unemployed persons as “discouraged job seekers” under one of the key measurements of labor market underutilization. According to ILO statistics in 2020, the share of discouraged job seekers in Egypt is considered relatively high compared to other countries.¹³ They account for one million representing 4 percent of the labor force, compared to 2.5 percent in

¹³ Not available for all countries.

Jordan, 0.7 percent in the United States¹⁴, 0.13 percent in Indonesia, and only 0.03 percent in Vietnam.

As a result, the share of informal jobs for youth has surged more sharply than for older people, reaching two-thirds of total jobs young people occupy. This is a pattern that has been almost standardized in the Egyptian labor market recently. As a result, youth formal employment rate has fallen dramatically (Amer et al. 2021).

Apparently, these trends differ according to the relevant characteristics of workers. Amer and Atallah (2019) studied youth informal jobs disaggregated by geographical areas and educational levels for both men and women. Their analysis revealed that youth informal jobs are more prevailing among the highly educated men and women, and in urban than rural areas, while irregular jobs followed the opposite direction. Young male private regular informal employment made up about 43 percent of youth total employment in urban areas and 35 percent in rural regions, while declining among young women to nearly two-third in urban and less than half in rural (29 percent and 16 percent of total young female employment, respectively). While young men in irregular wage work also constitute 15 percent of total male employment in urban areas and are more prevalent in rural regions at almost double this rate (28 percent).

More concerning is that the proportion of informal jobs has certainly accelerated **among the most educated** more rapidly than for other educational groups. The share of different segments of vulnerable employment, either informal or irregular, in total youth male employment has climbed for all education levels, but has accelerated much faster among university graduates. In the period 1998-2018, informal employment tripled for university graduates. As for young women, those with tertiary education entailed almost the entire informal employment in 2018.

¹⁴ Data for United States is in 2019.

However, prior to that time (mostly 2012-2018), highly educated women flowed more rapidly to these types of jobs over time. Moreover, young women occupying irregular jobs experienced an upsurge within secondary educated or less than secondary educated women (Amer and Atallah 2019).

Hence, Egyptian YOUTH whether men or women in urban or rural areas have been examining a considerable low quality of education and training, alongside a deterioration in real wages and quality of available jobs in the government sector, pushing them over time towards regular informality and irregularity.

- *Women*

The status of **women** in the Egyptian labor market reveals further remarkable vulnerability, mainly due to the high level of inequality compared to men. Females are more vulnerable to illiteracy compared to males, and their contribution to labor market is significantly low despite their high representation in the working age population. About 31 percent of Egyptian females are illiterate, compared to 21 percent of males, and the former's contribution to economic activity is nearly one-fourth of the latter in Egypt,¹⁵ as women with less education and empowerment have a higher tendency to bear children and use contraception less frequently (UNFPA 2016).

However, the highest share of unemployed women (three times the unemployed men) is indeed concentrated among the most educated, half of them is with university and post graduate education, followed by holders of a technical intermediate diploma (about 34 percent). Nevertheless, employed females whether educated or not, still face a challenging situation in the labor market, particularly young women as seen above. With less than one-sixth of total

¹⁵ Central Agency for Public Mobilization and Statistics, *Population statistics*, Annual Statistical Report 2020.

employed (15 percent of the total employed), females almost work in the informal sector with low quality of jobs and lower wages—more than half of women worked in the informal sector in Egypt in 2018. This is rather accelerating among educated young women, reaching the double among secondary educated young women and almost triple among most educated young female workers between 2012 and 2018 (Amer and Atallah 2019). Otherwise, they end up working for family projects as unpaid workers; with 30 percent of the female labor force in 2019 being unpaid family workers.¹⁶

Although the share of informal jobs for women remains lower than that for men, women have higher tendencies of informality. Likewise, working poverty and lower wages are further prevalent among women compared to men (Amer et al. 2021). Female wagedworkers suffer from a noticeable wage difference compared to males despite the equal average working hours between them in many economic activities or even higher for females in some sectors. For instance, in the ready-made garments and health sectors, the gender wage gap approaches 50 percent and 30 percent, respectively.¹⁷

Figure 2.10 below exhibits the proportion of youth who are not educated, employed nor in training (NEET) by gender, with women are far exceeding men over time. Although this gap has declined from six-fold in 2010 to three-fold in 2017, it is still considered high compared to Turkiye (1.8), Jordan (1.5), in 2019,¹⁸ or the one prevailing among North African countries (2.1 in 2017).¹⁹

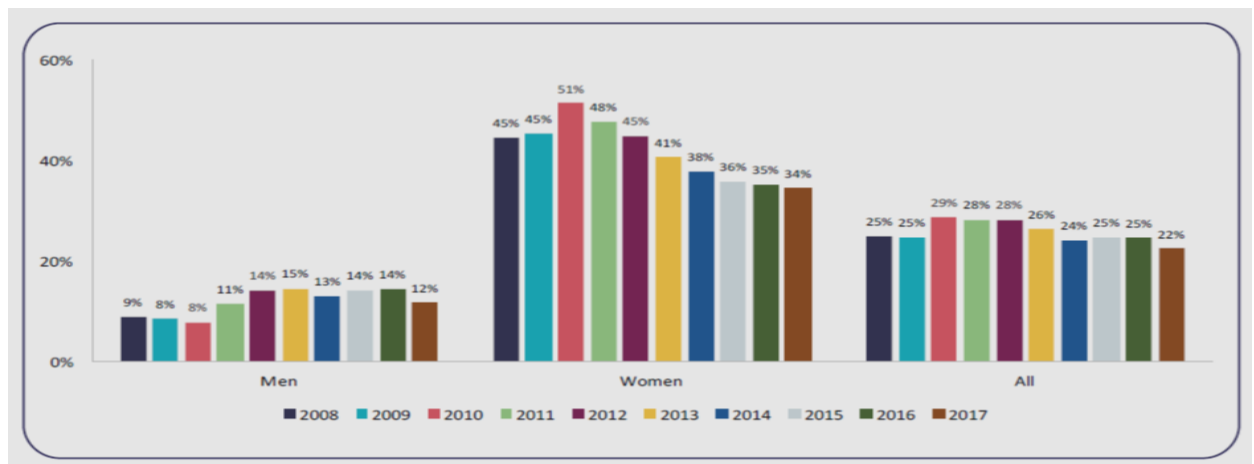
¹⁶ Central Agency for Public Mobilization and Statistics, *Labor Force Survey*, Annual Bulletin, 2020.

¹⁷ Central Agency for Public Mobilization and Statistics, *Employment, Wages and Hours of Work statistics*, 2020.

¹⁸ *World Development Indicators*, World Bank.

¹⁹ Alfani, et al. (2020).

Figure 2.10. Proportion of Youth in NEET by Gender, Ages 15-24, 2008-2017



Source: Amer et al. (2021).

In addition, the role of women is very limited in the decision-making or higher administrative positions. Firms in which females share ownership in Egypt accounts for a low percentage at about 18 percent compared to the MENA countries at nearly 23 percent. The presence of women among company owners and senior managers is also very limited (2.4 percent and 4.9 percent of companies, respectively). Also, women's share of ministerial positions is still limited, not exceeding 25 percent, even after it doubled in 2019 compared to 2017 (Seif El Dien 2020).

The possible reasons behind this vulnerability among women could be found in the legal and institutional framework governing their access to the labor market. The laws controlling the labor market could be unfair for working mothers to a certain extent. They do not, for instance, guarantee that returning mothers should have a position of equal value. Additionally, although the law precludes employers from dismissing a pregnant woman, in practice it lacks any provisions or mechanisms that might explicitly prevent discrimination in hiring against women (Constant et al. 2020).

Furthermore, inconsistency of policies and lack of coordination between country institutions and social security programs targeting these segments contributed to increasing vulnerability among working youth and women. A field study conducted by the Egyptian Center for Economic Studies with the Ministry of Social Solidarity to address the situation of informal workers in Egypt, in five different occupations, has revealed that most of them face difficulty accessing these programs (such as Takaful and Karama) due to their engagement in other social security schemes.

Another concern clearly noted by the study is reluctance of these segments to engage in further government social security schemes even those addressing women and working mothers. There are four main reasons behind this. First, the irregularity of their income to afford a fixed contribution on a regular basis. The second reason is the bureaucracy they face while issuing the needed papers, given their poor level of education. Third, a larger percent of them expressed the un-usefulness and lack of inclusiveness of benefits guaranteed through these programs, as they do not meet their needs, which differed per se from one sector to another and went beyond just a certain financial amount to be provided to them. Finally, most of them reported that having a regular formal job, or even training programs that might facilitate their transition to formal sector, is much more useful and necessary for them rather than receiving regular financial assistance from the government.

All these facts contributed significantly to Egypt's weak performance in the international indices concerned with gender gap measurement. Egypt ranks 134 out of 153 countries according to the Global Gender Gap Index issued by the World Economic Forum 2020, with an improvement of one place compared to 2018. It even ranked sixth in the Arab world after the UAE, Kuwait, Tunisia, Algeria, and Bahrain. Moreover, the World Bank Women, Business and Law report (2020) estimated an average value for Egypt in the composite index at 45.

This indeed is much lower than the global average of 75.2 that several countries completely succeeded in reaching (Seif El Dien 2020).

- *Working poverty*

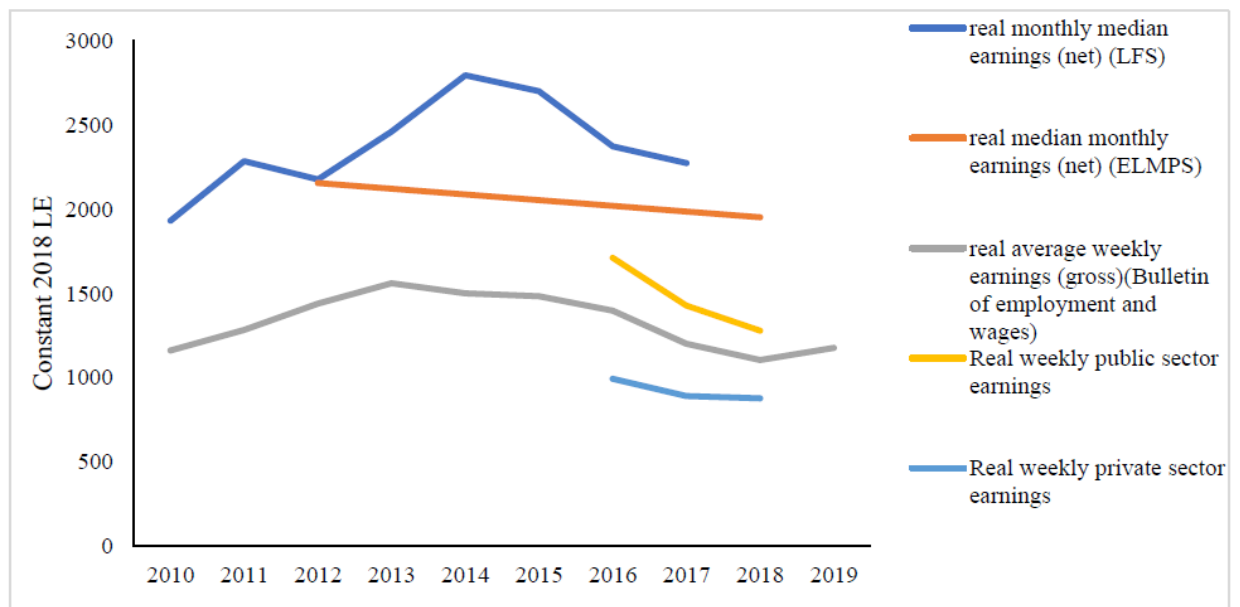
Working poverty is defined as the employed individuals in households whose disposable income is below the regional poverty line (Amer et al. 2021). Empirical findings on formality receding in the Egyptian labor market has significant implications with income distribution. Assaad et al. (2019) found that **poor workers** (the lowest quintile) never had considerable access to formal employment; it rather kept declining but with slight rates. As for the top quintile, workers still have good access to formal jobs, as they progressively move to formal private sector employment with the shrinking in public sector job opportunities. Informality²⁰ reached 45 percent of employment among the poorest men, declining to only 8 percent among the richest.

The increasing magnitude of working poverty is a direct result of more than one factor. First, the devaluation and higher inflation rates the Egyptian economy examined over the period 2015-2018. The price levels jumped rapidly exceeding income levels, leading to a significant reduction in incomes and wages in real terms (Amer et al. 2021; Armanious 2021). The World Bank pointed out the drop of real monthly earnings for all categories of workers in Egypt's labor market specifically in the period 2014 through 2019 (Figure 2.11). Such drop in labor real incomes strongly affirm that lower wages are the key contributor to the rising poverty in Egypt. Studies found that earnings examined a 4 percent decline between 2006 and 2018, and that total and hourly real earnings among all educational levels for both Egyptian males and females contracted. This diminishing in real earnings across public and private sectors accompanied by employment decline reflect how weak or probably unfulfilled and distracted the

²⁰ Outside establishments.

labor demand in the Egyptian labor market is, as will be seen in detail the coming section (World Bank 2021).

Figure 2.11. Real Median and Average Earnings for Different Categories, 2010-2019

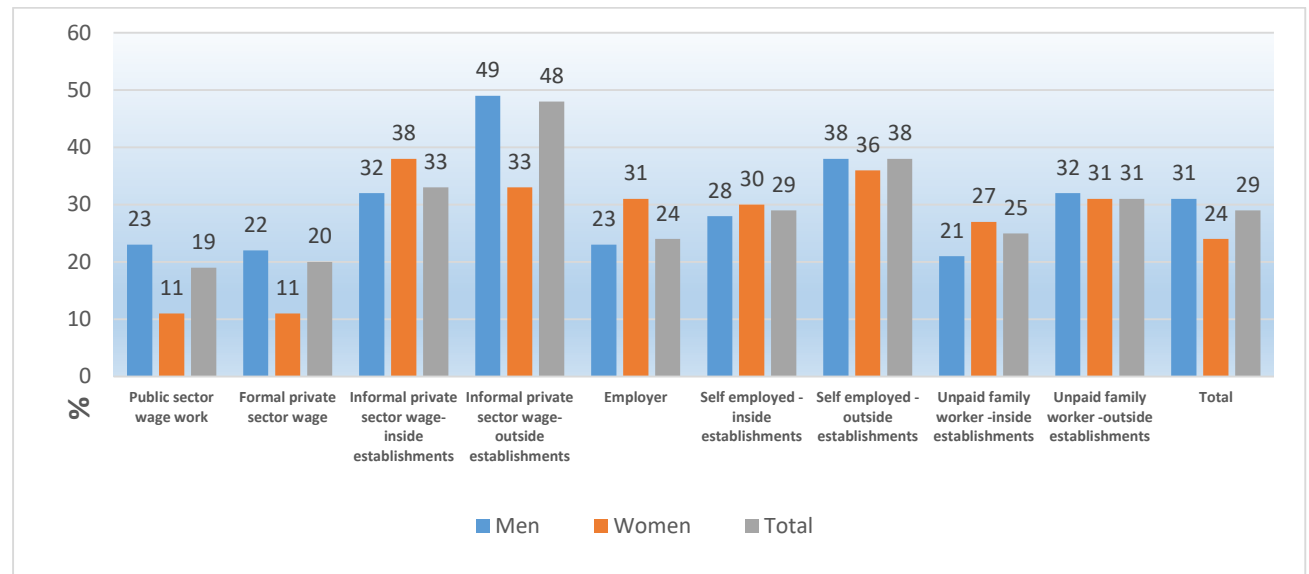


Source: World Bank (2021).

The second factor is the increasing share of informal private sector wage employment inside establishments, especially for women. Overall the employment schemes in Egypt's labor market, these jobs have examined a sharp decline in real wages to their lowest levels over time (Amer et al. 2021; Armanious 2021).

Figure 2.12 below shows this pattern clearly, indicating that the highest percentage of poor workers are employed in the informal sector. Nearly 40 percent of poor women workers are concentrated in the informal private sector inside establishments. Self-employed poor workers also represent larger segments of the vulnerable working poor.

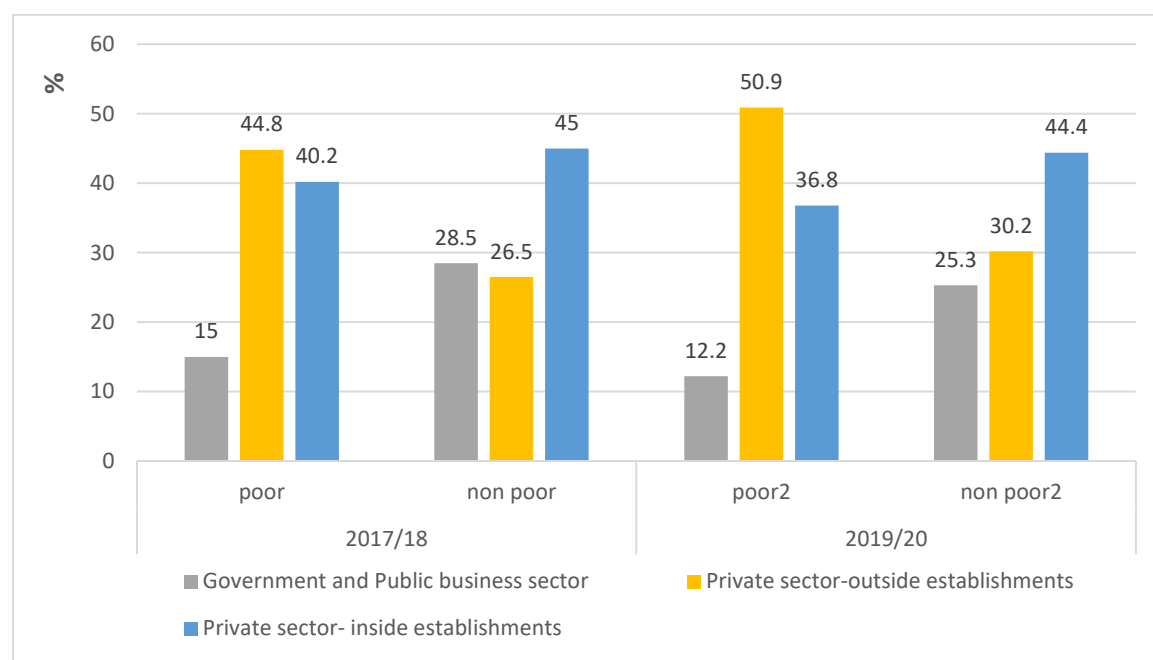
Figure 2.12. Percentage of Working Poor Aged 15-64 by Employment Status, Sector Formality, and Gender in 2017



Source: Amer et al. (2021).

According to results of the HIECS 2019/20, the highest proportion of poor workers are concentrated outside establishments in the private sector by about 45 percent of the poor in 2017/18, increasing to 51 percent in 2019/20. These ratios are more than 1.5 times of those prevailing among non-poor in the same sector. Even inside establishments in the private sector, percentages of poor workers are quite higher; however, they declined slightly in 2019/20, while only 15 percent of poor workers in 2017/18 are in the government and public business sector, decreasing to 12 percent in 2019/20 (Figure 2.13).

Figure 2.13. Working Poor and Non-Poor by Employment Sector, 2017/18 and 2019/20



Source: CAPMAS, HIECS key indicators, 2019/2020.

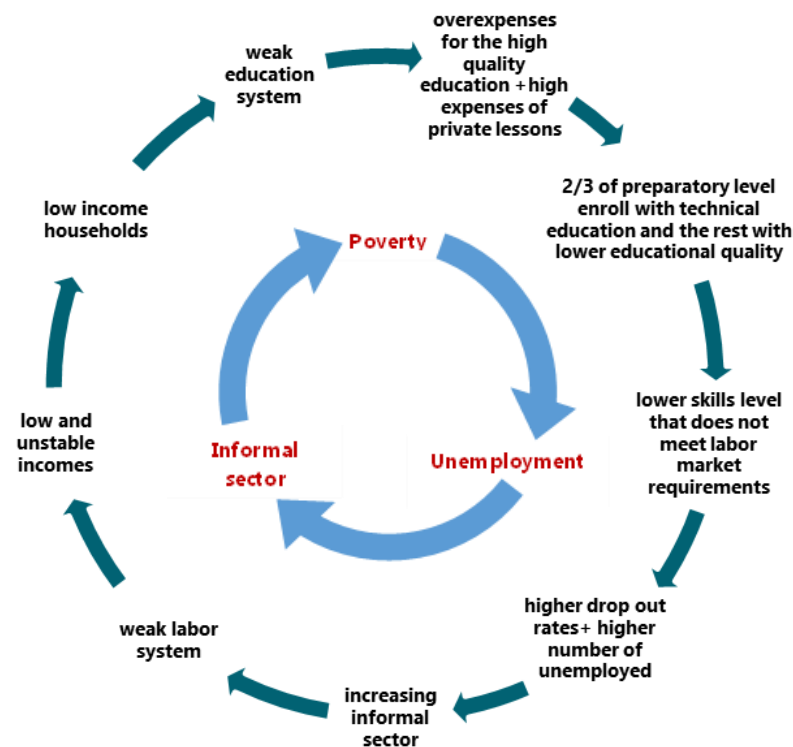
Evidently, working poverty is highly prevalent in sectors that have higher shares of informal workers, such as agriculture, construction, transportation and storage, manufacturing, and wholesale and retail trade. The construction sector, for instance, has almost 91 percent of its employment as informal jobs; this accelerated rapidly since 2016 as demonstrated before. Other service sectors that do not contribute significantly to employment (their poor workers represent about one-third), such as mining and accommodation and food services, and administrative and support services (World Bank 2021).

There are two further key mechanisms behind the increasing incidence of working poverty that are alarmingly characterizing the Egyptian labor market. The first is the demographic structure of the country that is highly characterized by growing dependency ratios, as demonstrated before in the previous section (see Table 1). The second is the lower labor force participation; more precisely, the share of full-time workers as a percentage of the total number of adults in each household. In fact, this pattern is quite alarming, as to reduce the increasing tendency of working

poverty, labor force participation should be growing with dependency ratios shrinking (Amer et al. 2021). Resources for investment in economic development and family welfare become more accessible when the labor force expands faster than the population depending on it. This also allows for higher income, better health and education services and lower cost of food and basic needs (UNFPA 2016). The opposite had been witnessed in Egypt over the past decade.

The above analysis strongly reflects the vicious circle those segments revolve in. Evidence showed that the ability of transition from a vulnerable job to a decent job for youth is very limited, especially if it was their first job. Some rather are pulled down to informal jobs with worse conditions, provided the ‘negative signal’ the employer considers from their initial working status (Azzawi and Hlsany 2022). Figure 2.14 below explains how the weak education system, with its deteriorated level of skills and higher dropout rates, is the starting point towards the weak social mobility that results in an enlarged informal sector as the last resort for their qualifications and background characteristics. Lower wages and quality of informal jobs make it impossible to survive this vicious circle of economic vulnerability (Poverty-Unemployment-Informal Sector).

Figure 2.14. Vicious Circle Resulting from Weak Education and Labor Systems



Source: Bahaa (2022).

The following section further narrows the scope of the analysis to the key sectors contributing to major changes in the structure of economic activities, and the relevant world of work.

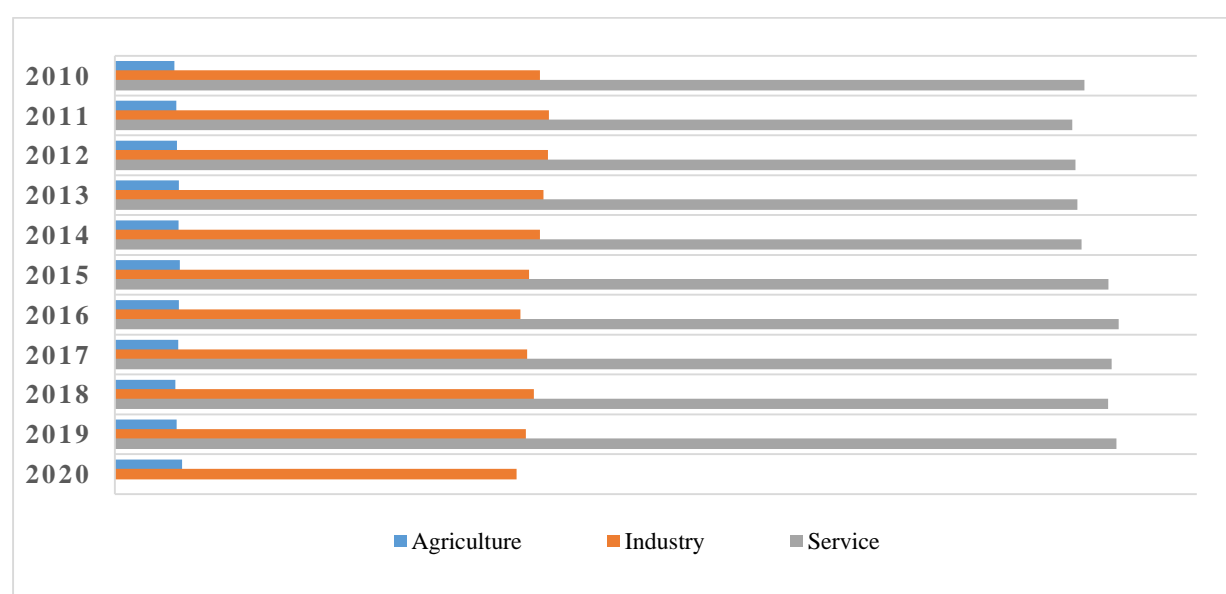
3. Sectoral View in a Nutshell

Over the past three decades, a clear sectoral shift began taking place. Analysis direction has shifted, as the services sector now dominated the bulk of advanced countries' GDP. The roles of both sectors have now switched, with services acting as the primary contributor to GDP, while manufacturing acts as its subordinate (Ghani et al. 2012; Attiah 2019). According to latest data, the services sector contributes more than two-thirds of economic output, attracts more than two-thirds of foreign direct investment worldwide, and provides nearly two-thirds of

jobs in developing countries, with this figure rising to 80 percent in developed economies (WTO 2019).

Furthermore, compared to agriculture, the service and manufacturing sectors accounted for higher weights in the global economy over the past decade. With steady growth rates, the contribution of services to global GDP is more than double the industrial sector and almost 7 times the agriculture share (Figure 3.1).

Figure 3.1. Share of Economic Sectors in Global GDP, 2010-2020



Source: Statista data source.

There is a close interaction between ‘manufacturing’ and ‘services’ activities that makes it difficult for firms to exclusively assign these activities to either sector. The services sector has long been considered a ‘residual’ sector, including all activities apart from ‘agriculture, manufacturing, construction and mining’. It differs widely in its labor intensity, knowledge intensity, etc. (De Backer et al. 2015). While manufacturing offers special opportunities for economies of scale, where technological advance is concentrated and diffused from there to other economic sectors, including the service sector (Attiah 2019).

The OECD coined the concept of the three T's: Technology, Transportability and Tradability which in turn has given rise to a category of progressive services labelled as 'modern' services that are more similar to manufacturing goods in the sense that they can be digitally stored and more easily traded. Given this strong heterogeneous character, service value-added is highly embodied into the output of other domestic industries, especially manufacturing. Domestic and foreign service industries are responsible for about 30 percent to 40 percent of manufacturing exports value added (De Backer et al. 2015).

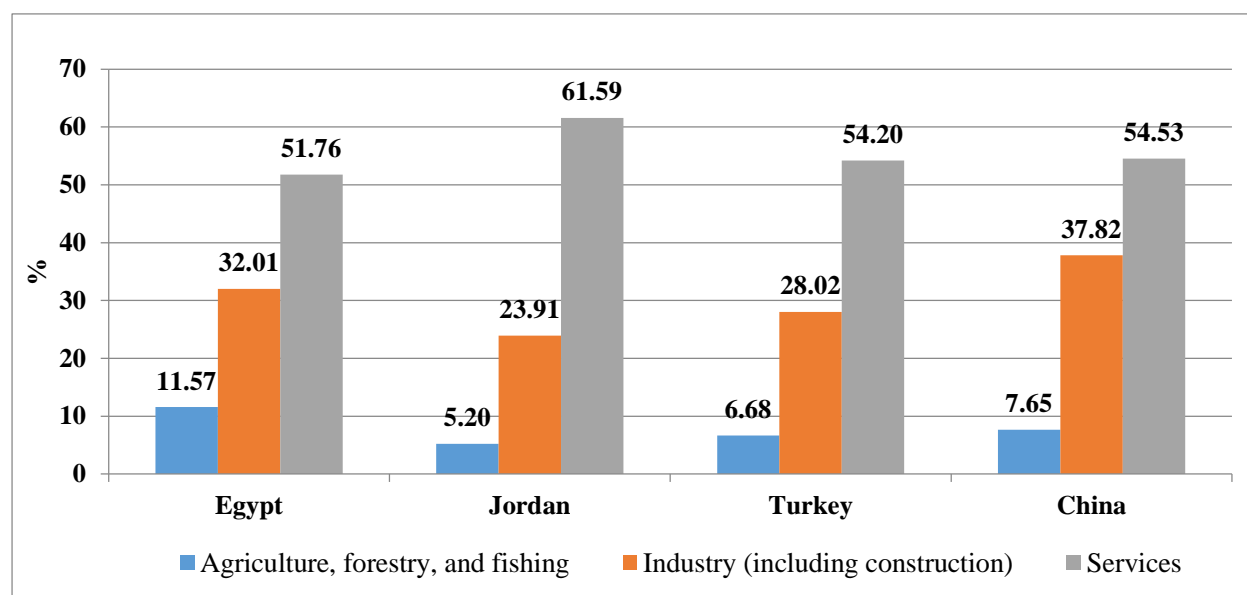
Moving to the Egyptian economy, the next subsection is going to set forth the most significant sectors that contribute most to GDP, value added and employment, as well as to Egypt's national development plans.

3.1. Sectoral composition of the Egyptian economy

To first benchmark the Egyptian sectoral performance, the study has selected the following countries to function as benchmarking economies. Jordan as a neighboring country to Egypt, Turkiye as a competitor in the MENA region and has an economic performance resembling that of Egypt, and China as a role model country and an economic superpower to show how a country with maximum resources compares to Egypt.

Figure 3.2 below demonstrates that sectors contributions to value added (as a percentage of GDP) are almost close within the benchmarking countries. The services sector has the highest share compared to agriculture and industry, contributing almost more than 1.5 times the industry sector and around 5 times more than agriculture sector in Egypt. This structure is actually very close to the Chinese economy.

Figure 3.2. Sector Value Added as Percentage of GDP in 2020, Egypt versus Benchmarking Countries

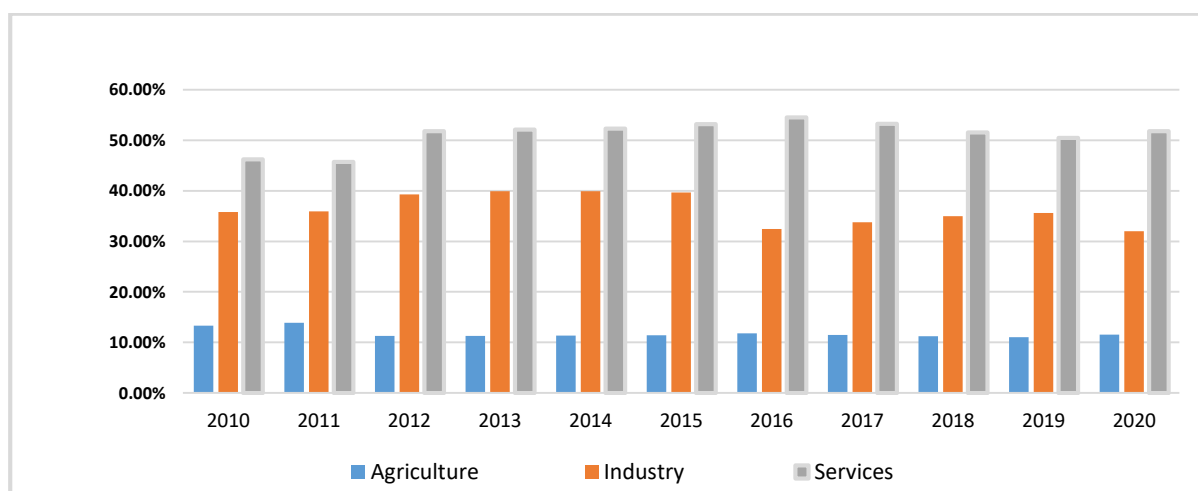


Source: World development Indicators, World Bank.

Figure 3.3 below shows that sectors contributions to GDP were changing over the past decade in favor of the services sector against industry and agriculture sectors. However, the decline was seen in the industrial sector. Likewise, value-added contributions by sector follow the same pattern with more than half going for the services sector compared to 35 percent for industry and only 11 percent for agriculture.²¹

²¹ World Bank, *World Development Indicators*.

Figure 3.3. Sectors Contribution to GDP in Egypt, 2020



Source: Statista data source.

Commodity and social services received the highest chunk, accounting for two-thirds of the public investment budget in the year 2019/2020. It made up nearly 31 percent increase in GDP growth, becoming a strong driver to Egypt's economic growth. Recent development challenges further pushed the Egyptian investment directions towards services sectors to improve Egypt's economic performance, especially in the wake of COVID-19 pandemic and its consequences. Among prioritized sectors in the socioeconomic national plan for the year 2022, services came first, including health, education, tourism, communication, and trade.²²

3.2. Key Indicators of the Egyptian Job Market Analyzed at the Sectoral Level

As labor demand is driven by demand on goods and services, workers used to represent a strong driver of sector growth across different economic activities. Economic activities, though, are broadly grouped according to nature of the

²² Ministry of Planning and Economic Development, *socioeconomic development plan 2021/2022*.

activity and relevant skill level of workers. However, these two determinants change according to age, depending on the newly emerging levels of technology and structure of living generations. The global known classification of activities groups them into primary activities done by ‘red-collar’ workers, secondary activities performed by ‘blue-collar’ workers, and tertiary activities with white-collar jobs.

As demonstrated previously, over time the role of the service sector began expanding worldwide, gaining a higher share in global output, adding more value to the global economy, creating more jobs and contributing further to the new world of work. Higher services were thus classified into quaternary and quinary tertiary activities whose jobs are ‘gold-collar’ professions.²³

The Egyptian economy merely occupy white-collar and blue-collar workers across the different sectors and economic activities. To understand the sectoral structure of the labor market in Egypt, and how it operates, the following subsection addresses few determinants that are believed to act as key drivers for sectoral economic growth. These determinants are sector contribution to employment and job creation, extent of informality and lack of decent jobs, labor productivity, employment of blue/white collar workers, skill mismatch and gender distribution in each sector.

3.2.1. Contribution to employment & job creation

²³ Quaternary activities are concerned with the ‘knowledge sector’. They are not necessarily localized by a market. The other special classification of services is that focusing on creation and re-arrangement of new and existing ideas, known as quinary activities. Jobs here are often referred to as ‘gold-collar’ professions, as they are highly paid skills, to the extent that their importance in the structure of advanced economies far outweighs their limited numbers (De Backer et al. 2015).

Empirical literature on employability and job creation has revealed different results explaining the relationship between nature of the activity and/or relevant productivity and job growth. Recent evidence on job growth by industry suggested that labor is being added by already labor-intensive activities (Assaad et al. 2020). Using association models between job growth and private firms' characteristics in Egypt over the period 1996-2017, Assaad et al. (2020) suggested that jobs are created in less productive and not high-capital or highly productive activities.

Kamal (2018) further identified output and employment multiplier²⁴ effects at the subsector level of manufacturing in Egypt, with more details on service subsectors. An important conclusion of the analysis is that most services subsectors gain their high rank from direct and induced employment, with little contribution of backward interlinkages, except for food and accommodation services.

Figure 3.4 below shows that the services sector is the largest labor absorber compared to other sectors in Egypt and all other benchmarking countries as well. It employs almost double the industrial sector's share since 2011. It also shows that the increase in the services sector's contribution to employment over time, especially trade services, came on the expense of the agricultural sector.

Remarkably, the Egyptian employment structure by activity is largely similar to the Turkish counterpart and varies slightly from the Chinese labor economic structure.

²⁴ Output and employment multipliers are useful for estimation of the effects of exogenous changes in demand for the output of a given sector on the other sectors of the economy.

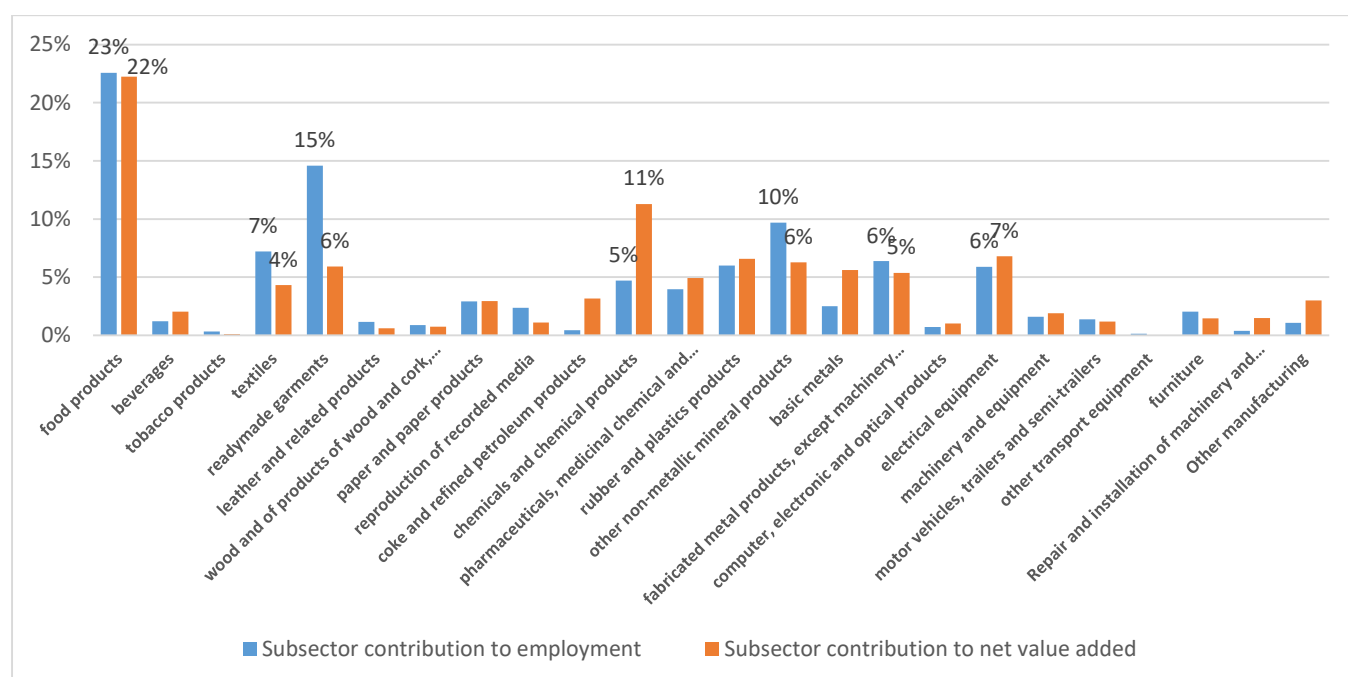
Figure 3.4. Sectoral Contribution to Employment (average distribution of total employment), 2011-2019



Source: International Development Indicators, World Bank.

Figure 3.5 below further indicates the manufacturing industries contribution to value added and employment in Egypt according to the latest industrial production census in 2017. It points out that only two subsectors dominate the employment shares, namely food and readymade garments industries at 23 percent and 15 percent of total employment of manufacturing industries, respectively. As for value added, food and chemical products add the most to economic activity at 22 percent and 11 percent respectively, in the private sector. In fact, almost all industries have comparable shares of both employment and value added overall the sectors, except for the readymade garments that has employment share 2.5 times its contribution to total value added, and the chemical industries that add value to the total manufacturing industry double its contribution to employment. This reveals the labor-intensive nature of the former and capital-intensive nature of the latter.

Figure 3.5. Manufacturing Industry Contributions to Employment & Net Value Added in the Private Sector in 2017



Source: Author calculation based on CAPMAS, *Annual Statistical Bulletin of Industrial Production for Private Sector*, 2017.

On the other hand, a large-scale field study conducted by ECES on the “Future Needs and Actual Labor-Related Problems” in the manufacturing industrial activities in 2019²⁵ revealed that small and medium enterprises in the manufacturing industry have more capacity to generate job opportunities. They enjoy a labor-demand growth rate of 2.04 percent and 1.92 percent respectively, compared to only 0.89 percent in large enterprises. For the current demanded jobs, 70 percent were for assembly and machinery workers, especially in the readymade garments industry, which demands 50 percent of the total needed jobs, followed by the engineering industries at 17 percent and chemical industries at 12 percent.

²⁵ [A Four-Dimensional Roadmap for Leveraging Technical and Vocational Education and Training in Egypt.](#)

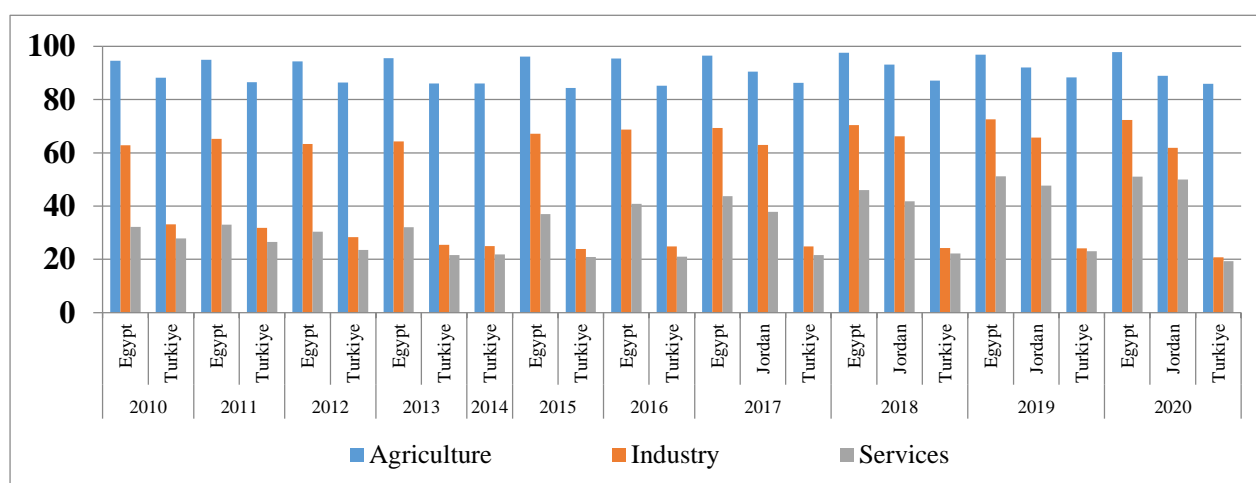
As a future employment absorber, readymade garments and engineering industries are still expected to create more jobs in the future, with closer shares at about 29 percent and 25 percent, respectively. However, large enterprises have much more tendency to increase employment in the future. They made up 46 percent of the total expected job opportunities between 2019-2024, which is apparently due to the more solid future visions and orientation these enterprises have towards planned production levels and targeted employment growth.

3.2.2. Informality in jobs

Amid the past decade, nearly 70 percent of jobs created in Egypt were generated in small informal businesses (World Bank 2014). A further sectoral analysis on Egypt's economic establishments and labor market highlighted that jobs in the Egyptian economy were created in industrial regions with small and informal firms or employment. This is consistent with an economy in which the informal sector is playing a labor-absorbing role instead of having labor demand being driven by large, dynamic, formal firms (Assaad et al. 2020).

Figure 3.6 exhibits the increasing share of informal employment in Egypt over the last decade. Informal jobs jumped to more than two-thirds the industrial sector, from 62 percent in 2010 to 72 percent in 2020. Apparently, the increase in the share of informality is higher in the services sector, dominating more than half the sector from 32 percent to 51 percent throughout the same period. Conversely, Turkish informal employment is shrinking in both sectors, representing only 20 percent of the industrial sector and 19 percent of services in 2020. Although informal jobs in the agricultural sector have witnessed a slight increase, they are already massively high (growing from nearly 95 percent in 2010 to 98 percent in 2020) in Egypt compared to 88 percent in Türkiye in 2010, declining to 86 percent in 2020.

Figure 3.6. Informal Employment by Economic Activity, 2010-2020



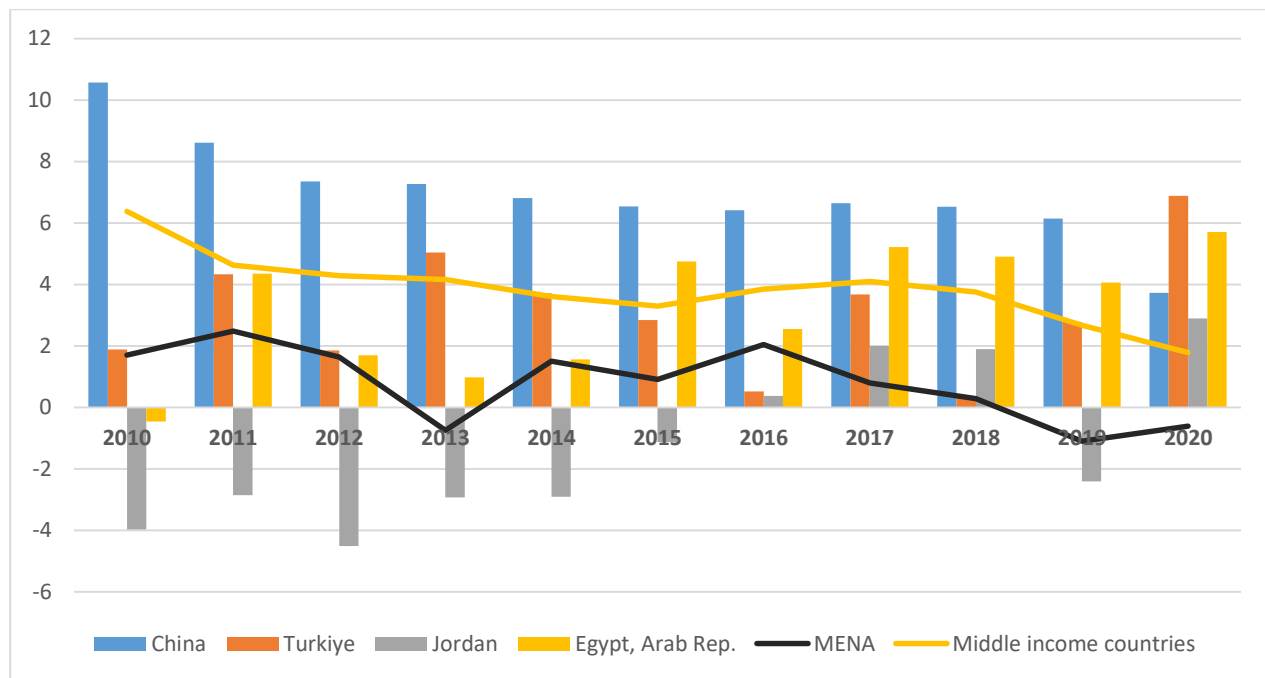
Source: ILO estimates.

3.2.3. Labor productivity

Labor productivity, measured as real GDP per worker, in Egypt averages 3.2 percent per year.²⁶ This growth rate approaches the rate prevailing in middle-income countries (3.9 percent), and far exceeds the average for MENA region (0.8 percent). However, compared to the benchmarking economies, annual labor productivity growth in Egypt, on average, is almost the same as that for Turkiye (3.1 percent), about 4 times that in Jordan (-1.2 percent), and nearly half that in China (6.9 percent). As seen from Figure 3.7 below, labor productivity is almost increasing over time but with diminishing rates.

²⁶ Annual average growth between 2010 and 2020, based on World Development Indicators, World Bank.

Figure 3.7. Annual Labor Productivity Growth in Egypt, Benchmarking, Middle-Income Countries and MENA Region, 2010-2020



Source: Author calculations based on World Development Indicators, World Bank.

Labor productivity varies across sectors; mining and extraction is a noticeable exception whose labor productivity on average stands at high levels compared to international standards, given the low share of labor employed and the sector's high capital intensity. While other sectors such as public utilities, construction, finance, insurance, and real estate perform particularly poorly by international standards (Morsy et al. 2014).

Recent literature revealed that labor productivity typically ranges between 0.02 and 0.4. While the ICT and finance sectors are noticeably higher in labor productivity, construction and transportation, trade and utilities are the least productive, even though the total employment share of ICT and finance are not expanding. In accordance with employment and productivity data, there is an obvious shift in labor force from low-productivity agriculture in general to low-productivity construction and services. Thus, sectoral shifts do not tend

to contribute to hefty gains in terms of overall productivity when it comes to employment (Fedi et al. 2019).

3.2.4. Blue vs white collar workers

Although the largest percentage of workers are blue-collar workers, available data on their distribution by sector are significantly rare. Nevertheless, one might infer some findings from the employment distribution figures for each occupational profession, as per CAPMAS classification. Table 4 below indicates that blue-collar workers account for more than half of the employed persons, followed by professionals and managers, and then white-collar workers.

Craftsmen represent the largest group of the blue-collar category by about 38.4 percent and of total professions by 19.5 percent. Farmers and agricultural workers follow them with nearly 29.7 percent of total blue-collar category, then workers in factories by about 22.6 percent, and finally workers of ordinary professions. As for white-collar workers, the services sector absorbs about two-thirds of them.

Obviously, white-collar employment distribution of different professions in Egypt points out that the share of specialists and those with scientific professions are almost the same as that of legislators and senior officials. In fact, this reflects another important imbalance in the labor market, as scientific professions normally have a greater weight and representation in the employment structure of any economy.

Table 4. Percentage Distribution of Employed Persons in the Main Professions, 2020

Main Professions	Share of Profession in total Occupational Category	Share of profession in total professions
Legislators, senior officials, and managers	40.4	8.0
Specialists and scientific professionals	59.6	11.8
Professionals and Managers	100.0	19.9
Technicians and associate professionals	23.7	6.9
Clerks etc.	16.1	4.7
Service and retail store workers	60.3	17.7
Total White collar	100.0	29.3
Farmers, agricultural workers, and specialized fishing workers	29.7	15.1
Craftsmen etc.	38.4	19.5
Factory operation workers, machine operators and production assemblers	22.6	11.5
Ordinary job workers	9.2	4.7
Total Blue Collar	100.0	50.8

Source: Author calculations based on data from the Central Agency for Public Mobilization and Statistics, *Annual Labor Force Survey Bulletin* 2020.

According to the latest ECES labor demand analysis, first launched in November of 2021 jointly with the National Bank of Egypt,²⁷ the most productive sectors for blue-collar jobs, were marketing and sales, services, tourism and hospitality, manufacturing, and transportation, during

²⁷ It is the first detailed analysis of its kind addressing the demanded jobs in the Egyptian labor market, including all details concerning required jobs nationwide, with the aim of contributing to achieving compatibility between the skills of those wishing to work and what companies are seeking through a full understanding of the demand nature <https://www.eces.org.egDemand-in-Egypt-Labor-Market>

2021/2022.²⁸ While the least job generators were information technology and communications, and the building and construction, and education sectors.

As for the white-collar workers, they were highly demanded during the same period in customer service, information technology/software development, sales and retail sectors. The big decline, however, occurred in the human resources; creativity, design and art; and medicine and health care sectors.²⁹

Overall, the most important sector that achieved positive growth is marketing and sales, which is at the same time the largest employer, as it produces alone 42 percent of the total blue-collar jobs.

3.2.5. Skill mismatch

One of the common definitions of skill mismatch in the labor market is the over-education level of workers that classifies them as “labor underutilization,” particularly “underemployed”. This category of workers, although employed, have higher educational attainment than their occupation requires. According to Amer et al. (2021), skills-related underemployment in Egypt, in 2017, was particularly predominant in some sectors, namely, information and communications, finance and insurance, and other service activities such as real estate, professional services and administrative and support service activities. Between 2009 and 2017, there was an increasing incidence of skill mismatch for both men and women across all economic sectors. The rise was more evident in the construction, finance and insurance, and information and communications sectors, as well as manufacturing for women.

This can be explained by the fact that clerks, sales workers and demonstrators, and machine/plant operators were the fastest growing occupations among

²⁸ The first launch included labor demand data analysis through the period July-September 2021 as the first quarter.

²⁹ [https://www.eces.org.eg/EventDetails-Labor-Market-\(4th-Quarter-October-2022\)](https://www.eces.org.eg/EventDetails-Labor-Market-(4th-Quarter-October-2022))

workers with a tertiary education during this time (at a rate of 10 percent annually), as these careers involve a level of expertise that is typically attained with less than a university education. Apparently, industries with increasing skill mismatches witnessed an excessive growth in these vocations (Amer et al. 2021).

More specifically, the ECES survey of “Manufacturing Sector Future Needs and Actual Labor-Related Problems” revealed that one of the most prevalent problems firms face while searching for workers is the skill shortage, i.e., difficulty finding suitable workers for the offered jobs, especially technicians and machinery and assembly workers, in addition to the higher turnover rate between jobs and lower labor productivity level. Mostly, firms have stated these problems in all sectors with different significances. For instance, lower productivity comes on top of problems faced by almost all sectors, while readymade garments, food industries, chemicals, pharmaceuticals, engineering, and furniture industries found that difficulty to find “well matching workers to the offered jobs” more problematic than high turnover. Prominently, all sectors attributed these frequent problems to lack of required skills (53.6 percent), absence of suitable training after graduation (51.1 percent), poor educational outcomes (40.2 percent), and absence of culture and value of work (52.2 percent), in addition to other less frequent reasons.

Most recently in 2022, almost 40 percent of blue-collar jobs required a higher education level, which reflects a clear announced mismatch and waste of human resources. However, labor demand on highly qualified people appears frequently in areas with administrative and service nature such as internal sales, insurance sales, secretarial and reception, warehouse management, branch management and service clients. While labor demand for middle and

lower-middle-level education is concentrated in transportation and delivery, food and beverage delivery, security, crafts, and production workers.³⁰

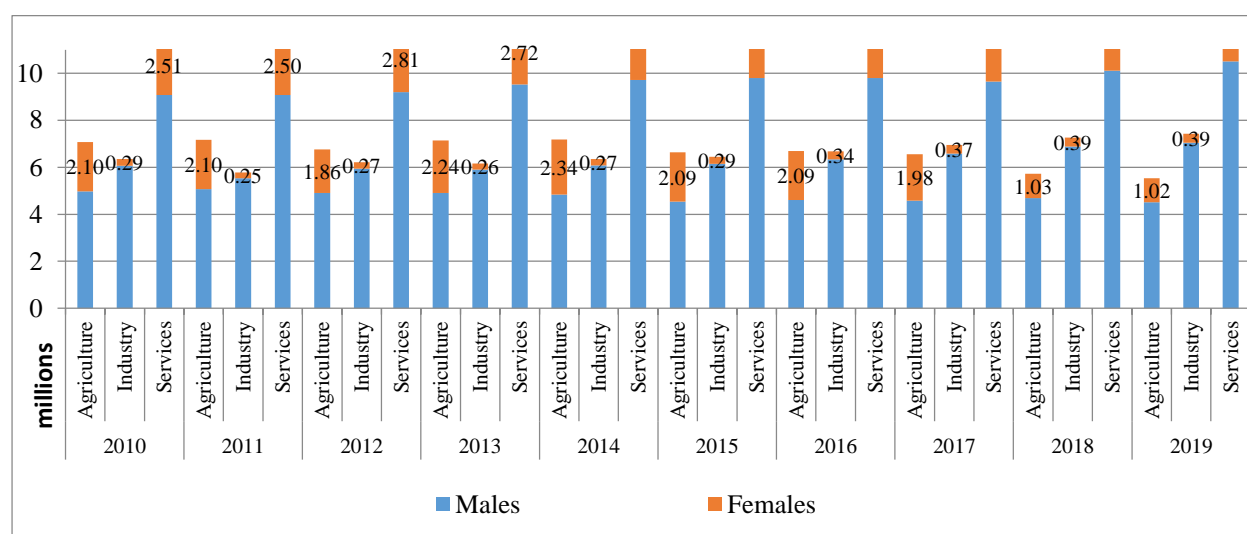
3.2.6. Gender distribution by sector

Female participation in the Egyptian economy is remarkably modest compared to male workforce across the economic activities. However, agriculture and public administration activities are typically dominated by women namely, education, health, and social services, while they are least represented in transportation and storage, manufacturing, construction as well as hospitality and tourism (Fedi et al. 2019; World Bank 2021).

Figure 3.8 below shows the same general pattern. Agriculture and services have the largest share of working women since 2010, most probably in their own family businesses, as 26.4 percent of working women in rural agriculture are unpaid workers (Barsoum et al. 2014). Whereas gender gap is increasingly widening in the labor market across sectors over time, the highest total gap is seen in year 2019, while the lowest was in 2011. Gender gap is observed at much higher rates in the services and industrial sectors. The gap is almost constant in the services sector, between 6-7 million workers, while increasing at a higher rate in the industrial sector.

³⁰ [https://www.eces.org.eg/EventDetails-Labor-Market-\(4th-Quarter-October-2022\)](https://www.eces.org.eg/EventDetails-Labor-Market-(4th-Quarter-October-2022))

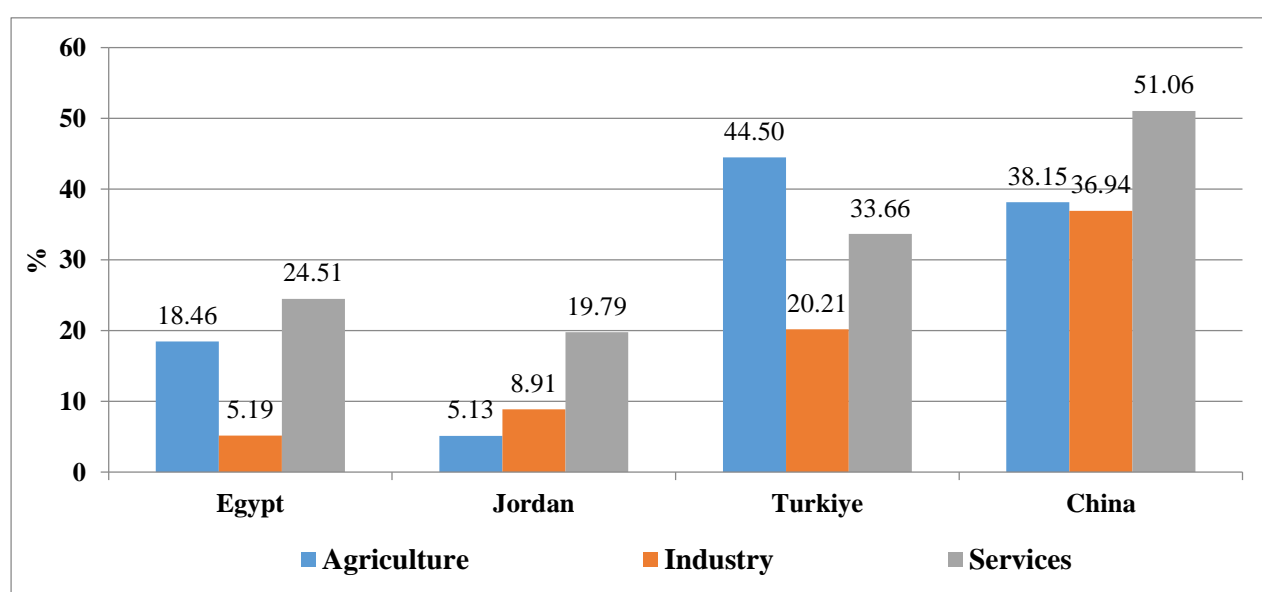
Figure 3.8. Female Employment by Sector in Egypt, 2010-2019



Source: ILO estimates.

Compared to benchmarking countries, China and Turkiye have a higher female representation in all sectors with double or more, compared to the Egyptian women workers especially in industrial sector (Figure 3.9).

Figure 3.9. Working Females as Percentage of Total Employment by Sector in Benchmarking Countries, 2019



Source: ILO estimates.

After analyzing labor market dynamics and sectoral decomposition over the past decade, the following section will shed light on important insights of the future of work, global mega trends, and their emerging dynamics of labor market. This will be followed by the key elements of success derived from the best practices, and where Egypt stands in coping with such a new system of work.

4. Future of Work: Digitization and New Dynamics of Labor Market

The term "Future of work" refers to major economic and social changes that were directly reflected on supply and demand sides of the labor market, and completely changed its features, not only in terms of technology, but also the level of transformation and readiness of the labor market to respond to these changes. This transformation is reflected through several mega-trends. Most importantly, the information revolution and its impact on re-arranging countries' priorities worldwide, globalization and technological booms, the Fourth Industrial Revolution and how it contributed to shifts in the balance of global economic power, and finally the demographic development.

There are three patterns that reflect global changes in labor market trends, which automatically led each other to emerge. The first pattern concerns recently discovered technologies that are getting more and more complex day after day, which in turn led to the loss of a substantial number of jobs, and the emergence of other new jobs, which is the second pattern. The final pattern is the new structure of skills necessary to practice these new jobs. It is estimated that machines may replace 85 million jobs by 2025, while 97 million new jobs may emerge to be more adapted to the new division of labor between humans, machines, and algorithms (Zahidi 2020). This type of substitution is called "job disruption," and is offset by the creation of new job opportunities in new fields known as "Jobs of

Tomorrow". The most important element that distinguishes the effect of global changes this time compared to previous waves is that the skill gap could no longer be overcome by training or compensating job losers due to technological progress.

The final impact of new technology dominance on the labor market depends on several factors; most importantly, the types of innovative technologies and their degree of suitability to existing industries. The ability of sectors to localize technology and generate job opportunities that offset job losses resulting from automation. The level of skills, which determines the gap resulting from the shift from original jobs to new ones. Finally, the percentage distribution of workers between white and blue-collar jobs (WEF 2021).

4.1. The “Integrated System of Work” as the main driver of change

Several factors are driving the importance of the integrated system of school to work transition towards a better future of work. Most importantly: the fact that employment and labor market revitalization play a vital role in any country as a primary source of production. The acceleration of mega global trends, such as leaps in emerging technologies and the demographic shift. The changing nature of jobs that accompanied the digital and industrial technology revolutions, the educational skills and the level of readiness required. COVID-19 pandemic structural break which revealed the unfavourable situation of the labor market and the “New Norm” that has consequently arisen. Finally, the chronic structural and institutional deficiencies facing the Egyptian labor market, which require raising Egyptian readiness to face these accelerating developments, exerting more effort to absorb new models, and dealing with labor market transformation (Bahaa 2022).

In fact, readiness of countries for labor market developments varied. Some countries quickly realized these transformations and took steps to confront the technological disruption of jobs, while others recently realized the need to raise readiness in the face of these transformations to reduce job losses, which has been accelerated by the spread of the COVID-19 pandemic. Another set of countries is still looking at how to compensate for the losses. Three countries have made progress to varying degrees. China as a model for a leading country, Turkiye as an example of a competitor country with Egypt, and the United Arab Emirates as a neighbouring country to Egypt. Country experience revealed that there are three key pillars towards adjusting to technological changes in the labor market directly and other aspects of economic activity indirectly. These pillars are: 1) Institutional framework, 2) Information framework, and 3) A third framework related to the monitoring and evaluation system, necessary to keep pace with technological development and ensure its sustainability (Bahaa 2022).

These three pillars represented the vertices of the “success triangle” upon which the strategies of the countries that have realized tangible achievements in this regard were based. It is striking that these countries did not focus on developing their labor markets as much as they focused their efforts mainly on developing the mother system, which is based on developing the education system, the updated technological infrastructure serving it, and complementing all of this with smart technological cities. This resulted in an automatic generation of suitable job opportunities and a gradual adaptation of the labor market to the new normal. Hence, the success of countries came as a direct result of the comprehensive and intelligent view of the transformation system.

Box 1 below presents the most important elements of success drawn from the three previously mentioned country experiences.

Box 1. Elements of success based on country experiences

Elements of success based on China, Turkey, and UAE experiences

- An Executive plan under the direction of the central government, engaging civil organizations and educational departments in the implementation process.
- Beginning with the inclusion of new skills in higher education institutions first - especially in the majors of teaching and pedagogy - then to basic levels of education.
- Involving youth in the institutional management of the technological development process.
- Foreign partnerships with more than one country to localize new technologies and skills.
- Upgrading the level of technical education to international levels in accordance with foreign trade requirements.
- A strong, comprehensive, and unified database at all educational levels since childhood.
- Monitoring and Evaluation units to follow up on the system on a regular basis.
- Achieving an equal level of opportunities between different educational administrations.

4.2. Where Does Egypt Stand in Coping with the New Global Norm?

The state's readiness to face future demands is based mainly on the status of its education and labor systems, how consistent the relationship between them is, and the degree of flexibility and dynamism that allows for rapid engagement with the latest changes. This is mainly related to three pillars, namely: The institutional framework, the information framework, and the monitoring and evaluation framework.

To take a deeper look at the ability of the Egyptian labor market to cope with global changes and new patterns of employment, Table 3 below shows briefly

where Egypt stands regarding the above success factors in terms of the three pillars.³¹.

Table 3. Egypt's Position Against the Elements of Success

Elements of Success	Egypt's Position
Dimension 1. Coherent and Effective Institutional Framework	
1. Proper design ensuring good governance of development plans	<ul style="list-style-type: none"> Fragmented affiliation among many bodies and authorities, merely ministries with different specializations for the same file, including: <ul style="list-style-type: none"> Huge number of councils and projects that lack coordination, some of them not being addressed by the relevant legislation. Centralization, overlap, nonbinding strategic frameworks and socio-economic development plans. Outdated capacities and personnel versus emerging qualifications and expertise.
2. A unified and comprehensive implementation plan in its objectives and diverse in time-frame	<ul style="list-style-type: none"> Variety, multiplicity and inconsistency of time and technical frames of different interrelated plans and strategies, led to overlapping and unclear priorities.
3. Consistent and sustainable financial plans	<ul style="list-style-type: none"> Financial centralization, that is, if the ministry needs more funding for development than approved by responsible ministries (MOF and MOPED), it relies on other own resources! Minor education budget, (not exceeding 2.7 percent of GDP and about 74 percent of it is allocated to wages and salaries).
4. Comprehensive system for teacher development	<ul style="list-style-type: none"> Weak teacher development system, outdated curricula in faculties of education. Placing teachers among the bottom specialization faculties with very low salaries and poor career path after graduation

³¹ More details on Egypt's "future of work" and its position are available in (Bahaa, 2022).

Dimension 2. Information Framework	
1. Sustainable localization of new skills	<ul style="list-style-type: none"> • Lack of sustainable projects that are concerned with localizing skills, such as Mubarak-Kohl, due to: weak funding, limited implementation, not addressed by laws and regulations, and not binding on the private sector, as in successful developed countries.
1. Comprehensive and up-to-date development of educational content	<ul style="list-style-type: none"> • Weak educational curricula in the basic levels and lack of an electronic component, especially in government schools. • Ineffectiveness of the academic performance evaluation system for students, on which the future of students in the labor market depends.
2. Unified Educational System	<ul style="list-style-type: none"> • Huge differences and great disparities whether between regions or the types of education itself, in terms of quantity and quality.
Dimension 3. Monitoring and Evaluation System	
I. A unified and comprehensive database for the educational levels, linking it to labor market data	<ul style="list-style-type: none"> • No unified, comprehensive, and updated database for the educational levels or the labor market.
1. Comprehensive system for monitoring and evaluation at the National level	<ul style="list-style-type: none"> • No follow-up and evaluation system of development plans objectives at the ministerial level.
2. An objective evaluation mechanism to achieve good governance	<ul style="list-style-type: none"> • Individual evaluation of performance by ministries through KPIs set at the beginning of the planning process.

Source: Bahaa (2022).

5. Key Findings

The objective of this paper was to evaluate Egypt's labor market performance over the past decade to identify the key constraints it faces and derive the policy maker attention towards the right directions of potential improvements. Egypt's labor market situation analysis came up with a set of constraints that differed in their level of influence in the labor market. These constraints will be assessed according to two criteria. First, the extent to which each constraint influences the Egyptian labor market as reflected in the analysis of the status quo and relevant literature review. Second, the potential positive impact of corrective policy intervention on improved functioning of the labor market.

The following subsection will briefly conclude the previous analysis about the Egyptian labor market dynamics and sectoral analysis and give the key messages. Table 5 will follow to prioritize and arrange the top 10 constraints according to the above criteria.

5.1. Concluding Remarks and Key Messages

- Although a significant portion of Egypt's labor market weak performance is attributed to external shocks and unfavorable economic policies, the structural deficiencies characterizing Egypt's labor market have further revealed its weakened situation and fragility in response to any economic downturns or crises over time. Continuous higher unemployment rates with an inverted pyramid of unemployment structure, because of the simultaneous excess supply and demand of labor, and along with wider skill mismatch and gender gap, all reflect deep institutional weakness and economic vulnerability as the most important predominant constraints currently facing the Egyptian labor market.

- Moreover, lower employment elasticity with respect to economic growth reveals a negative structural shift in the Egyptian economy skewing towards lower productivity sectors with more dependence on services and less credit to private sector.
- A direct result of all these was the booming of the informal economy and informal jobs with lower irregular wages and higher vulnerability to economic downturns, representing an additional subsequent constraint.
- The speeding-up of technological transformation has increased the importance to fill the gap between productive sector needs and labor supply of skills, bearing in mind that nontraditional actions that used to be undertaken throughout the previous waves of technological progress are no longer applicable.
- The best model to cope smartly with global trends, according to best practices, is building up a comprehensive framework for labor market transformation. This comprehensive framework should be built on the three pillars of “education, technology, and institutional structure. Such smart parental system is expected to result in an automatic generation of suitable jobs and a gradual adaptation of the labor market to the new normal.

The following list includes the top 10 predominant constraints as concluded from the status quo analysis and relevant literature review. Institutional weakness and skill mismatch are found to be the deep running roots for the subsequent challenges facing the Egyptian labor market. Table 5 below arranges the constraints from the most to the least problematic and provides the rationale behind this classification.

5.2. Top 10 Predominant Constraints

1. Institutional constraints
2. Skill mismatch
3. Informality

4. Gender gap and women vulnerability
5. Wage distortion
6. Contradicting and biased legislative framework
7. Serious weakness in TVET system
8. On-the-job-training (OJT) replacement to education
9. Supply driven labor market
10. Higher and chaotic labor migration

Table 5. Labor Market Top 10 Predominant Constraints by Order of Priority, and Rationale

Rank	Constraint	Rationale	
		Importance (status quo)	Impact of dealing with it
1	Institutional constraints	<ul style="list-style-type: none"> • Egypt has a very weak institutional framework governing the Egyptian labor market that failed to respond to structural challenges it faced for decades. • Egyptian labor market faces a significant institutional mis-coordination between the three main players in the Egyptian labor market: the government sector, the private sector, and labor unions.³² • Affiliation is fragmented between many bodies and authorities with different specializations for the same file. • Each ministry develops its own sectoral strategy, ending up with several conflicting development strategies. • Development initiatives are associated with separate committees that do not meet periodically and are centralized inside the ministries. • The institutional and personnel capacities are generally outdated. • Plans and strategies of relevant ministries suffer from variety, multiplicity and inconsistency of time and technical frames. 	<ul style="list-style-type: none"> • Strong driver of change, in which reforming the institutional framework and insuring consistency between policies and government institutions automatically lead to other reforms, thus having a broader impact (domino effect). • Developing the parent system of education-labor will potentially result in an automatic generation of suitable job opportunities and a gradual adaptation of the labor market to the new norm and better future of work. • Coordination between various responsible authorities prevents conflicting, overlapping, and fragmented development plans and unsustainability. This also ensures consistency between different policies targeting the same objective. • Starting to deal with institutional weaknesses allows for³³: <ul style="list-style-type: none"> ○ building momentum with quick wins before proceeding to tougher changes, especially that tougher institutional changes—likely to face a lot of resistance—are easier to approach after seeing the positive fruits of the first steps.

³² The International Labor Organization included Egypt in the short list of countries that violate workers' rights, aka blacklisted, for the fifth time in June 2019 due to non-compliance with international treaties signed between Egypt and the International Labor Organization. Since 2008, Egypt was removed from the list only twice, the first in 2011 with the beginning of allowing independent unions. Egypt returned to the list in 2012, when reversing the decisions taken after the revolution, due to a violation of the "Co87," which Egypt signed when joining the organization more than 50 years ago. The second is in 2018, after preparing the Trade Union Law and holding labor elections after 12 years without elections. But the final version of the law had several problems and loopholes that returned Egypt to the blacklist. This forced the Egyptian government to introduce amendments to the Syndicates Organizations Law and to adjust its status within the deadline set by the International Labor Organization.

³³ Abdel-Latif (2021)

Rank	Constraint	Rationale	
		Importance (status quo)	Impact of dealing with it
		<ul style="list-style-type: none"> • The sectoral dimension of the plans is absent, and they do not consider differences between sectors. • The final decision in determining the allocations for financing the education development plan is in the hands of other Ministries! • There is no unified, comprehensive, and updated database for the educational levels or the labor market. • There is no system for follow-up and evaluation of development plans objectives at the ministries' level. • The responsible ministry evaluates its own performance through performance indicators set at the beginning of the planning process! 	<ul style="list-style-type: none"> ○ capitalizing on the silver lining of Covid-19, as short cuts in few typically bureaucratic procedures were successfully adopted. ○ allow for timely interventions by positively influencing ongoing reforms. ○ Tasks become gradually arranged from top to bottom within a central, unified, and comprehensive institutional framework, avoiding overlapping and fragmentation. ○ Development plans that do not change with the change of responsible officials. ○ An executive plan drawn up under the guidance of central government, as well as policies for each region, thus the timeframe of implementation becomes very clear and well determined. ○ directing necessary funding in accordance with the development plan. • A higher decision at the level of the Republic to allocate funds ensures sustainability of the implementation plan in the short and long terms. • Monitoring and evaluation allow for adjusting and for proper accountability all through and after implementation, reduce costs and ensure sustainability of development plans.

Rank	Constraint	Rationale	
		Importance (status quo)	Impact of dealing with it
2	Skill mismatch	<ul style="list-style-type: none"> • Simultaneous excess of supply and demand, reflecting severe structural weakness of the labor market and a widening skill gap. • Firms in the manufacturing industry are facing skill shortages, especially technicians and machinery and assembly workers; and workers' lower quality and productivity level as the most two important obstacles while searching for workers. • Unemployment rates highly prevail among the educated; they rather surge with rising educational levels due to education system's failure to meet labor market demand and required qualifications, especially by the private sector. • The share of university graduates in employment is significantly low, and even approaches that of those who can read and write. • Skills-related underemployment has increased for almost all economic activities. • The proportion of informal jobs has certainly accelerated among the most educated more rapidly than for other educational groups. • Educational curricula are weak at the basic levels and lack electronic components, especially in government schools. • The quality of education varies between urban and rural areas in terms of quantity and quality. • There are great disparities in education systems between government, private and international schemes, which creates 	<ul style="list-style-type: none"> • Narrowing the skill gap between labor demand and supply will have an impact on both economic growth and working productivity, especially in the industrial sector & manufacturing industries. • Will lead automatically to elimination of informal gig economy and irregular work, saving more resources for the government that were used to be directed to informal workers in the form of social assistances. • Gradually narrowing the extent of illegal practices. • Underutilization of labor will gradually disappear with the adjusting of both over-education and under-education characterizations. • The private sector will bridge its skill gap thus more resources (OJT it provides to close this skill gap) might be available for job creation and production growth. • Inverted pyramid of school to work transition would rather reverse to the right direction, university graduates will find matching jobs, and unemployment between educated will decline gradually. • Informal education practices, such as private lessons, external books, and curricula..., etc., will be formalized. • Jobs will be of higher quality in terms of protection schemes and social benefits. • Disparities between different education programs will be eliminated, reaching more balanced skill levels in the labor market.

Rank	Constraint	Rationale	
		Importance (status quo)	Impact of dealing with it
		<p>educational layers and segmentation in the labor market after graduation.</p> <ul style="list-style-type: none"> There is a lack of concrete data base that combines both the demand and supply sides of the labor market. 	<ul style="list-style-type: none"> Accelerating the digitization and coping process with the mega trends and new models of school to work transition, with an easier fulfillment of the global gap of newly emerging jobs and required skills accordingly. Increasing overall resilience of the economy facing external shocks and unexpected downturns, especially against vulnerable segments. Database on skills levels, supply and demand of labor, actual needs of the employers will easily be available. Such a database can serve as career guidance to fresh graduates in the market.
3	Informality	<ul style="list-style-type: none"> The informal sector employs about 50 percent of non-agricultural workers in Egypt, 63 percent of the total employed in all sectors, contributing equivalent to 30-40 percent of GDP. Egypt's informal employment is about 1.5 times that of Jordan, and double that of the Turkish economy. There are 60.4 percent of informal workers in the informal sector, while the rest 39.6 percent work in the formal sector under informal arrangements without contracts or insurance. Informal wage employment proportion has particularly increased as a percentage of total employment from 31 percent in 2012 to 39 percent in 2018. Considered as one of the most vulnerable types of employment in Egypt. 	<ul style="list-style-type: none"> Informality is a direct result of previous constraints mainly, the institutional weaknesses and mismatch between supply and demand of labor. Thus, dealing with them will lead automatically to more formality. Informal sector accounts for more than 70 percent of total employment—and nearly one-third of GDP—in EMDEs. That scale diminishes these countries' ability to mobilize the fiscal resources needed to bolster the economy in a crisis, to conduct effective macroeconomic policies, and to build human capital for long-term development (World Bank 2021). Dealing with informality decreases the incidence of vulnerability between these segments in the face of any crises or downturns.

Rank	Constraint	Rationale	
		Importance (status quo)	Impact of dealing with it
		<ul style="list-style-type: none"> The share of informal jobs for youth has surged more sharply than for older people, reaching two-thirds of total jobs young people occupy. A clear deficiency in the country's vision and the way it deals with that sector, and the absence of a comprehensive vision for its development. Lack of accurate databases on the informal labor in Egypt. Dealing with the informal sector from a corporate rather than workers' perspective. 	<ul style="list-style-type: none"> Also, its impact will be extended to the working poor, as they represent a large share of the informal workers due to their irregular incomes and lower wages, in addition to the unpaid work particularly among women. The expected social mobility of new generations will start to take place pulling them out of the vicious circle they are stuck in for years. Unemployment rates among technical educated graduates will gradually fall, as they represent a large percentage of employed persons outside the establishments.
4	Gender gap and Women vulnerability ³⁴	<ul style="list-style-type: none"> About 31 percent of Egyptian females are illiterate. Although females represent nearly half the population in working age, they account for only one-sixth the labor force. The rate of participation in the labor force among females is 4-5 times less than that of males. Decrease in the share of females to less than one-fifth of the total employed (15.3 percent in 2019). NEET women are far exceeding men over time. However, this gap has been declining from six-fold in 2010 to three-fold in 2017. 	<ul style="list-style-type: none"> Female participation could increase GDP over the next decade in Egypt by 34 percent if the number of men is equal to the number of women in the labor market (ECES 2020). Women empowerment has a dual impact, one on the economy through more participation in the economic activities especially services, and another on the society via raising well-educated, healthy, and dedicated children for a better future of work. Empowering working poor women is expected to have a larger positive impact on the women headed families, especially in the rural areas.

³⁴ More details about women situation in Seif El-Dine, Racha. (2020). The Egyptian Women. In Abdel-Latif, A.(ed), *A sectoral Analysis of the Impact of COVID19 on the Egyptian Economy*, Part II, Egyptian Center for Economic Studies
And, in Seif El-Dine, Racha. (2022). Women as a Critical Engine for Economic Recovery. In Abdel-Latif, A.(ed), *Building Forward Better- Focus on a Few Drivers of Change*, Part III, Egyptian Center for Economic Studies.

Rank	Constraint	Rationale	
		Importance (status quo)	Impact of dealing with it
		<ul style="list-style-type: none"> • Higher unemployment rate among females, reaching three to four times that of males. • Highest share of unemployed women is among the most educated, half of them is with university and post-graduate education • Working poverty and lower wages further prevail among women compared to men. • Employed females either work in the informal sector with low quality jobs and lower wages, or in family projects as unpaid workers. • Unpaid work for women increases, even more after marriage; this work is often at home, as it is easier to reconcile with the responsibilities of marriage. • Despite the equal average working hours between the two genders in many economic activities, the gender wage gap approaches 30-50 percent in some sectors. • Laws do not guarantee that returning mothers will have a position of equal value, and they lack any provisions or mechanisms that might explicitly prevent discrimination in hiring against women. • “Necessity” is the most motivating factor for women to resort to entrepreneurship, as models of necessity entrepreneurs dominate among most women. • The role of women is very limited in general in the decision-making or higher administrative positions. 	<ul style="list-style-type: none"> • Equal opportunities between females and males in terms of access to labor market, wage level, rules of hiring and firing, facilities and benefits provided for working mothers, etc., give more incentives for women to participate in the labor market especially in the private sector and be highly productive, given that they already represent nearly half the population. • Providing regular jobs for women will help eliminate informality among women workers, especially that most women work out of necessity. • Revisiting the law, rules and regulations governing women in the labor market will enforce private sector treat them equally as men.

Rank	Constraint	Rationale	
		Importance (status quo)	Impact of dealing with it
		<ul style="list-style-type: none"> The presence of women among company owners and senior managers is very limited (2.4 percent and 4.9 percent of companies, respectively). Egypt ranked low in international indices measuring gender inequality. 	
5	Wage distortion	<ul style="list-style-type: none"> Wages have not adjusted to the higher inflation that has led to a significant erosion in real wages. Prevalence of wage differentials between economic sectors is in favor of specific sectors, despite the convergence of the average weekly working hours in the sectors between 50-55 hours. Average wages vary greatly in favor of non-productive sectors, exceeding wages in value-added production sectors. Average wages also decrease in sectors that are most vulnerable to crises, such as tourism and wholesale and retail trade. 	<ul style="list-style-type: none"> Direct positive impact on the increasing incidence of poverty rates in Egypt, and the working poor in the labor market. Tying wage levels with the inflation rate ensures its match to the standards of living and keeps poverty rates bounded. Ensure a unified level of payments in both public and private sectors.
6	Contradicting and biased legislative framework	<ul style="list-style-type: none"> The labor law guarantees many fringe benefits for civil servants compared to the private sector workers. It is also biased towards certain groups within the government sector. Despite the unified minimum wage law in all sectors, which theoretically applies to all workers in the government and private sectors, there is a distinction in favor of the government sector. 	<ul style="list-style-type: none"> One unified legal framework helps prevent informal practices, especially against vulnerable segments. Prevents the private sector from practicing discrimination against women or poor workers. Assures equal opportunities between different sectors, occupations, and different skill levels. All government bodies are treated the same way in terms of benefits, wage levels, bonuses, etc.

Rank	Constraint	Rationale	
		Importance (status quo)	Impact of dealing with it
		<ul style="list-style-type: none"> • Not all private sector enterprises are committed to implement the minimum wage. This mainly causes unemployment to rise as young graduates are still queuing for the government job. • Those who work in semi-governmental bodies such as public authorities and local administrations do not enjoy the same privileges as the government sector. • The law is biased towards technical education graduates compared to those with general education in terms of career path and promotions. • Laws imply contradiction between work regulations, leading to turmoil in the labor market. 	
7	Serious weakness in TVET system ³⁵	<ul style="list-style-type: none"> • Technical education absorbs 40 percent of preparatory students, branching into about 200 specialties in 2019/2020. • The unemployment rate among technical intermediate graduates is more than 4 times higher than among General Secondary and Al-Azhar graduates. • The poverty rate among them is higher compared to those with General Secondary education and with a university degree. • Two thirds of technical workers work in rural areas, equivalent to one and a half times their urban counterparts. • Biased labor law against technical graduates. The Egyptian law gives more advantages to graduates from general education compared to technical education. 	<ul style="list-style-type: none"> • Higher level of productivity in the industrial sector, particularly manufacturing industries. • Equal opportunities in the labor market in terms of wages, availability of formal jobs, social protection, etc. • Equal opportunities in terms of certification and qualification system, not perceived as the last resort and thus lower value of technical workers. • Reduce poverty levels, thus pulling them out of the vicious circle of unemployment-informality-poverty.

³⁵ Data are for 2017 unless stated otherwise.

Rank	Constraint	Rationale	
		Importance (status quo)	Impact of dealing with it
		<ul style="list-style-type: none"> • They are not promoted beyond a certain point in the labor hierarchy, while promotion is extended and unlimited for the other groups. • Graduates of technical education are much more likely to be exposed to what is known as “dead end jobs”. • Misallocation and inefficiency of financial resources to technical education. • Poor governorates get a lower share in the educational investment national budget plan, despite being the most disadvantaged in terms of schools’ availability and technical specializations. • Lack of coordination between technical schools and vocational training centers and the private sector. • Weak contribution from private sector either financially, technically through training and employment schemes, or actual contribution in curricula and training courses components. 	
8	OJT replacement to education	<ul style="list-style-type: none"> • Lack of responsiveness to private sector employers’ demand for particular skills. • Private sector adapts to the growing supply of labor and implements training programs to qualify them, compensating for the lower educational outcomes. • The current system of training suffers from dispersion and an overlap in training efforts. 	<ul style="list-style-type: none"> • The private sector will bridge its skill gap thus more resources (OJT it provides to close this skill gap) might be available for job creation and production growth. • Closing the gap between what private sector in manufacturing industries need and available qualifications. • Save the double effort of training centers, especially the government ones. • Technical workers will have more value and better working conditions in the market.

Rank	Constraint	Rationale	
		Importance (status quo)	Impact of dealing with it
		<ul style="list-style-type: none"> • About 89 percent of firms' train new employees, which confirms the weakness of the current system outputs regarding technical and vocational education and training.³⁶ • The private sector provides training in basic technical areas provided by the state, which reflects the duplication of roles and waste of resources. • Despite the importance of non-technical skills, the current technical education system does not deal with these skills. • The need for vocational training in Upper Egypt exceeds the capacity of the training centers there. • Sectors with non-traditional orientations, including pharmaceuticals, food products and printing, need training beyond the capacity of government training centers. • Repeated reference to partnerships confirms the ambiguity and disparity of firms' information. • Courses, though, are not designed to meet the real needs of the attendants and local practices and requirements. 	
9	Supply driven labor market	<ul style="list-style-type: none"> • A huge workforce is injected annually into the labor market, exceeding its ability to generate new job opportunities. • Youth in the age group 20-24 represent only about 11 percent of the total employed compared to more than twice this percentage (26.6 percent) for the 30-39 age group. 	<ul style="list-style-type: none"> • Reduce the pressure on the job opportunities needed to absorb graduates each year. • Boost the capacity of the economy to generate matching jobs in the labor market. • Inverted demographic pyramid would reverse to the right direction, youth unemployment will decline gradually.

³⁶ According to the ECES survey results on the [Future Needs and Actual Labor-Related Problems](#) in 2019.

Rank	Constraint	Rationale	
		Importance (status quo)	Impact of dealing with it
		<ul style="list-style-type: none"> • Employment rates among the former group are half that of the latter (28 percent versus 55 percent, respectively). • Around 60 percent of the unemployed belong to those who have never worked before. • Around 73 percent of unemployed females have never worked before compared to 44 percent among males. 	<ul style="list-style-type: none"> • Utilize the wasted demographic dividend properly.
10	Higher and chaotic labor migration	<ul style="list-style-type: none"> • 10.2 million Egyptians are working abroad, 7 million are in Arab countries alone, representing 70 percent of Egyptians working abroad in 2017. • Unorganized external labor market in terms of demand and supply movement. • Lack of database for external labor demand on Egyptian workers in different fields. • Very important source of foreign currency, value of labor remittances exceeds that of exports from goods in Egypt. • Larger discrepancies between working conditions in Egypt's labor market and abroad, making it more repellant. In addition to higher unemployment, that increases the incidence of illegal risky migration. • Lack of bilateral agreements and labor exchange programs between beneficiary countries. • Higher percentage of informal migrant workers from refugees, illegal migrants, etc. • Discrimination against Egyptian workers in favor of imported foreign workers due to the skill gap. 	<ul style="list-style-type: none"> • Eliminate illegal migration and dangerous practices that abuse unemployed and discouraged youth. • Organize labor supply and demand movements between beneficiary countries, to eliminate informal jobs. • Better working conditions for Egyptian workers in both domestic and international labor markets. • Raise Egypt's earnings from remittances in an organized, formal, and sustainable manner. • Reduce pressure on the job opportunities needed to absorb returned workers, especially in times of crises. • Concrete database for the Egyptian labor abroad and foreign workers locally as well. This database will help in matching supply and demand in the labor market and fill the skill gap. • Bilateral agreements for labor exchange will help improve and upgrade skills.

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