MOVING BEYOND THE UNEMPLOYMENT RATE:

Alternative Measures of Labour Market Outcomes
to Advance the Decent Work Agenda in North Africa

By

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Introduction

It is by now well established that North African labour markets are characterized by some of the highest overall and youth unemployment rates in the world (Assaad, 2014a, 2014b). Overall unemployment rates in North Africa are about two and a half times the world average and youth unemployment rates are nearly three times the world average.[2] Unemployment rates among women in the region are particularly elevated, with both overall and youth female rates being about four times higher than the world average. The question I address in this paper is whether the unemployment rate is a sufficient metric of Labour market performance in North Africa and how it can be supplemented with other measures to provide a more holistic picture of the adequacy of employment in the region.

I argue that the unemployment rate in North Africa highlights the Labour market insertion problems of a specific group of people, namely educated new entrants searching for their first job. As such, it does not fully capture the extent of employment inadequacy for a host of other groups that are often substantially more disadvantaged than educated new entrants. These include less educated and poor workers who cannot afford to remain unemployed and must therefore obtain whatever casual or informal employment they can find or create a job for themselves through marginal self-employment. They also include more mature workers of all types who have already entered the Labour force but had to settle for jobs that offer low remuneration and poor working conditions. Finally, they include women who opt to remain out of the Labour force because they have no prospect of obtaining work that meets a minimum set of working conditions that are acceptable to them, their families, and their communities.

I propose supplementing the unemployment rate and its companion Labour market indicators, the Labour force participation rate and the employment-to-population ratio, with a host of additional labour market indicators that capture the adequacy of employment and that can, therefore, advance the decent work agenda in North Africa and elsewhere. Over the years, the International Conference of Labour Statisticians (ICLS), organized under the auspices of the International Labour Organization (ILO) has made numerous recommendations regarding labour statistics and indicators. I draw on these resolutions and the way they have been operationalized by ILOSTAT in my suggestions.

In a few cases, I also draw on the indicators proposed by the UN to monitor the achievement of the Sustainable Development Goals (SDGs). With the adoption of the 2030 Agenda for Sustainable Development

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[2] Based on ILO Modelled Estimates (ILO, 2018c). See Figures 3 and 4 below.

in 2015, the SDGs explicitly recognize the centrality of decent work to sustainable development. While decent remunerative work is critical to the achievement of a number of SDGs, such as ending poverty, eliminating hunger and achieving gender equality, it is placed front and center in SDG 8 which calls on countries to "promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all." (United Nations, 2015). The SDGs propose a series of indicators to measure progress towards achieving the SDG targets. Several of these indicators address labour market outcomes and are included among the indicators I propose below.

The proposed indicators include measures of formality and social protection, employment regularity and precariousness, monetary and non-monetary remuneration, workplace safety, work hours, labour underutilization, and voice and participation. Some of the proposed indicators, like those related to earnings and hours of work are sometimes included in official labour force surveys, so it is often a question of accessing the microdata from these surveys to obtain them. However, a number of others are not and would require the addition of questions or modules to official surveys. One of the major roles of the ADWA expert network, as I see it, is to advocate for the inclusion of richer measures of labour market outcomes and the adequacy of employment in official surveys as a way to promote the decent work agenda through evidence-based policymaking and policy analysis.

The rest of the paper is structured as follows. Section 1 reviews the stylized facts of North African labour markets by making use of ILO modelled estimates of standard labour market indicators. Section 2 makes the case for the insufficiency of the unemployment rate as a measure of the labour market performance. Section 3 proposes other measures of the adequacy of employment, and, in some cases, illustrates their use with examples from selected North African countries. Section 4 concludes.

1. **Stylized Facts about North African Labour Markets**

As mentioned in the introduction, labour markets in North Africa are characterized by high overall and youth unemployment rates, with rates being especially high among women. They are also characterized by low female participation rates and employment to population ratios.

As shown in Figure 1, although male labour force participation rates are only slightly below the world average, female rates are at about half the world average in Northern Africa. Moreover, both male and female participation rates have been falling since 2012 for the region as whole. The decline in female rates started earlier in Morocco and Sudan but reversed in Sudan in recent years. The overall regional pattern of

a more recent decline reflects the pattern in Egypt and Algeria. Tunisia has maintained a slightly rising trend, but, as we will see below, it is primarily due to the increase in female unemployment there rather than employment.

Employment-to-population ratios (EPRs) have also been declining slightly since 2010, with the decline being more pronounced for men than for women (Figure 2). These declines reflect similar declines at the world scale, but from much lower levels, indicating there is no evidence of convergence toward the world average. At about 15%, female EPRs are about one third of the world average and by far the lowest among all world regions. In Morocco, EPRs were higher than the regional average, but, after recent declines there, they are now converging to the regional average. EPRs are substantially lower than the regional average for Algeria. After converging toward the regional average from 2000 to 2012, they began declining thereafter, matching the regional trend.

Unemployment rates in Northern Africa, at 11.8% in 2018, are about two and the half times higher than the world average of 5% and are the highest among all world regions. The next highest region, Central and Western Asia, had an unemployment rate of 8.2% in 2018. As shown in

Figure 3, unemployment rates were declining from 2000 to 2010, but then shot up in 2011 with the onset of the Arab Spring uprisings and remained fairly flat since then, declining only slightly in since 2016. This regional pattern reflects the pattern in Egypt and Tunisia, the two countries of the region most affected by the uprisings. Algeria experienced a steep decline from very high unemployment rates in 2000, continuing until about 2008, then remaining fairly stable from 2008 to 2015 only to start rising again since then.

Morocco also saw some declines in the early 2000s, but then stability at a level substantially lower than the regional average since 2010. Sudan's unemployment rate was also stable since 2008 at a rate slightly higher than the regional average. Although the pattern of the overall unemployment rate mirrors that of males quite closely, female rates follow a somewhat different pattern. For one, at 20.8% in 2018, they are 3.8 times higher than the world average of 5.4%. The female unemployment rate next highest region, Latin America and the Caribbean at 9.6% is at less than half the rate in Northern Africa. Thus with the lowest female participation rates and by far the highest female unemployment rates, North Africa is distinguished by very high barriers to female employment. After declining somewhat from 2000 to 2008, there was a big increase in female unemployment rates in that year and then a steady increase until 2015, when the female unemployment rate stabilized at current levels (

Figure 3). Morocco distinguished itself by having female unemployment rates that are slightly less than half the regional average and the smallest gap in female to male unemployment rates. Female unemployment rates in Egypt, Sudan, and Tunisia were higher than the regional average. Algeria saw declines in female unemployment in the early 2000s, but large increases since 2013.

At 29.9% in 2018, youth unemployment rates are 2.5 times higher than the world average of 11.8%. Female youths are particularly vulnerable to unemployment with a rate of 40.8% in 2018, 3.3 times the world average. As shown in Figure 4, male youth unemployment rates shot up in 2011 and 2012 in the aftermath of the Arab Spring uprisings, but female youth unemployment rates were already climbing much earlier. They reached a peak in 2012, reflecting the pattern in Egypt and Tunisia, declined steadily from 2012 to 2015 and then stabilized at current levels since then. Again, Morocco distinguishes itself by having the lowest female youth unemployment rates, but these rates have been rising rapidly since 2007.

Besides being concentrated among the youth, previous research has shown that unemployment is strongly correlated with educational attainment in Algeria, Egypt and Tunisia (Assaad, 2014b; Assaad, Hendy, Lassasi, & Yassin, 2018), so that it is essentially a reflection of the labour market insertion problem of educated new entrants. Rapidly rising education levels and the closing of the gender gap in education have resulted in growing numbers of educated youth seeking formal employment. On the other hand, pressures to curtail the growth of over-sized public sectors, and, in some cases, actual retrenchment of the public sector workforce, in the absence of dynamic growth in the private sector resulted in declining formal sector labour demand in much of the region (Assaad & Barsoum, 2019).

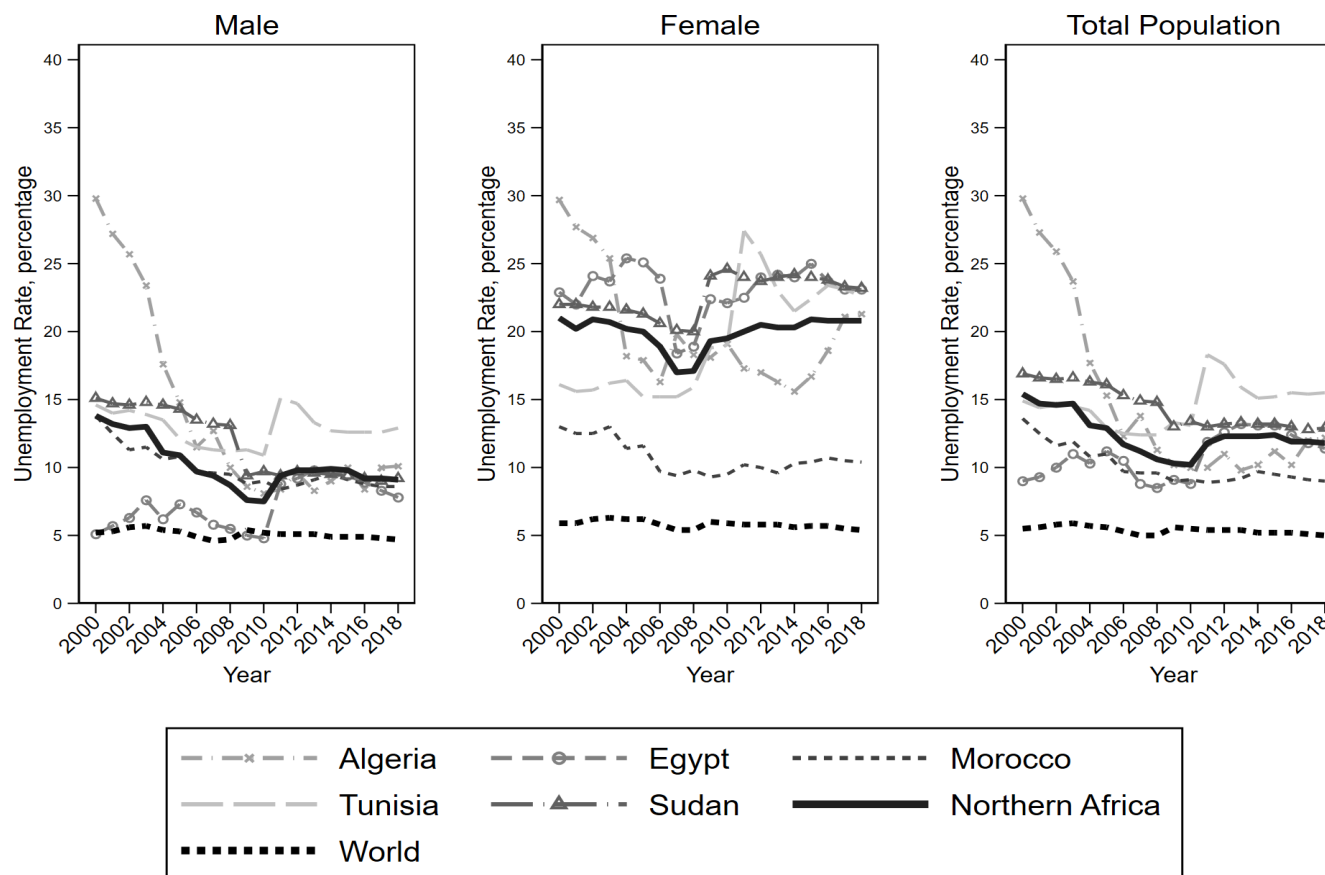**Figure 1. Labour Force Participation Rates by Sex in Northern Africa, Ages 15+**
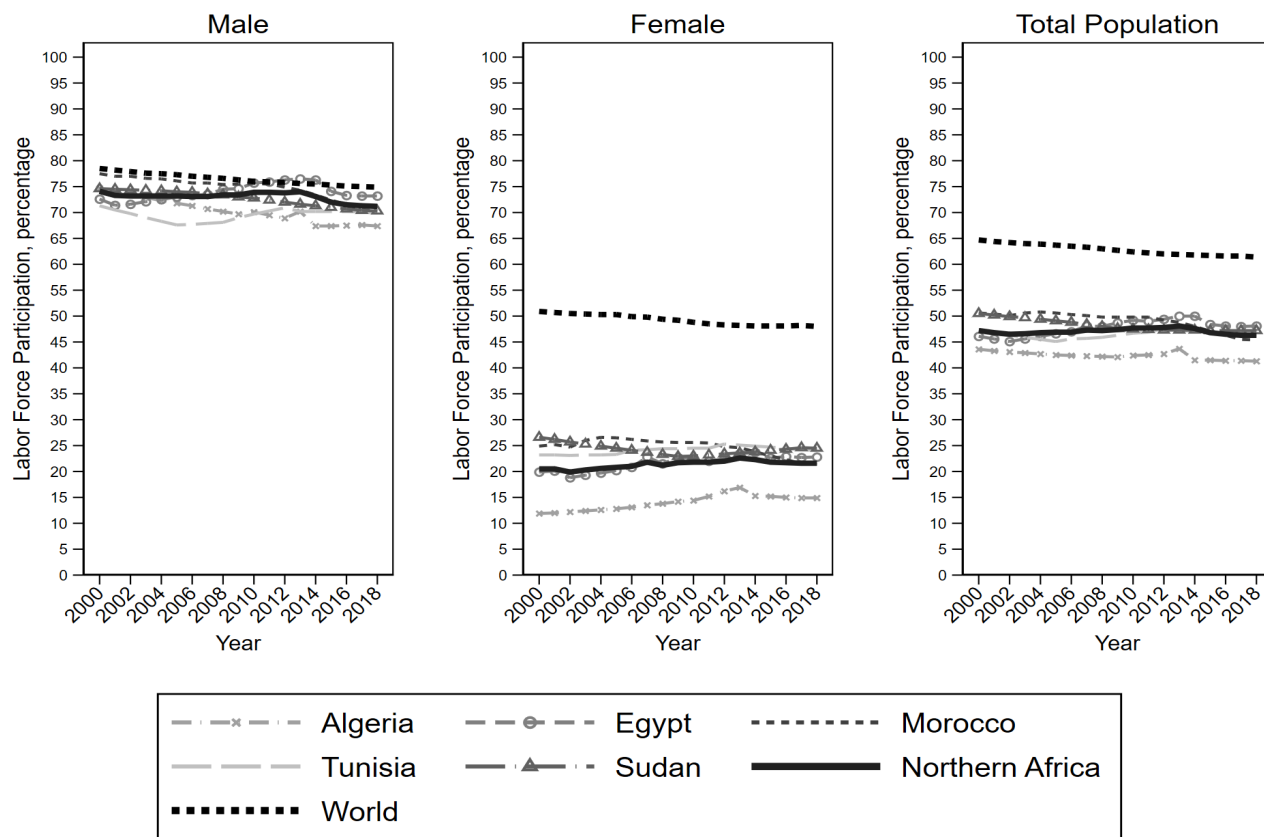
Source: ILO Modelled Estimates (ILO, 2018b).

Figure 2 Employment-to-Population Ratios by Sex in Northern Africa, Ages 15+
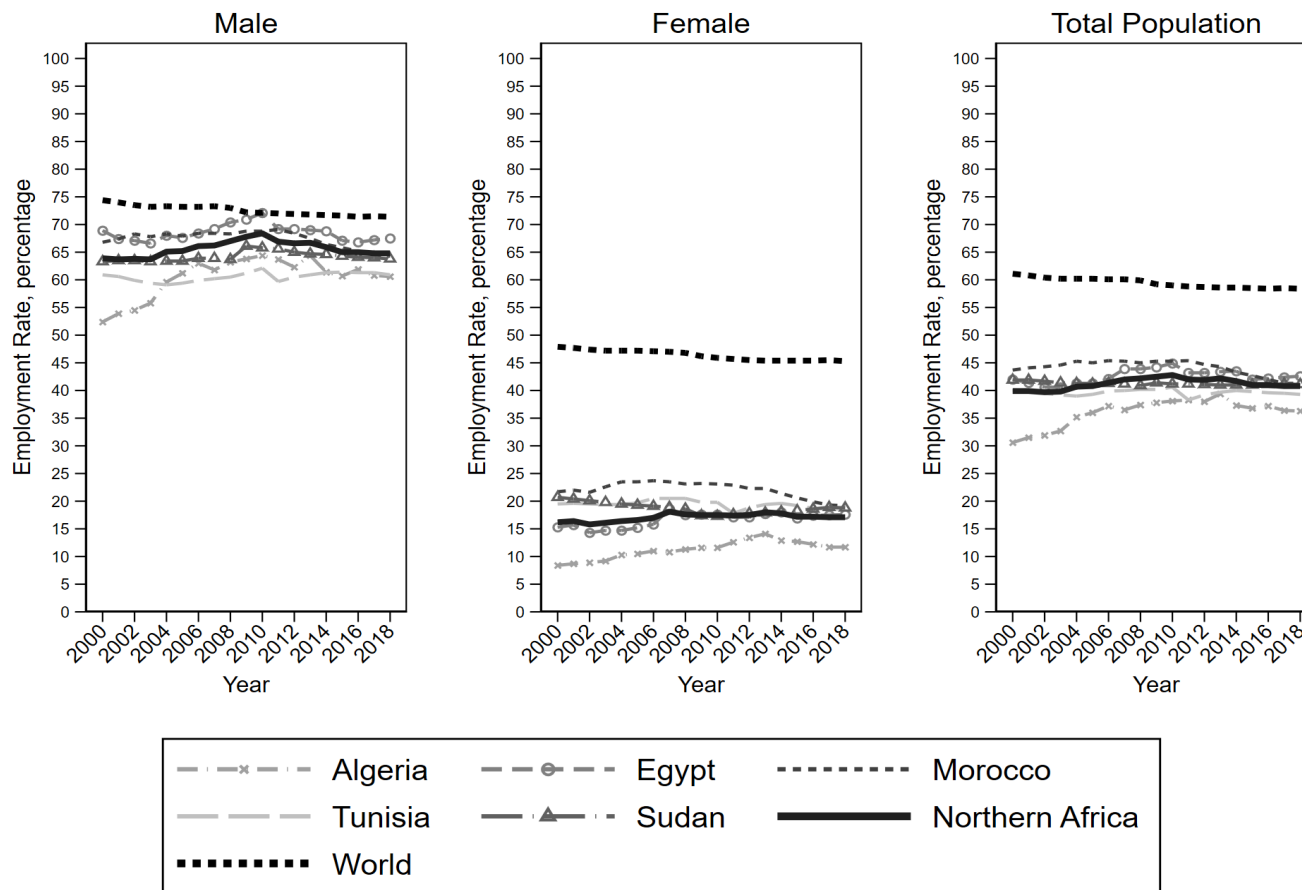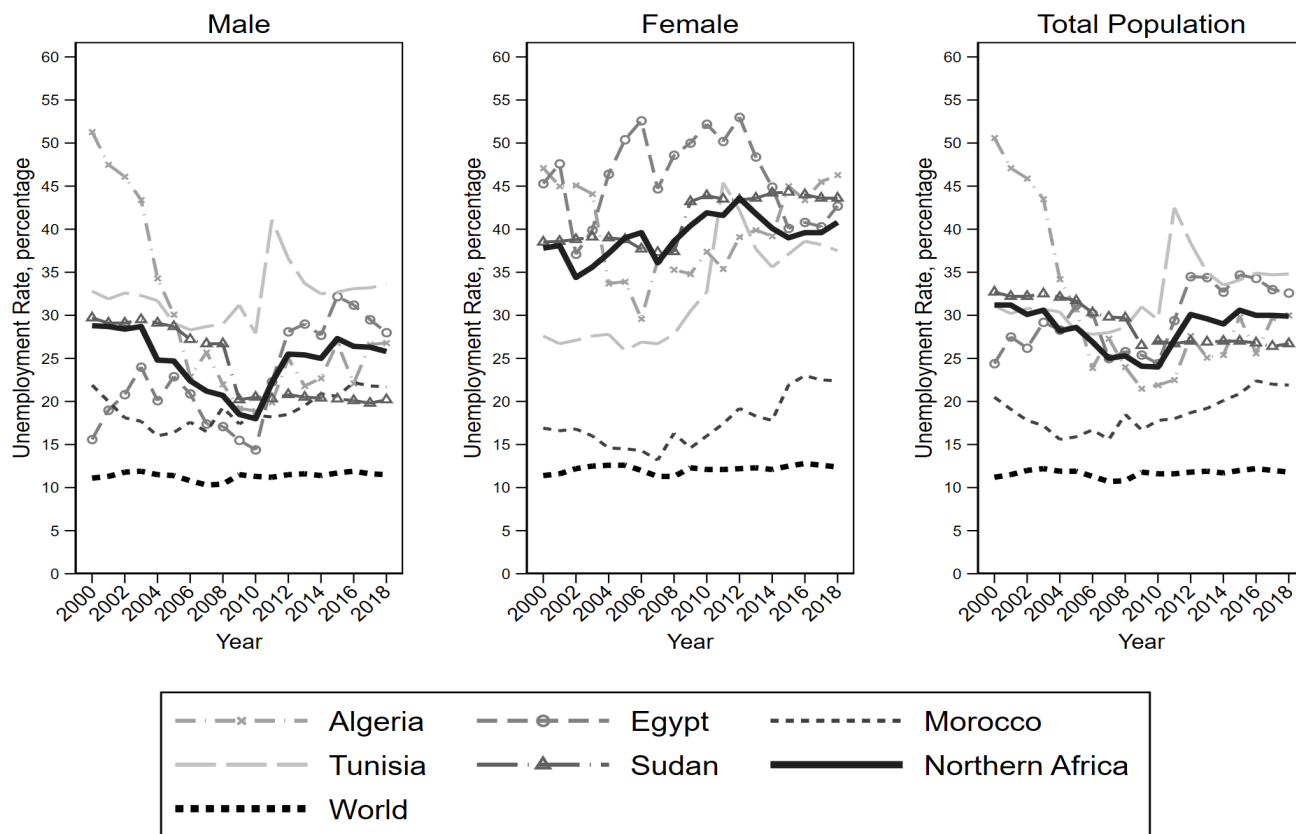

Source: ILO Modeled Estimates (ILO, 2018a)

Figure 3. Unemployment Rate by Sex in Northern Africa, Ages 15+

Source: ILO Modelled Estimates (ILO, 2018c)

Figure 4. Youth Unemployment Rate by Sex in northern Africa, Ages 15-24

Source: ILO Modelled Estimates (ILO, 2018c).

2. Why the unemployment rate is a partial measure of labour market performance in North Africa?

Unemployment can essentially be understood as a job search strategy (Pissarides, 1990, 2002). Individuals assess the job prospects available to them against future prospects and against their reservation wage and reservation working conditions. Based on this assessment, they decide whether to take the jobs on offer (or create one for themselves) or to keep searching longer. A decline in the unemployment rate can happen either because the supply of good jobs increases or because the expectations about the supply of acceptable jobs declines. One of the important determinants of these expectations in North Africa is the extent to which public sector hiring is expanding or contracting. If it becomes apparent to job seekers that formal employment is not forthcoming and will not be in the foreseeable future, the viability of their job search is brought into doubt. Under such circumstances, it is more rational to either take up any employment that is available, even if its quality is low, create oneself a job through self-employment or unpaid family work, or, in the case of many young women, simply stay out of the labour force altogether. All these responses would contribute to lower unemployment for some groups, although they are entirely unrelated to the quality of labour market opportunities facing these groups.

Less educated and older workers experience the problem of employment inadequacy very differently from educated new entrants. To the extent that less educated workers engage in wage work, they do so as either informal or casual workers. As such, they may experience employment inadequacy as time-related underemployment, low earnings, or inadequate job security and social protection. Alternatively, they may engage in low-productivity self-employment or unpaid family labour that also generates limited income and in poor income security. These two forms of labour market inadequacy are not in the least captured by the unemployment rate and could in fact worsen when unemployment declines.

The association between open unemployment and socio-economic advantage or privilege is illustrated by its association with educational attainment and parental wealth (Krafft & Assaad, 2014). As shown for the case of Egypt in 2012, the unemployment rate increases strongly with education for both men and women (**Figure 5**). Moreover, the bulk of the unemployed among the educated are new entrants rather than individuals with previous work experience. For men aged 15 to 34, the proportion of unemployed new entrants quadruples as we go from basic to secondary education and then doubles again when we go from secondary to higher education.

For women in the same age range, less than 1 percent are unemployed new entrants among those with basic education, but the proportion rises to 12% for those with secondary education and 17% for those with higher education. These are not unemployment rates, since the denominator includes all those who are not students and therefore includes those who are out of the labour force.

Figure 5 Labour Market Status by Education and Sex, Egypt, Ages 15-34, 2012
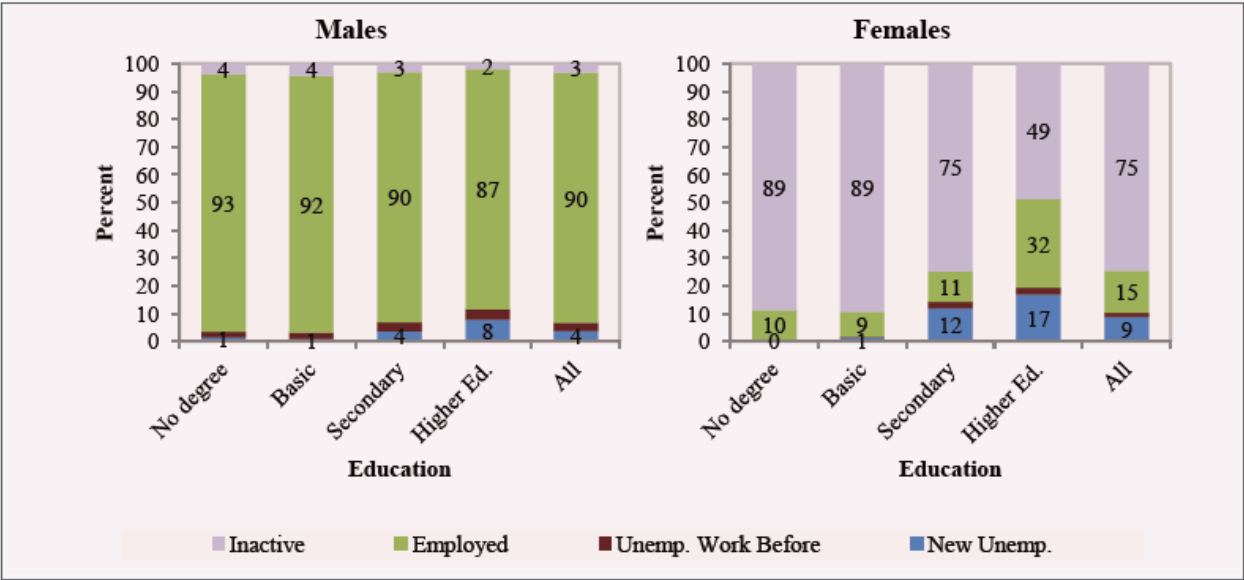
Note: Universe excludes students and males out of the labour force for military service.
Source: Krafft & Assaad (2014) based on data from the Egypt Labour Market Panel Survey of 2012.

Figure 6. Labour Market Status by Parental Wealth Quintile and Sex, Egypt, Ages 15-34
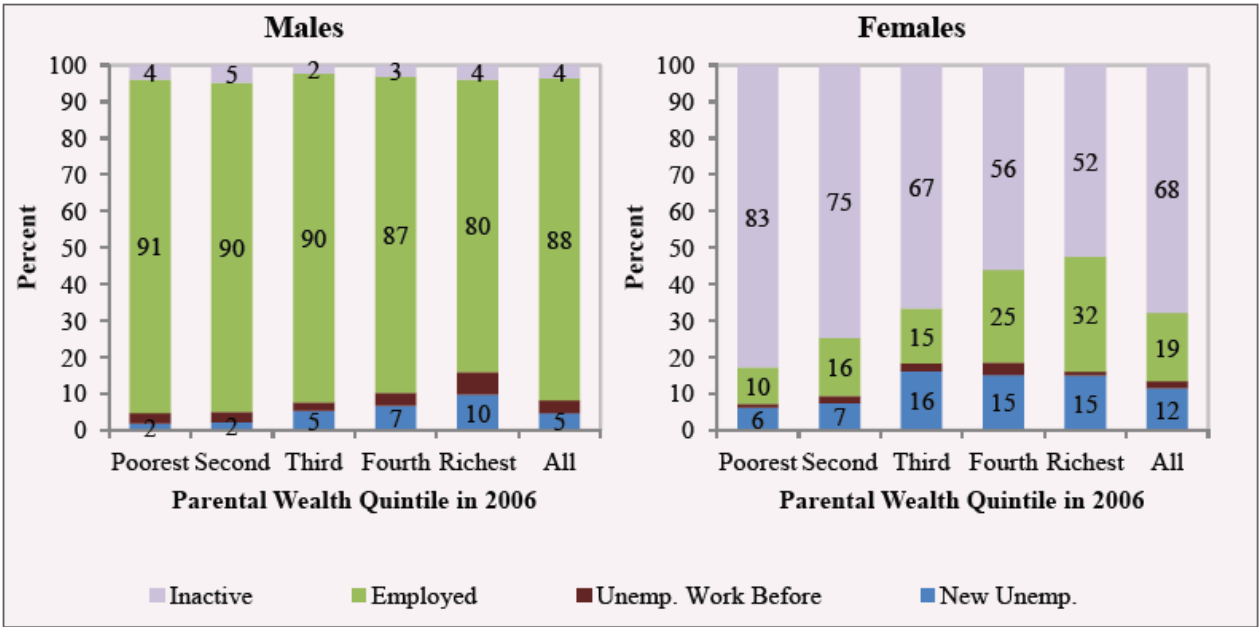
Note: Universe excludes students and males out of the labour force for military service.

Source: Krafft & Assaad (2014) based on data from the Egypt Labour Market Panel Survey of 2012. Figure 6 explores the relationship between unemployment and parental wealth. For men, there is a strong positive relationship between unemployment and parental wealth. The proportion of unemployed new entrants steadily increases from 2% among men in the bottom two quintiles of parental wealth to 10% among those in the top quintiles. For women, unemployment increases substantially from the second to the third quintile of parental wealth, but then remains roughly at that same level through the top quintile.

These results suggest that unemployment measures employment inadequacy among a rather narrow slice of the population, namely relatively educated and relatively privileged young people entering the labour market for the first time. In what follows, I will propose alternative measures of labour market outcomes that can describe the adequacy of employment more broadly.

3. Alternative Measures of the Adequacy of Employment

The alternative measures of employment inadequacy can be grouped under the following sub-headings:

1- Labour underutilization
2- Type of employment
3- Regularity of Employment and working time
4- Earnings and nonwage benefits
5- Social protection
6- Safety and health at work
7- Industrial relations

Before discussing proposed indicators and statistics to be collected under each sub-heading, it is important to emphasize that given the substantial differences in Labour market involvement along lines of gender, education, age, and location in North Africa, all indicators should be disaggregated by sex, education and age group, and urban/rural location. At a minimum, disaggregation by sex is required.

1- Labour underutilization

As argued above, the degree of labour underutilization in the economy is only partially captured by the unemployment rate and the Labour force participation rate. Additional indicators measuring the extent of labour underutilization include (i) discouraged job seekers (ii) proportion of youth (15-24 years) not in education, employment or training, (iii) time-related underemployment, (iv) potential labour force. These can be complemented by composite measures that combine time-related underemployment, unemployment, and potential labour force.[3]

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[3] See the resolution concerning statistics of work employment and labour underutilization of the 19th ICLS (ILO, 2013).

(i)   Discouraged job seekers

This statistic is best expressed as a percent of the Labour force. Discouraged job seekers are individuals who have not worked even an hour during the reference period, want to work and are available for work, but have not taken any steps to seek employment.

(ii)   Proportion of youth (15-24) not in education, employment or training (NEET)

The proportion of youth 15-24 not in education, employment or training or the NEET rate is a complement to the unemployment rate since it can be a fuller measure of underutilized human resources among youth. It does not take into account whether an individual is actively seeking employment or even if an individual is desiring to work or available for it. Two cautions need to be kept in mind in the context of North African countries. Individual in mandatory military service in some countries, such as Egypt, are considered to be out of the labour force rather than as employed. Individuals undertaking their military service would then be included in NEET unless explicitly excluded. Second, given the low female labour force participation rate, NEET rates tend to be quite high for young women.

(iii)   Time-related underemployment rate

Time-related underemployment, also known as involuntary part-time work, occurs when employed individuals are working fewer hours than a particular threshold during the reference period and are willing and ready to work additional hours. The rate is calculated by dividing the number of individuals in time-related underemployment by total employment. According to the recommendations of the 16th ICLS, the threshold is chosen according to national circumstances (ILO, 1998c). For example, the thresholds used by the ILO to calculate this statistic for North African countries varies from 40 hours per week in Algeria, 35 hours per week in Egypt and "usual weekly hours of work" in Morocco.

(iv)   Potential Labour Force

The potential labour force is defined as individuals of working age who in the short reference period were neither employed nor unemployed but who (a) carried out activities to "seek employment" while not being currently available for employment but who would become available within a short period (i.e. unavailable job seekers), (b) did not carry out activities to seek employment but wanted employment and were available for it (i.e. available potential job seekers) (ILO, 2013). The latter notion is similar to that of discouraged job seekers described above.

2- Type of Employment

There are a number of dimensions to type of employment. These include (i) employment by institutional sector (public or private), (ii) employment by status in employment (employee, employer, own-account worker, and contributing family workers), (iii) employment by economic activity (including agricultural vs, non-agricultural employment, but possibly also distinguishing between industry and services), (iv) employment by formality of employment, (v) formal vs informal sector employment.[4] Since agriculture is almost always predominantly informal, the recommendation is to restrict the distinction between formal and informal employment to non-agricultural employment.[5]

These dimensions can be usefully combined to create a composite type of employment variable, which combines institutional sectors, status in employment and informality in a single classification, such as (i) public sector wage employment, (ii) private formal wage employment, (iii) private informal wage employment, (iv) employers and own account workers in formal enterprises, (v) employers and own account workers in informal enterprises, (vi) contributing family workers. A further dimension of type of employment is whether employment is inside or outside a fixed establishment. Employment outside fixed establishments tends to be more irregular and often more hazardous.

It is recommended to use the type of employment as a classification variable for the indicators of job quality that come next.

3- Regularity of Employment and Working time

The degree of regularity of employment is an important dimension of job quality as it captures the extent to which employment is vulnerable to economic fluctuations. The notion of non-standard forms of employment subsumes workers that are hired on fixed-term, project- or task-based contracts, as well as seasonal or casual workers.[6] Seasonal or casual workers are particularly vulnerable to time-related underemployment as described above.

When weekly hours of work are available, one can compute the related concept of part-time employment, which is defined as employment for less than 35 hours per week. It is also possible to classify employment

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[4] Formal employment is defined as employment that is subject to social insurance contributions. Informal sector employment is based on the formality status of the enterprise, which is determined by its bookkeeping and registration status (ILO, 1993a, 2003).

[5] SDG Indicator 8.31 is the proportion of informal employment in non-agricultural employment.

[6] According to ILO STAT glossary, there is no official definition of non-standard forms of employment https://ilostat.ilo.org/glossary/non-standard-forms-of-employment/ [accessed October 4, 2019]

by hours actually worked (ILO, 2008). ILO STAT uses the following categories: (i) no hours, (ii) 1-14 hours, (iii) 15-29 hours, (iv) 30-34 hours, (v) 35-39 hours, (vi) 40-48 hours, (vii) 49+ hours.

4- *Earnings and nonwage benefits*

The first set of indicators related to earnings are mean hourly and monthly earnings expressed in nominal and real terms.[7] Employees can also be classified as being low pay or not. Low pay is defined as the proportion of employees whose hourly earnings in all jobs are less than two-thirds of median hourly earnings.[8] These data can be used to calculate measures of gender equality, such as average hourly earnings of female and male employees (SDG indicator 8.5.1), female share of low-pay earners, and gender wage gap by occupation. Indicators of receipt of non-wage benefits include the proportion of employees receiving paid vacations and paid sick leave and the proportion of workers with employer-provided health insurance.

If household expenditure data is available, statistics on working poverty can be computed. These include the working poverty rate (percentage of employed living below US 1.90 (2011 PPP) in household expenditure per capita).[9]

5- *Social Protection*

These include access to old age pensions, contribution to social insurance, access to unemployment insurance, and health protection coverage. Indicators include (i) share of population above statutory pensionable age receiving an old-age pension, (ii) active contributors to social insurance as a percent of labour force, (iii) share of unemployed receiving regular unemployment benefits, (iv) social health protection coverage as a percent of the total population. In addition, the E-handbook on SDG indicators defines SDG indicator 1.3.1 as "the proportion of the population covered by social protection floor/systems by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims and the poor and the vulnerable."[10]

6- *Safety and health at work*

Occupational safety is an important component of decent work. Statistics on occupational injuries include exposure to fatal and non-fatal occupational injuries by type of injury and by type of worker as well as days lost to cases of occupational injury with temporary incapacity. These terms are defined in ILO (1998a).

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[7] Guidelines for measuring employment-related income can be found in ILO (1998a).
[8] https://ilostat.ilo.org/glossary/low-pay-rate/ [accessed October 4, 2019]
[9] https://ilostat.ilo.org/glossary/working-poverty-rate/ [accessed October 4, 2019]
[10] https://unstats.un.org/wiki/display/SDGeHandbook/Indicator+1.3.1 [accessed October 4, 2019].

7- Industrial relations

The definitions of indicators on collective agreements and industrial relations are among the earliest adopted by the ILO. The resolution concerning statistics of collective agreements was adopted by the Third ICLS as early as 1926 (ILO, 1926). Indicators include collective bargaining coverage rates, union membership, days not worked due to strikes or lockouts (ILO, 1993b).

4. Conclusion

We focus is this approach paper on improved measurement of the adequacy of employment in order to advance the decent work agenda in North African countries. I argue that the basic measurement of labour market aggregates such as labour force participation, employment and unemployment is not sufficient to diagnose the health of the labour market. The proposed measures cover a number of dimensions including labour underutilization, type of employment, including the degree of informality, the regularity of employment, working time, earnings and non-wage benefits, social protection, workplace safety and industrial relations. Most of these measures are derived from recommendations of various international conferences of labour statisticians and/or the proposed indicators to monitor progress toward the SDGs. Some of these measures can be derived from the regular sources of official data on labour market issues routinely carried out in North African countries, such as labour force surveys or household income, expenditure, and consumption surveys, but some will require these sources to be supplemented with additional questions. Even when the required information is available in existing surveys, the microdata from these surveys is often inaccessible to researchers and analysts, and thus severely limiting the value of these surveys in advancing the decent work agenda.

What this paper did not address directly is how to achieve fuller and higher quality employment. This would be the logical next step in the analysis and would require a diagnosis of the macroeconomic environment and the regulatory and institutional frameworks governing labour markets. It would also require an analysis of the factors contributing to the competitiveness and dynamism of private enterprises, including the ease of doing business, access to finance, the correspondence between available and required skills and the quality of the available human capital, and the extent of integration into international trade and global value chains. These kinds of analyses would require access to data from enterprise surveys as well as household surveys and the implementation of qualitative case studies to explore the institutional environment and policies affecting specific industries.

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