

Why does the MENA region have such high unemployment rates?

Fatma El Hamidi¹ and Jackline Wahba²

1. Introduction

Over the last decade, most of the countries in the MENA region experienced high and persistent unemployment rates making unemployment in MENA one of the highest in the world. Given the lack of formal social security in MENA and the associated negative economic and social consequences of unemployment, there is no doubt that the high unemployment rates have been a major concern for the region.

This chapter will examine the pattern of unemployment and the main characteristics of those unemployed in MENA. Then it will discuss the factors behind high unemployment rates in the region, before focusing on Egypt and Morocco to provide in depth understanding of the determinants of unemployment in two countries of the region.

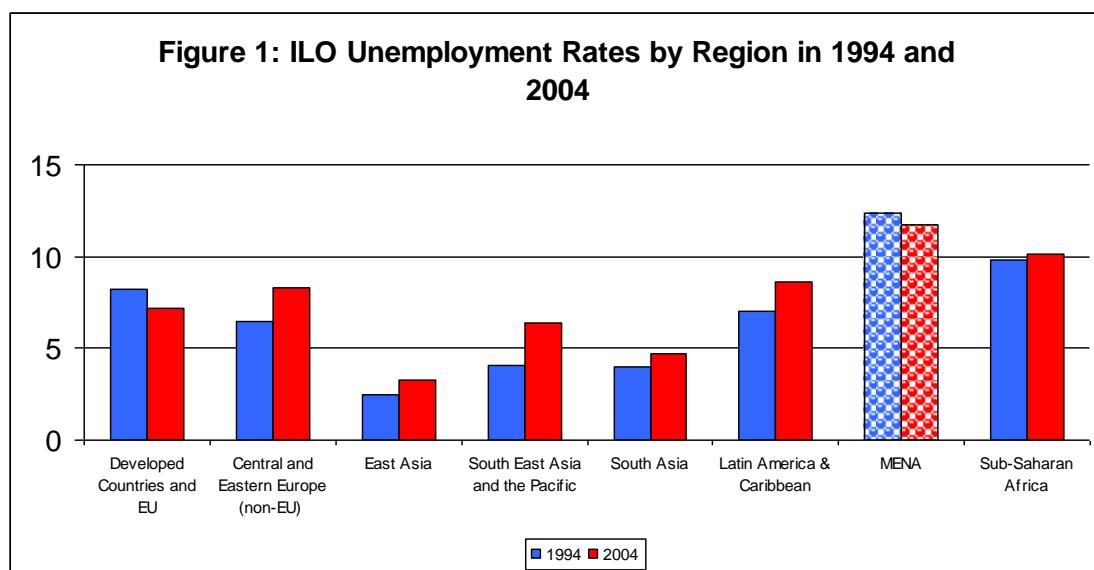
2. Unemployment in MENA

The MENA region recorded the highest unemployment rates among the developing regions in the 1990s according to the ILO as seen in Figure 1. The unemployment rate in MENA has hovered around the 12 per cent mark for at least the past decade reflecting a steady increase in the number of total unemployed since mid 1990s with an average of 500,000 additional unemployed per year according to the ILO

¹ University of Pittsburgh, Economics Department. 391 Glenwood Dr., Monroeville, PA 15146' USA. Email: fatma@pitt.edu Tel: 412-372-0895; Fax: 412-372-5324

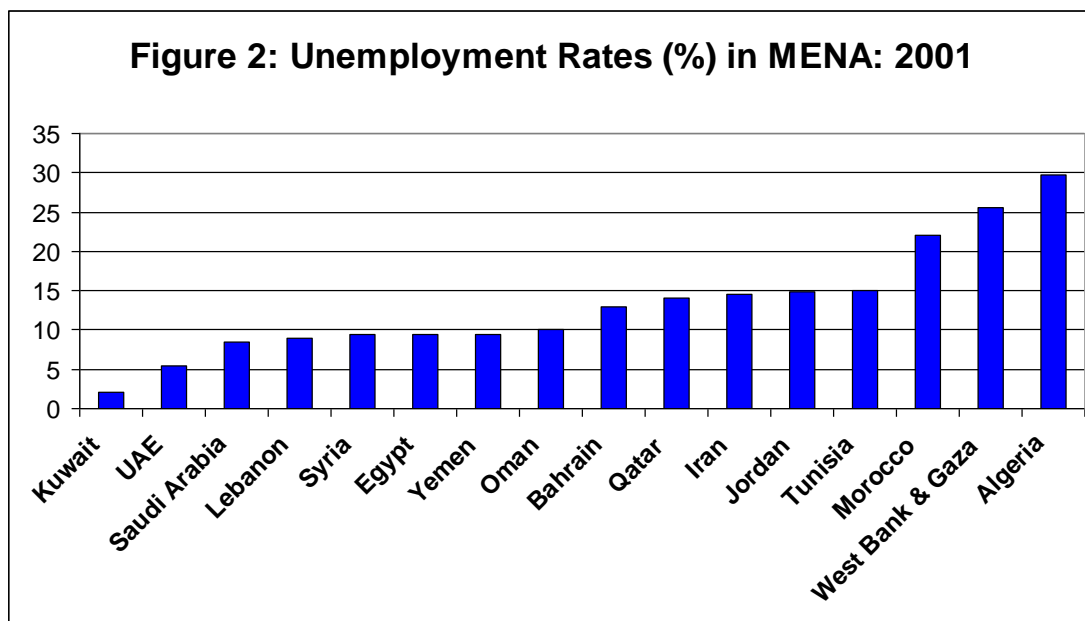
² Economics Division, School of Social Sciences, University of Southampton, Southampton, SO17 1BJ, United Kingdom. Email: j.wahba@soton.ac.uk, Tel: +44 23 80 593996, Fax: +44 23 80 593858.

estimates.³ While the region is heterogeneous in terms of developments in the labor market, the majority of the region has been characterized by high levels of unemployment. Although the oil economies of the Gulf States on average have lower national unemployment rates than non-oil economies in MENA, recently some of the Gulf States, like Saudi Arabia have also experienced high unemployment rates among their national labor force. Recent estimates of unemployment rates in MENA range from less than 5% in Kuwait to almost 30% in Algeria- Figure 2. In addition, unemployment has not fallen much in the region over the 1990s in particular in the countries in which unemployment levels are the highest.



Source: ILO, Global Employment Trends 2005.

³ ILO, World Employment Report 2004-05.



Source: "Unlocking the Employment Potential in the Middle East and North Africa" 2004, Washington, DC: The World Bank.

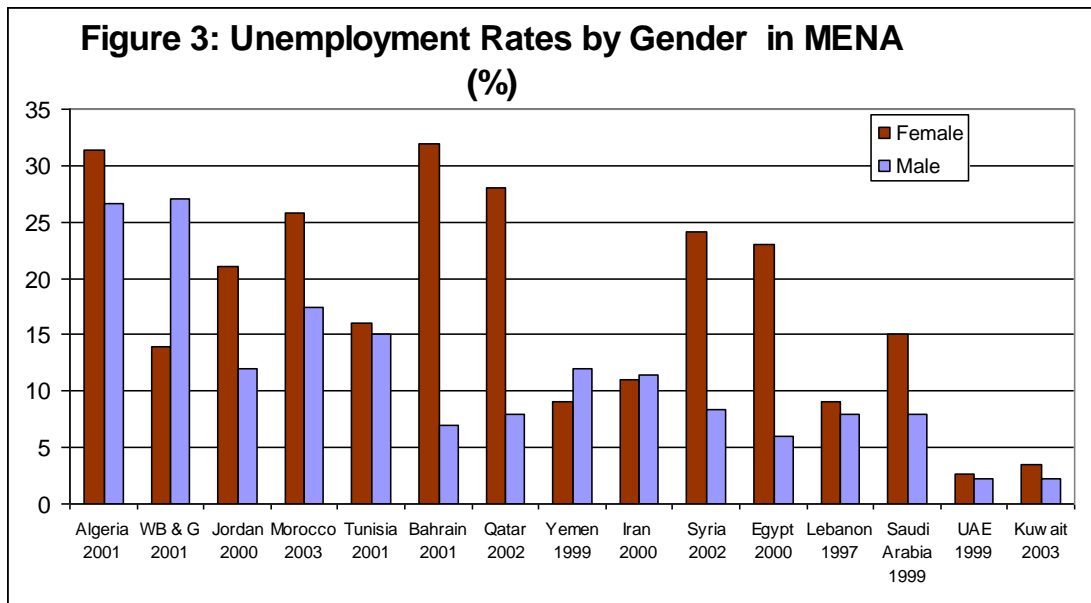
It is important to note that figures of unemployment rates are probably underestimates. Given the differences in the way in which employment is measured across countries in the region, and even between different sources within a country, a comparison of unemployment rates is difficult. First, not all the countries survey or count all those between 15 and 65 years old, for example in Tunisia, only 18-60 are considered. Secondly, for a person to be considered unemployed he/she has to be actively seeking employment (the job-search criterion), however, the ILO recommendation⁴ states when labor markets is not organized or limited in scope the job-search criterion can be relaxed. Thus, in some MENA countries unemployment does not exclude those who are not actively searching for work. For example, inactive people (mostly housewives) are counted as unemployed in Tunisia, although these people would not be counted as unemployed in other countries. Additionally, some

⁴ See ILO (1983), pp. xi-xv.

surveys use the ILO extended definition of employment, which includes subsistence agriculture i.e. individuals engaged in the production of goods and services for their own or household consumption, as opposed to the narrow definition of employment. Obviously, the definition of employment used, would affect both the labor force participation and unemployment rates. Besides, there is also the possibility of underestimation of unemployment rates in economies where labor market opportunities are poor. Labor force participation is often greatly affected by market opportunities, with individuals tending to withdraw from the labor market when opportunities for employment are poor- discouraged unemployment. As a result, labor force estimates are often downwardly biased in precisely those economies where labor market opportunities are the poorest. Furthermore, rarely there are estimates for underemployment which is another problem. Thus, one has to be aware of the potential contradiction in unemployment estimates.

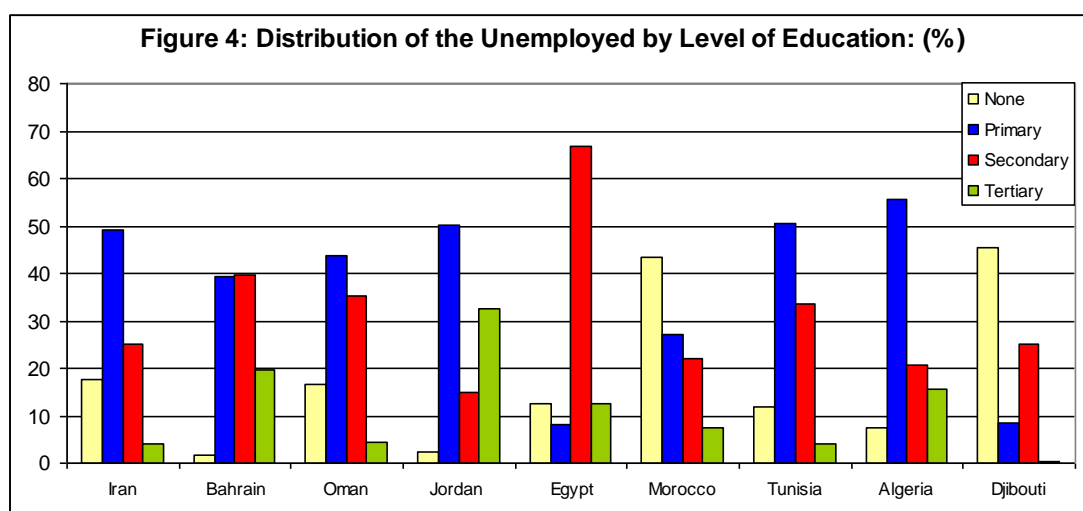
3. Characteristics of Unemployment in MENA

An important aspect of unemployment in MENA is its gender dimension. In most MENA countries, oil exporting Gulf States, Maghreb and Mashreq, women's unemployment rate is higher than men's. The only exceptions are Iran and Yemen, where male unemployment rate exceeds female unemployment rate which is probably due to the very low female participation rates in both countries, and in West Bank and Gaza which is due to the Israeli closure. The rest of the region has higher female unemployment rates in part because of the growth in the female working-age population and rising labor force participation rates brought about by higher educational attainment. For example, in Jordan, female unemployment rate is almost double that of men's, while in Egypt it is almost four times as much- Figure 3.



Source: "Unlocking the Employment Potential in the Middle East and North Africa" 2004, Washington, DC: The World Bank. Note: rate in GCC countries is for nationals only.

Another important feature of unemployment rate in the region is the level of education. MENA has made considerable progress over the last decades in increasing access to basic education. The educational attainment of the adult population in MENA has increased over 180% over the last three decades, higher than any other region of the world (Keller and Nabli 2002). However, the relationship between the level of education and unemployment is not uniform in all MENA countries as seen in Figure 4. In fact the distribution of the unemployed by educational level varies across countries and so does the unemployment rates by educational level as well. In most countries of the region, though, those with no education have the lowest unemployment rates as shown in Table 1. This is particularly the case since those uneducated households tend to be the poorest and most vulnerable.



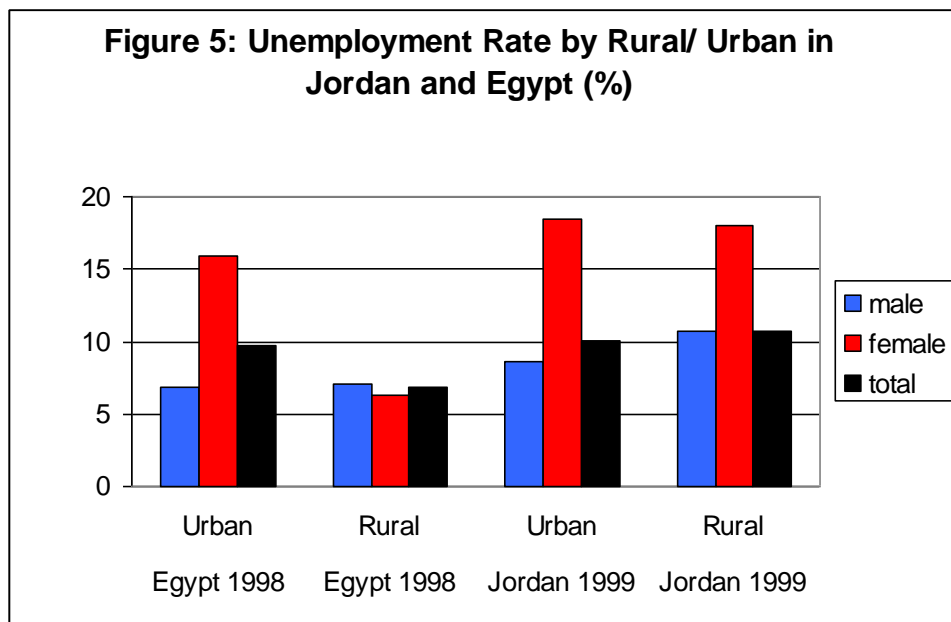
Sources: ILO, Key Labor Market Indicators 2000-2001, except for: Bahrain: ILO LABSTAT; Egypt: 1998 ELMS; Morocco: 1999 LSMS.

Table 1: Unemployment Rates by Educational Level (%)

Country & Year	None			Primary			Secondary			Tertiary			All		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
Oman 1996	5.6	5.6	5.6	13.4	12.2	29.6	24.8	13.5	79.4	2.8	2.3	5	10.8	8.7	28.6
Egypt 1998	4.1	3.6	6.6	5.7	4.7	18.2	22.4	12.9	42.1	9.7	6.5	17	11.4	6.9	26.9
Morocco 1999	9.4	9.7	8.9	26.3	24.9	31.1	32.4	30.4	37.3	37.6	31.8	48.2	15.6	15.7	15.4
Tunisia 1997	10.2	---	---	20.8	---	---	15.4	---	---	6.4	---	---	15.7	15.4	16.7
Algeria 1995	9.6	---	---	30.9	---	---	30.9	---	---	68.4	---	---	27.9	26	38.4

Sources: ILO, Key Labor Market Indicators 2000-2001, except for: Bahrain: ILO LABSTAT; Egypt: 1998 ELMS; Morocco: 1999 LSMS.

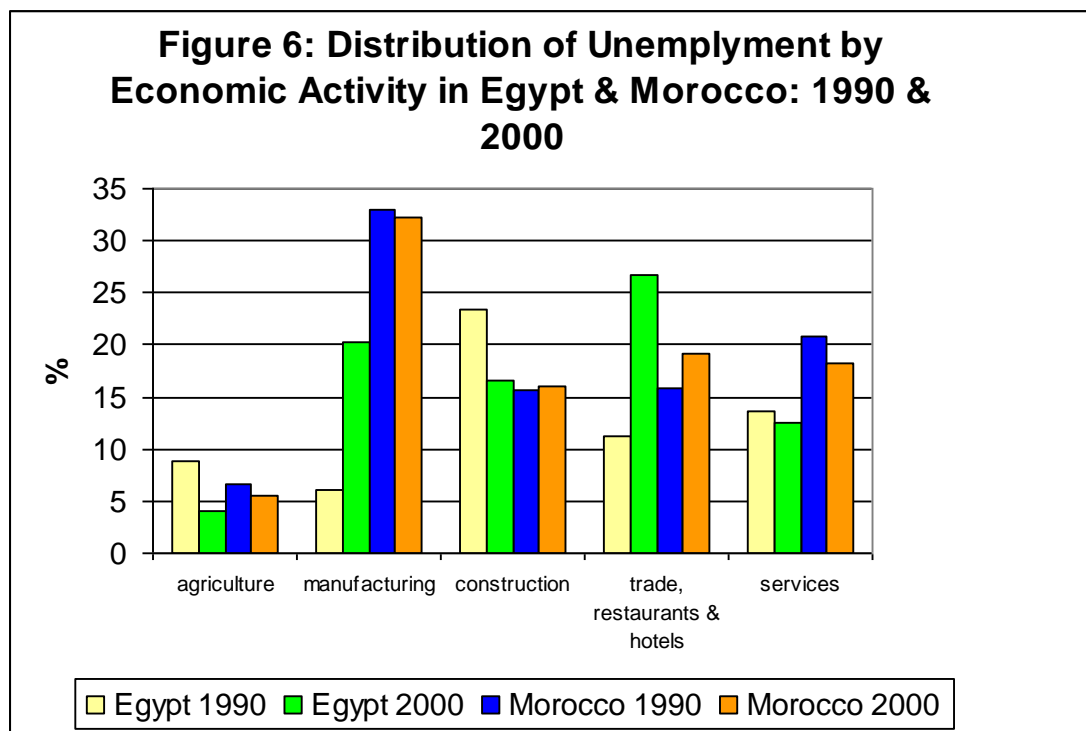
Although unemployment in the region has always been an urban phenomenon, this trend is changing, though still only seen in few countries. For example, in Jordan, rural male unemployment rates are as high as urban unemployment - Figure 5. In Egypt and Jordan, higher rates of rural unemployment are observed among the youth, implying that rural job opportunities have not kept pace with increasing educational attainment, contributing to mismatch and unmet wage expectations.



Source: Jordan 1999 Labor Force Survey, and Egypt 1998 ELMS.

Another important aspect of unemployment is the previous economic activity of those unemployed since that would indicate which activities are booming and which are declining. Figure 6 shows the ILO estimates for the distribution of the unemployed who previously held jobs by economic activity for Egypt & Morocco in 1990 and 2000 which also enables one to examine the effects of economic reforms on unemployment. A number of interesting points emerge from this figure. First, unemployment is the lowest in agriculture in both countries. Unemployment amongst

manufacturing workers has increased four folds in Egypt and although it has fallen slightly in Morocco in 2000 compared to 1990, it still accounts for the unemployment of more than 30% of workers which is not surprising given privatization and economic reforms. In addition, unemployment among workers in trade, restaurants and hotel have increased in both countries, but more so for Egypt than for Morocco. This again may be due to the decline in tourism industry. On the other hand unemployment in services has fallen in both countries suggesting a more flexible sector that is able to absorb workers more easily.

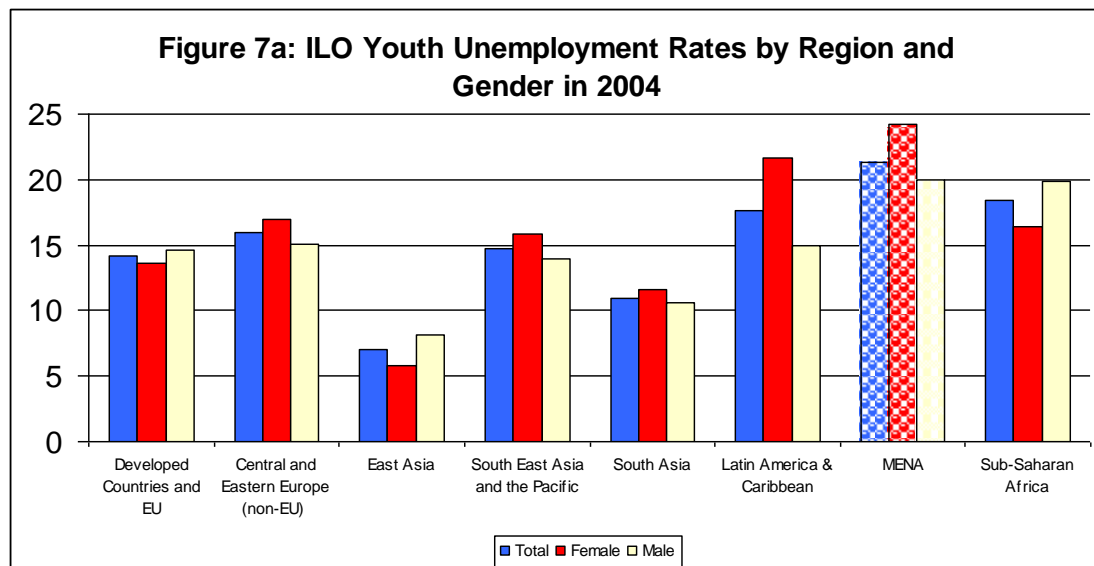


Source: ILO LABSTAT. Note: Unemployed who worked before only.

3. Youth Unemployment

An important characteristic of unemployment in MENA is its young face. According to the ILO, in 2004 youth unemployment was around 24 per cent in MENA the

highest in the world- Figure 7a.⁵ Unemployment rates among the 15-24 age groups are more than the national average in most countries of the region. For example, youth unemployment rate is 13 % in Bahrain where the national average is around 5%. In Morocco, youth unemployment is estimated to be as high as 35% (relative to 22% for the entire urban labor force). In Algeria, youth unemployment among 15-24 age group is 39%, ranging from 1.3 (for 20-24 age group) to 2.7 (for 15-19 age group) times higher than the overall unemployment rate.

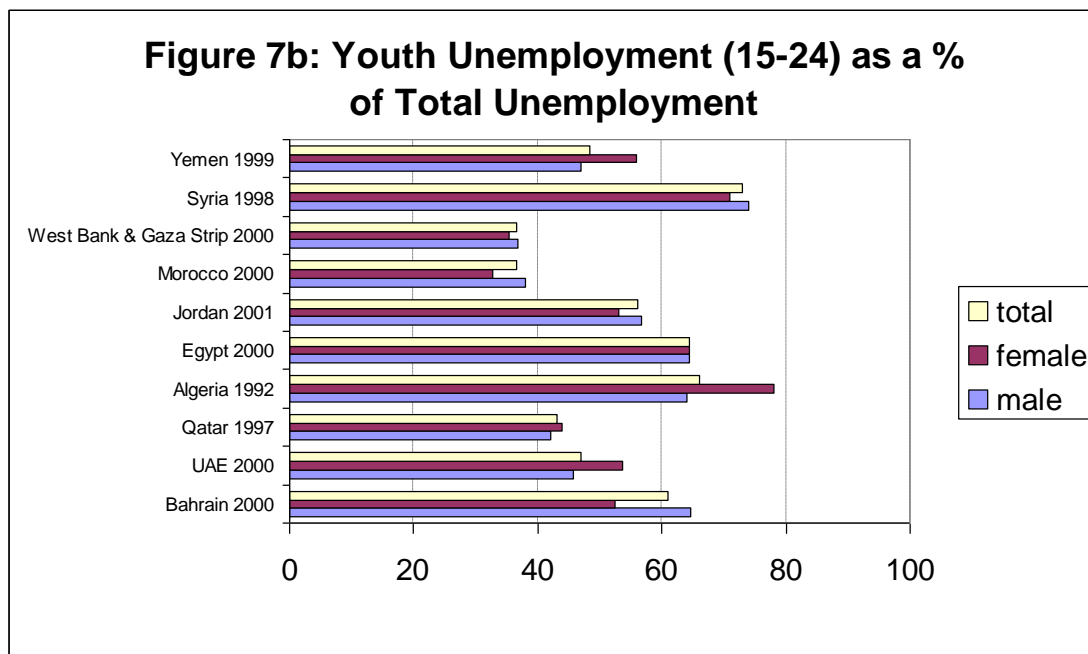


Source: ILO, Global Employment Trends 2005.

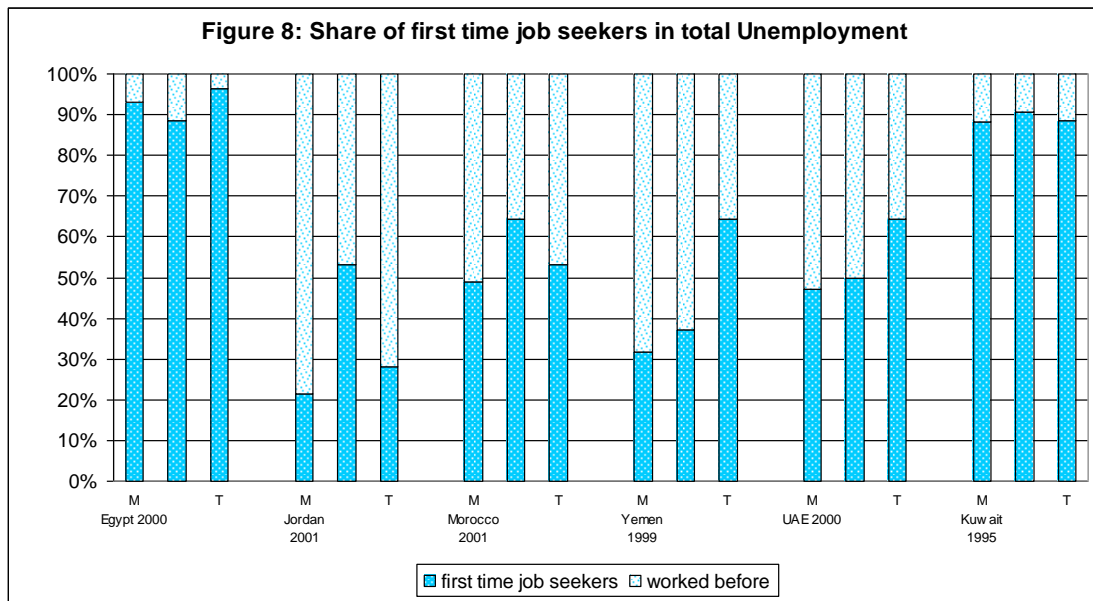
Examining the share of the youth in total unemployment, Figure 7b shows that the youth comprises between one third to three quarters of all unemployed persons in MENA countries. Youth unemployment is also mostly concentrated among the educated as a result of the incapability of the economies of MENA countries to create new job opportunities sufficient to accommodate the annual increase in the labor force

⁵ ILO, Global Employment Trends 2005.

which is mostly composed of youth entering the labor market for the first time. In fact around 50% of the unemployed in many MENA countries are first job seekers; i.e. new entrants to the labor market. Figure 8 shows that the proportions of first time job seekers in total unemployment range from around 30% in Jordan to almost 90% in Egypt and Kuwait. One explanation behind the high youth unemployment is the inadequate job creation to keep pace with demographic pressures that caused rapid labor force growth and therefore an influx of new entrants. Recent estimates of new youth entrants to the labor market projected to be between 2.5-3 million annually in the period 2000-2010. Thus, it is highly likely that this trend will continue in the foreseeable future.



Source: ILO, LABSTAT; except for Syria, Algeria & Qatar: ILO (2002) Global Employment Trends; Jordan: Annual Report of Employment and Unemployment Survey 2001, Department of Statistics (Jordan).



Source: ILO LABSTAT, except for Kuwait: Population Census 2001, Jordan: Annual Report Of Employment and Unemployment Survey 2001, Department of Statistics (Jordan).

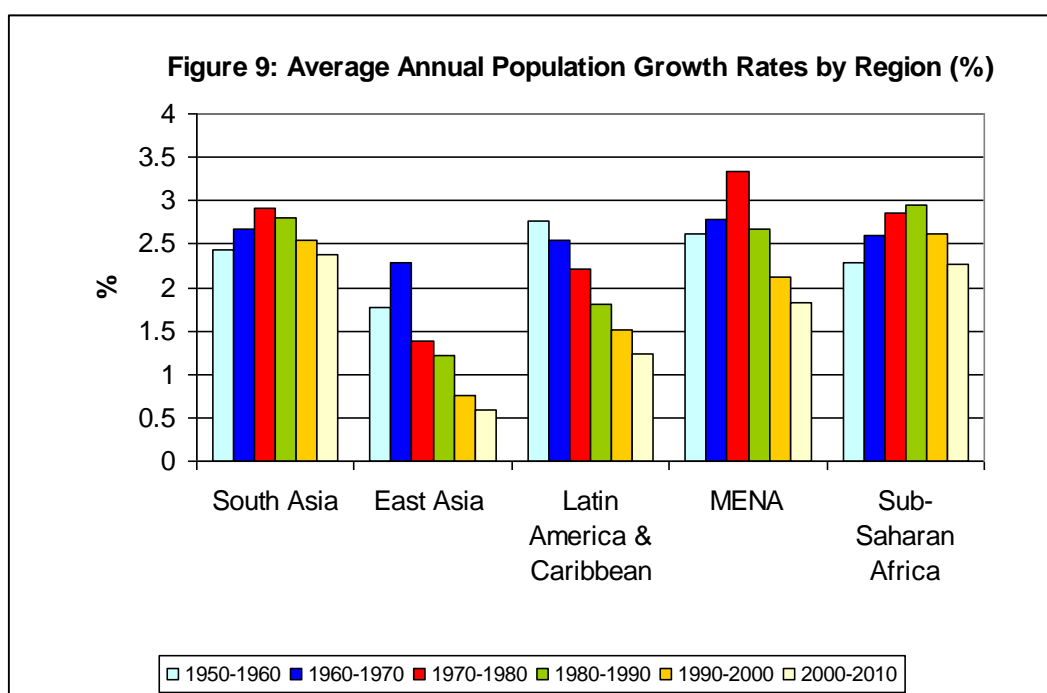
4. Factors Behind Unemployment

There are several factors that have contributed to the high unemployment rates in MENA. This section will examine each in details.

4.1 High population growth rates

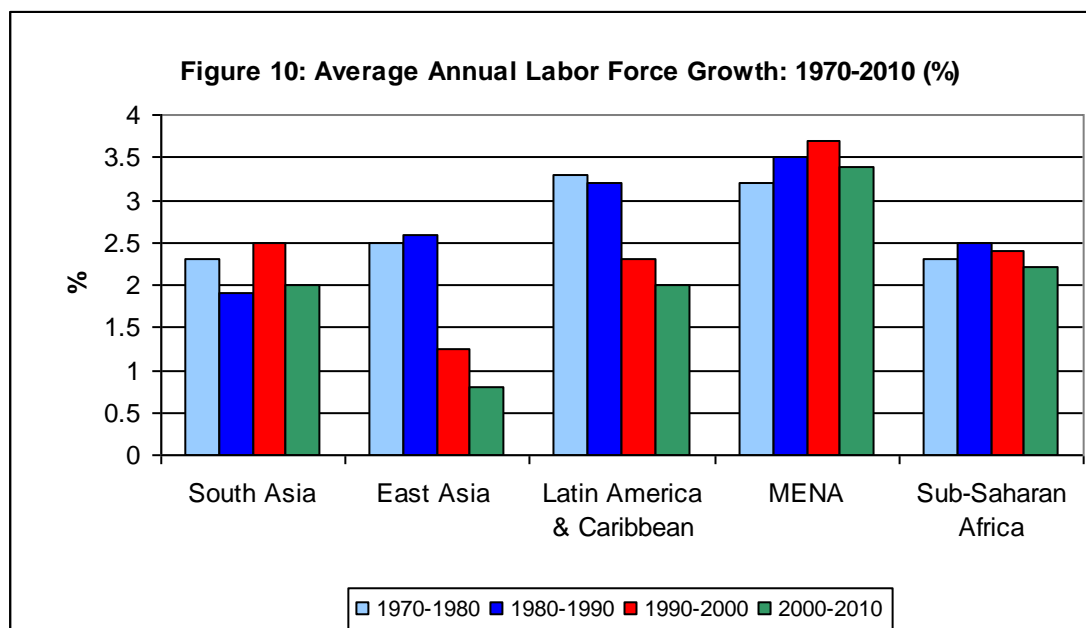
During the 1970s and 1980s, the MENA region experienced the highest rates of population growth in the world- Figure 9. In fact, MENA population has quadrupled during the period 1950-2000, with the largest non-oil diversified economies in the region--Algeria, Egypt, Iran, Jordan, Morocco, and Tunisia accounting for some 70% of total MENA population. Total population grew from 100 million in 1950 to over 380 million in 2000. This has resulted in a fast growing work force as seen in Figure 10 that was not matched by growing job opportunities in the MENA region. One of

the factors of this unprecedented increase in total population is the high increase in fertility rates in the 1950s, despite serious efforts to curb it in the 1980s, and with a great success in the 1990s. During that demographic transition, the structure of population changed in favor of the youth cohorts. Although the demographic transition may be a gift, yet in the absence of dynamic labor markets and steady output growth, the rapid expansion of the working age population and the accompanying labor force growth have contributed to high unemployment.⁶ Although fertility rates have recently been declining resulting in slower population growth, it will take 20 years for this to translate into slower growth in the workforce.



Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2004 Revision and World Urbanization Prospects: The 2003 Revision.

⁶ Youssef (2002).



Source: "Unlocking the Employment Potential in the Middle East and North Africa" 2004, Washington, DC: The World Bank. Note: East Asia excludes China.

More important has been the changing age structure of MENA's populations. Whereas the age structure in the past was dominated by the very young (ages 0-14), the balance is gradually shifting in favor of working age adults (ages 15-64) whose share in the population will steadily rise. Participation rates are projected to rise sharply because of the continuing change in the population structure and greater numbers of women seeking work for economic reasons. As a consequence, labor markets in MENA have had, and will still need to continue, to cope with a rising tide of first-time job seekers on top of those already unemployed and seeking work. Some 47 million jobs need to be created over the next 10 years just to keep pace with new entrants to the job market. Close to 6.5 million additional jobs would be needed to reduce the regional unemployment rate by one half. The implication is that the current employed workforce would have to expand by close to 60% over the next ten years. Such an accomplishment was not even achieved by the high performing East Asian

economies during the height of their employment growth periods, making it one of the most key challenges facing MENA. (Keller and Nabli (2002)).

4.2 Public Employment

Although unemployment rates vary considerably in the MENA region, the underlying factors behind unemployment are similar. The MENA region entered the 1990s with high share of government employment in the labor force and extensive involvement of the State in economic production. This was the result of governments in the region opting out for a more active role in production and employment after independence. This Social Contract between MENA governments and the people meant that governments often used public sector to combat unemployment and to provide social safety nets.⁷ For example, in Egypt, the government passed a law that guaranteed employment to all secondary, technical institutes, and university, graduates in the early 1960s. Although the law was suspended in 1984, the policy was not fully abolished and therefore, did not result in curbing the demand on government and public sector jobs. Also, government employment was seen as a last resort employer during downturns. This has resulted in the public sector becoming the main employer for many of the countries in the region. For GCC, employment in the government was seen as a way to redistribute rents from oil to the nationals. (See Said (2001)).

The rise in government employment was initially associated with significant increases in social services (education, health, social protection) and great improvement in social indicators. Expansion of public sector has been partly fueled by an expansion of the activities of state-owned enterprises while public administration has played a

⁷ See The World Bank (2004) chapter 2.

substitute role for “social protection” through over-recruitment. These rigid institutional structures have led to a rather inflexible response to labor market pressures. Following the decline of oil prices and low, even negative, economic growth rates, public sector employment started creating “deficit financed” jobs to absorb the excess supply of labor, thereby acting as a buffer for those who could not be absorbed in the private sector.

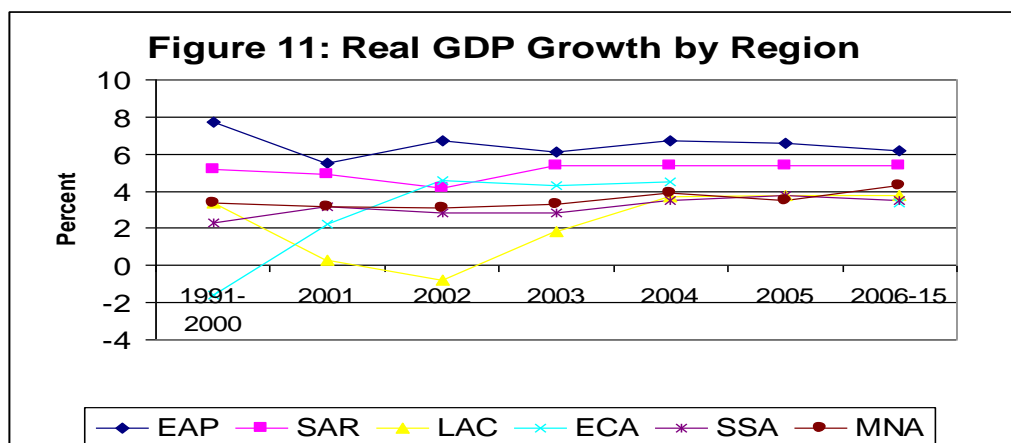
During the 1990s, most MENA countries tried to downsize their public sector and limit the growth of its employment as part of the overall economic reform programs. Some countries managed to reduce their public sector like Jordan and Morocco, while others like Egypt failed to especially hampered by the limited role of the private sector in job creation. For many the public sector provided an attractive employment that meant individuals were ready to queue for those jobs. The public sector offered a range of monetary and fringe benefits as well as life time job security. In addition, the private sector offered few jobs for women. Thus, the role played by public sector distorted the labor market.

In addition, the way wages are set also contributed to the problem. Public sector wages in Egypt for example are set according to the Law of the Price List of Certificates of 1951 (Assaad, 1997), which stipulates a fixed salary for each certificate and a systematic raise according to seniority (not performance or skill), with lower and upper limits for each occupational grade. Even in countries where the public sector contributes a lesser role in employment, such as Morocco, wage settings in the public sector influences general wage determination in the economy. Adding stringent

firing procedures in the private sector and judicial practices that reinforces the security and permanency of the job, further augments the problem in Morocco.

4.3 Slow growth and low TFP

Economic growth has been insufficient, given the region’s labor force growth. Poor economic growth in the region - see figure 11- is due to several reasons. Declining oil prices had a major impact on the region, both for the oil exporting countries, and for much of the region through the impact on remittances and external financial flows. Following the decline in the price of oil, investment and growth rates collapsed, as did regional capital and labor markets. Over the last 30 years, growth of economy-wide productivity, or Total Factor Productivity (TFP), declined while population growth has remained high. Declining productivity, high population growth, and falling oil prices contributed to an average regional decline in real per capita incomes of two percent per year since 1986, the largest decline in any developing region during this period.⁸



Source: World Bank, Global Economic Prospects and the Developing Countries, 2004.

⁸ See Abrahart, Kaur and Tzannatos (2000).

The unemployment problem in the region is compounded by decreasing productivity. Over the 1990s, the growth of GDP per worker was lower in the MENA region than in any other region of the world after Sub-Saharan Africa, averaging only 0.8% a year. In the period 1990 - 1995, productivity has declined in Kuwait, Algeria and Jordan, has remained the same in Bahrain and Oman and has increased in Egypt, Tunisia and Morocco. Alongside the productivity decline, real wages have also witnessed substantial declines over the decade. Outside of the GCC, real wages in manufacturing have declined, on average, by about 2 percent a year over the period 1990-1996. Algeria and Egypt registered the largest average real wage declines in the early 1990s but decline also occurred in Jordan and Tunisia during that period- see The World Bank, (2004).

4.4 Macroeconomic instability

The region was also marked by macroeconomic instability and structural inefficiencies during the 1985-1995 periods which prevented the emergence of a strong private sector. Public sector ownership was extensive, yet while large investments were taking place with the oil windfalls, there were few policies in place to make these investments competitive. Trade regimes were protective. Regulation limited the entry of the private sector into most sectors. Financial sectors were geared to serving public enterprises, and institutions were not in place to facilitate a vibrant private sector. As a consequence, when oil prices collapsed, the engine for growth in the economies of MENA stalled, and there was limited ability to absorb the burgeoning labor force. Starting in late 1980s, several countries in the region – Morocco and Tunisia, and soon after, Jordan and Egypt, embarked on extensive programs of macroeconomic stabilization and policy reform. By the 1990s, nearly all

of the non-GCC countries in the region followed suit, as did several of the Gulf economies. While there has been considerable variance among economies in terms of both the speed and depth of these reforms, the overall change in policy throughout the region would seem to be a significant step forward in creating an environment in which the private sector could emerge and become an engine for higher and sustainable growth. Despite this, strong growth failed to emerge and the private sector failed to take off.

Although a number of factors are responsible for the high unemployment rates in MENA as shown above, a number of important questions arise from the previous analysis. 1. Is unemployment primarily a problem of new entrants and expectations mismatch? 2. Is unemployment voluntary rather than involuntary? 3. To what extent workers still queue for public sector jobs? In order to better understand the determinants of unemployment, one needs to examine the micro-level determinants of unemployment. The rest of the paper will focus on two countries: Egypt and Morocco and use micro-level data from labor force sample surveys to attempt to understand the above questions.

5. Profile of the Unemployed in Egypt and Morocco

In order to better understand the nature of unemployment, we focus in the rest of the paper on two countries in MENA namely, Egypt and Morocco to highlight some of the different determinants of unemployment in the region. The analysis for Egypt is based on the 1998 Egyptian Labor Market Survey (ELMS) and the 1988 Labor Force Sample Survey. For Morocco, we use Morocco Living Standard Measurement Surveys (MLSMS) of 1991 and 1998/1999. All surveys are nationally representative household surveys that include extensive data on employment

characteristics such as status, economic activity, duration of unemployment, occupation ...etc.

5.2 Who are the Unemployed?

First, we examine the characteristics of the unemployed in both countries- see Table 2. An important difference between unemployment in Egypt and Morocco is that in Egypt new entrants comprise over 70% of the unemployed compared to 55% in Morocco. Examining the reasons behind unemployment in Morocco indicates that restructuring might have been responsible for a substantial proportion of unemployment in Morocco. Almost 35% of those who previously held jobs were unemployed due to firms' closure in 1999 up from 22 percent in 1991. However, in Egypt a larger majority of the unemployed are new entrants, suggesting that economic restructuring is not as important a reason there. More than half the unemployed in Egypt claimed they were unemployed because of an absolute absence of jobs, which suggests that their unemployment may be involuntary.

In Egypt, the unemployed is slightly younger in age with a mean of around 25 years old, while in Morocco the mean age is around 27 years of age. In addition, given that the majority of the unemployed in Egypt are new entrants to the labor market 60% are below 25 years old and another 22% are between 25 and 29 years old. The proportion of youth (ages 15-24) among the unemployed in Morocco is less than in Egypt and reaches almost half of the total unemployed (47%). It is also worth noting that in Morocco the proportion of the unemployed among those over 30 years of age has increased after restructuring and is higher than Egypt.

The distribution of the unemployed by educational level seems to be different in the two countries. In Egypt the proportion of the educated among the unemployed is high at around 80 %, while in Morocco 70% of the unemployed have no education or just primary education. The average number of years of schooling of the unemployed in Egypt increased from 9.4 to 11 years and from 6.8 to 8.2 years in Morocco reflecting the overall increase in educational attainment in both countries.

Another emerging trend in the region is the increase in unemployment in rural areas. The case of Egypt reflects this where the proportion of the unemployed in urban areas has fallen in the 90s compared to the 80s.

Table 2: Characteristics of the Unemployed in Egypt and Morocco

	Egypt		Morocco	
	1988	1998	1991	1999
New Entrant (%)	----	70.24	50.49	54.85
Mean Age in years	24.75	24.77	26.68	27.09
<i>Age groups (%)</i>				
15-19	25.00	19.74	19.21	18.68
20-24	39.50	40.77	31.78	28.68
25-29	18.51	21.59	25.71	23.35
30-39	9.54	12.64	15.54	19.96
40-49	5.34	2.56	4.38	7.22
50-59	1.53	2.56	3.39	1.70
<i>Educational level (%)</i>				
illiterate	16.30	7.80	22.81	17.09
read & write	9.24	3.66	29.07	23.93
Primary	12.32	8.78	19.61	29.49
Intermediate	42.75	56.83	14.46	17.95
Secondary	6.16	9.63	10.85	4.70
university+	13.22	13.29	3.20	6.84
Urban Residence (%)	75.40	69.40	68.98	80.38
married	32.32	24.62	16.46	16.83
Unemployment Duration in weeks	29	159	79	178
Sample Size	557	719	719	474

Notes: New entrant refers to those who did not hold previous jobs. All analysis is based on unemployed with search criterion in Morocco and with search criterion including subsistence agriculture in Egypt.

Source: Authors' own calculations.

Unemployment Duration

Table 2 also shows the mean length of unemployment spells in Egypt and Morocco over time. The duration of unemployment appears to have increased sharply over time in both countries. In Egypt, the average duration of unemployment has increased from 29 weeks in 1988 to 159 weeks while in Morocco the average duration of unemployment increased from 79 to 178 weeks.⁹ The data also suggest that unemployment durations are longer among first time job seekers than among those with previous work experience. For first-time job seekers in Egypt, the average unemployment duration was around 190 weeks compared to 86 weeks for those with previous work experience in 1998. Similar patterns are apparent in Morocco. Thus, it is clear that new entrants tend to wait longer for jobs.

Figures 12a and 12b show the distribution of the unemployed by unemployment duration. In both countries, what is worrying is the persistence of 19% in Egypt and 25% in Morocco, to remain unemployed after 5 years.

⁹ Although these figures, like any retrospective data, may suffer from recall and reporting problems, the increase in duration of unemployment in both cases is unmistakable.

Figure 12a: Unemployment Duration in Egypt 1998

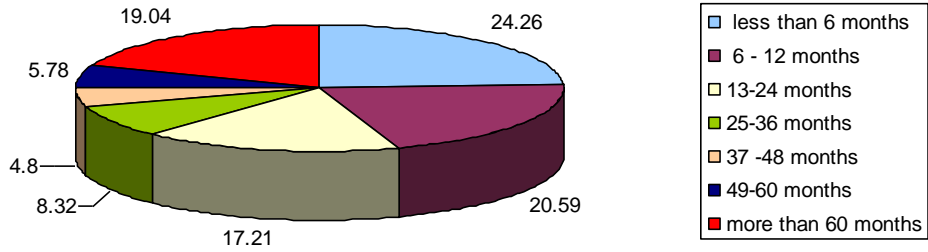
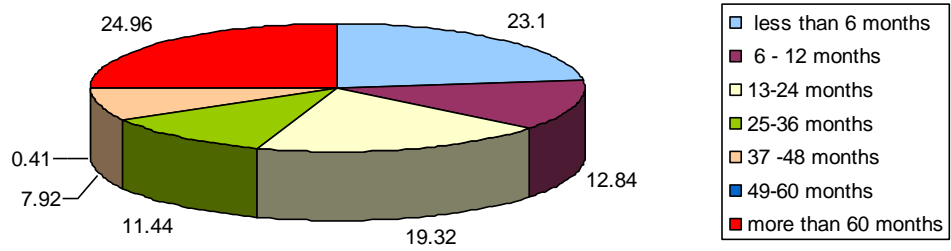


Figure 12b: Unemployment Duration in Morocco: 1999



6. The Determinants of Unemployment in Egypt and Morocco

Having examined the characteristics of the unemployed in Egypt and Morocco, we now turn to the determinants of unemployment. First, we review the empirical findings on the determinants of unemployment.

6.1. Review of the Empirical Literature:

The analysis of unemployment in developing countries is quite limited given the magnitude of this problem. Few studies have focused on whether unemployment in developing countries is a luxury by examining the characteristics of the unemployed. For example, Rama (1999) studies unemployment in Sri Lanka and finds that it is largely voluntary and not the result of a shortage of jobs but the artificial gap between good and bad jobs. His argument for high unemployment rates centred on rent received from public sector jobs and formal private sector activities that are protected by high tariffs or covered by job security regulations. On the other hand, Kingdon and Knight (2001) find little evidence to support the luxury unemployment interpretation of joblessness in South Africa.

Fewer studies have looked at women unemployment because of lack of data and the difficulty of observing unemployed women. However, Tansel and Tasci (2005) show that the probability of leaving unemployment for Turkish women is substantially lower than men, which they argue may indicate that either women have a high shadow value of home production activities, and thus a high reservation wage, or may be an indication of discrimination against women in the labor market.

Studies also found that education has been an important determinant of unemployment. For example, Park (1997) finds education has strong negative effect with the probability of unemployment in the USA. Kettunen (1993), using Finnish microeconomic data, shows unemployed persons who have about 13-14 years of education have the highest employment probability. Ham et al (1998), in the Czech republic, find that education had no significant impact in 1994, though in 1995 - 1996 more educated people had more chances to leave the unemployment pool. Grogan and van den Berg (2000) found similar outcome in Russia, which is in contrast with the results obtained by Foley (1997).

Age plays an important role in unemployment. Abraham and Vodopivec (1993) find older workers and least educated workers have the most troubles in finding a job. Dushi (1997) has investigated unemployment in Albania and has found that age, gender, education, local unemployment rate, number of children have no statistically significant effects on leaving unemployment.

6.2 Methodology

To examine the relationship between unemployment and socio-economic factors, we use a probit regression model.

We follow the ILO definition of the unemployed as: those people who are (1) without work, (2) available for work and (3) have been looking for work.¹⁰ We acknowledge that this does not account for the discouraged unemployed or for the degree of underemployment. We use the extended definition of employment that includes all

¹⁰During the early 1980s, the ILO relaxed the search criterion when defining unemployment in case of developing countries.

those engaged in any subsistence production. For our purpose, youth refers to those aged 15-29 years of age, although we distinguish between 15-19, 20-24 and 25-29 age groups. We investigate the influence of age, gender, marital status, urban/rural region, and education on unemployment.

$$\hat{p}_j = \frac{1}{1 + \exp^{-\hat{\beta}_j X_j}}$$

where $\hat{\beta}_j$ is a vector of regression coefficients, i.e. characteristics for individual j .

6.3 Empirical Findings

Table 3 presents the marginal effects of the probability of unemployment in Egypt and Morocco. For both countries, the determinants of unemployment are similar. The probability of being unemployed is higher for females than for males even when other individual characteristics such as age and education are controlled for. The probability of unemployment is much more prevalent among single, never married individuals compared to those who are married. In addition, the probability of unemployment is higher in urban than rural areas in both Morocco and Egypt.

Table 3: Determinants of Unemployment in Egypt and Morocco: Marginal Effects

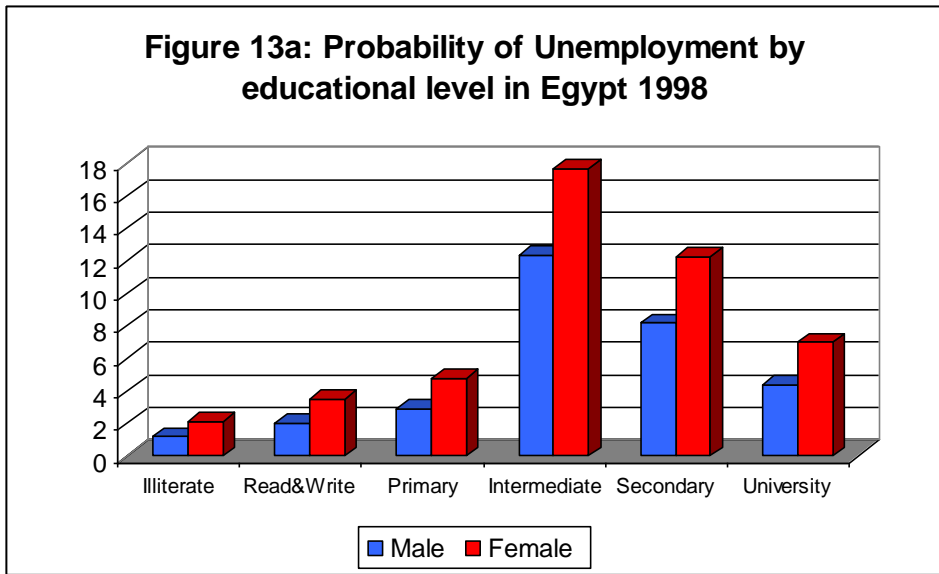
	Egypt				Morocco			
	1988		1998		1991		1999	
	Marginal Effect	Std Error	Marginal Effect	Std Error	Marginal Effect	Std Error	Marginal Effect	Std Error
Male	-0.0292	0.004	-0.0218	0.005	-0.0013	0.007	-0.0221	0.004
<i>Age Groups: ref: 20-24 years old</i>								
aged1519	-0.0014	0.004	-0.0117	0.005	-0.0315	0.007	-0.0056	0.004
aged2529	-0.0198	0.003	-0.0181	0.004	0.0076	0.010	-0.0004	0.005
aged3039	-0.0347	0.003	-0.0463	0.004	-0.0360	0.008	-0.0133	0.004
aged4049	-0.0302	0.003	-0.0617	0.004	-0.0357	0.009	-0.0200	0.004
aged5059	-0.0341	0.003	-0.0458	0.004	-0.0376	0.011	-0.0234	0.004
<i>Educational level dummies: ref: no education</i>								
Read & Write	0.0308	0.009	0.0306	0.015	0.0594	0.012	0.0274	0.007
Primary	0.0331	0.009	0.0200	0.010	0.0895	0.017	0.0535	0.009
Intermediate	0.0800	0.010	0.1077	0.012	0.1220	0.024	0.0653	0.013
Secondary	0.0558	0.017	0.1121	0.021	0.1411	0.038	0.0372	0.017
University	0.0534	0.012	0.0672	0.014	0.0428	0.028	0.0788	0.022
<i>Marital Status</i>								
married	-0.0176	0.005	-0.0428	0.006	-0.1008	0.011	-0.0263	0.005
<i>Urban/Rural Residence</i>								
Urban	0.0322	0.004	0.0136	0.004	0.0760	0.008	0.0319	0.004
Base	0.027		0.042		0.071		0.027	
No. of Obs	9336		8785		6425		9582	
log likelihood	-1612.11		-1954.27		-1815.720		-1587.47	

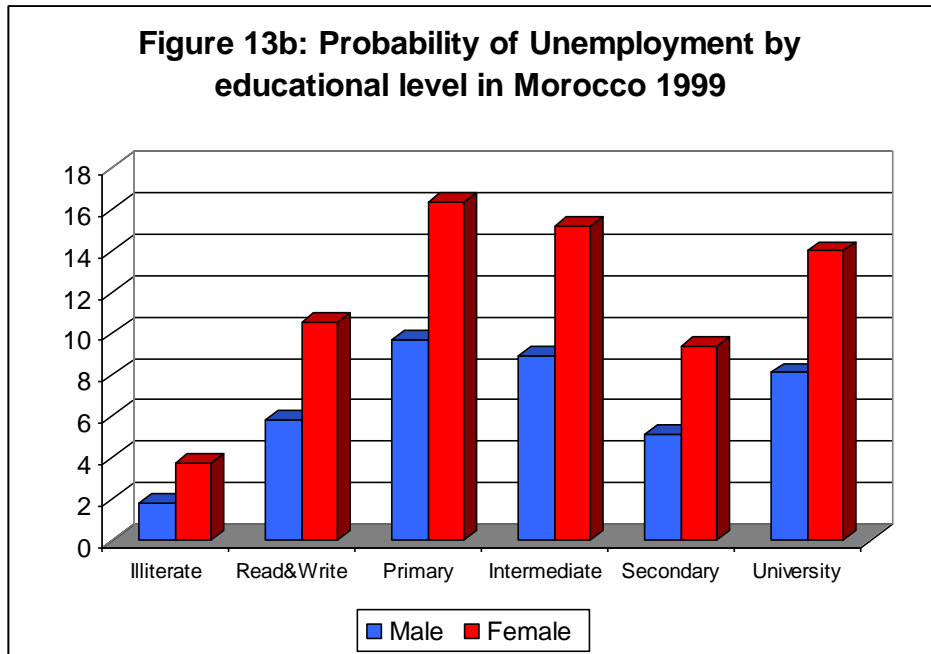
Bold: significance at 5 % level or better.

Source: Authors' own calculations.

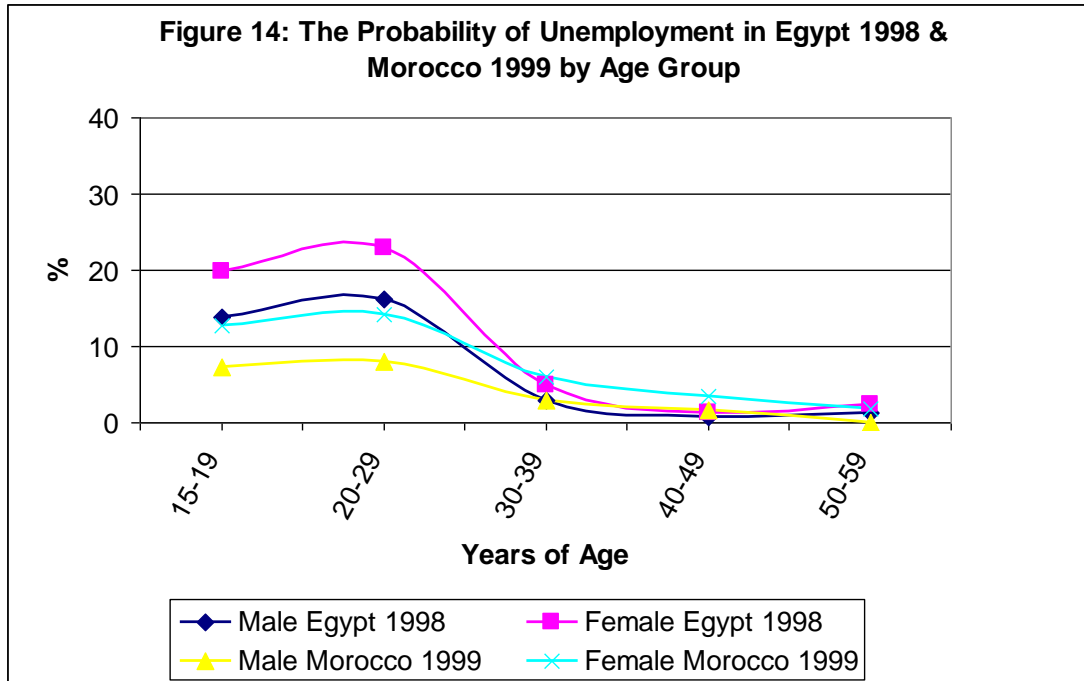
In Egypt, the probability of unemployment in 1998 increased for almost all educational levels with the exception of those with primary education. Those with intermediate level of education have the highest probability of unemployment. Overall those with more than primary education tend to have higher probability of unemployment than those with primary or less in Egypt. However, in Morocco, the relationship between education and the probability of unemployment is not linear. Figures 13a & 13b show the predicted probability of unemployment by educational levels in Egypt 1998 and in Morocco 1999. In Egypt, the highest probability of

unemployment is found for those with intermediate education. In Morocco, unemployment is highest among holders of primary and lower secondary school certificates. However, it is important to note that levels of education in Morocco are significantly lower than in Egypt: 68 percent of working age Moroccans had less than a primary education in 1999 compared to only 35 percent of working age Egyptians in 1998. In fact, in both countries, significant levels of unemployment affect people who are in the upper third of the educational distribution. This may be the case because unemployment mainly affects young people- as seen below- and young people tend to be more educated than older people.



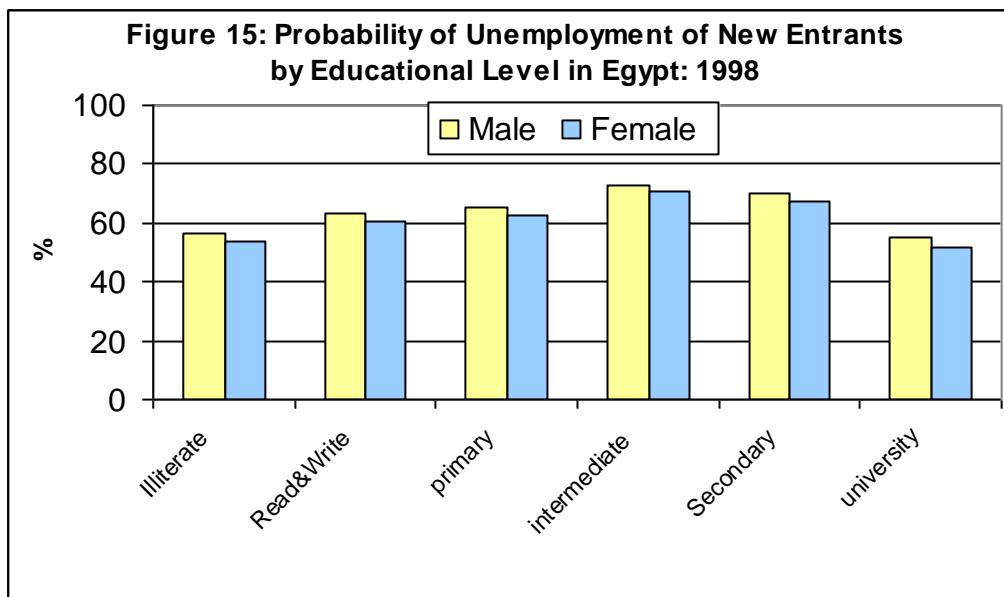


Age plays an important role in unemployment with the highest likelihood being for the 20-29 years old in both countries. The probability of unemployment falls with age for both men and women in Egypt and Morocco as seen in Figure 14. Thus, it is clear that the probability of unemployment is particularly high for the youth. In addition, it is a problem for new entrants to the labor market. In both countries, it is not surprising that new entrants to the labor market are much likely to be unemployed than those who have worked before.



6.4 New Entrants in Egypt

In fact, the probability of unemployment of new entrants (those who joined the labor market at the year of the survey) in 1998 was above 50% for new entrants to the Egyptian labor market regardless of their educational level- Figure 15.

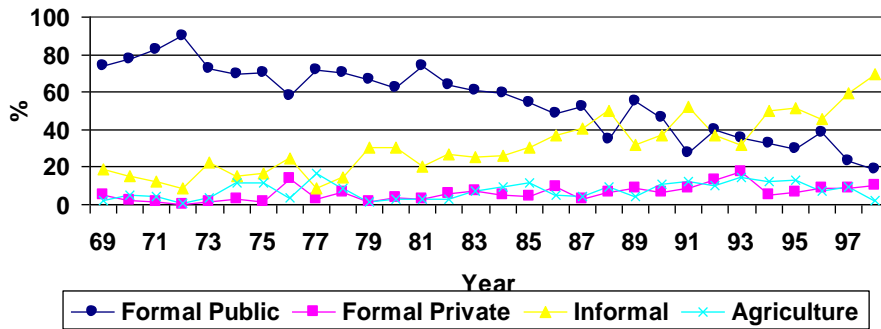


Jobs of new entrants

The preponderance of youth and new entrants among the unemployed and the longer unemployment durations among new entrants points to two possible explanations: (i) labor demand has not grown fast enough to absorb new entrants to the labor force, or (ii) many job seekers are effectively voluntarily unemployed because they choose to wait for “good” jobs rather than accepting lower or less remunerative work that is readily available. In fact the downsizing of the public sector in the 1990s and the limited role played by the private sector in job creation is clearly reflected in the pattern of jobs of the new entrants over the last three decades. Figure 16a shows the percentage of new entrants going into formal public, formal private, informal and agricultural employment between 1969 & 1998. In 1969, around 74% of new workers were drawn into formal public employment and 20% into informal jobs. Since 1993, informal employment has been absorbing more workers than formal public employment. Thus, by 1998, around 69% of new workers were drawn into informal employment and only 19% into formal public jobs. The relative share of formal private employment has doubled: in 1969 it was 5% compared to 10% in 1998. Since the mid 80s, male workers were drawn disproportionately into informal jobs. However, this only started to take place in the early 90s for females- Figures 16b & 16c.¹¹

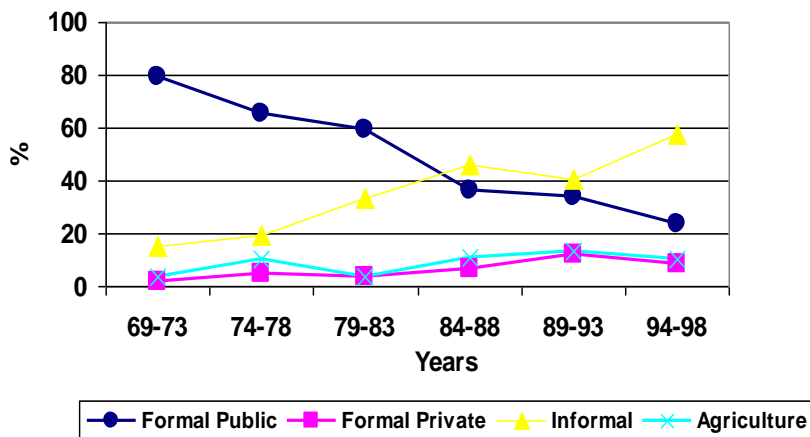
¹¹ See Moktar and Wahba (2002).

Figure 16a : Percent of New Entrants to Formal & Informal Employment: 18 or more years old



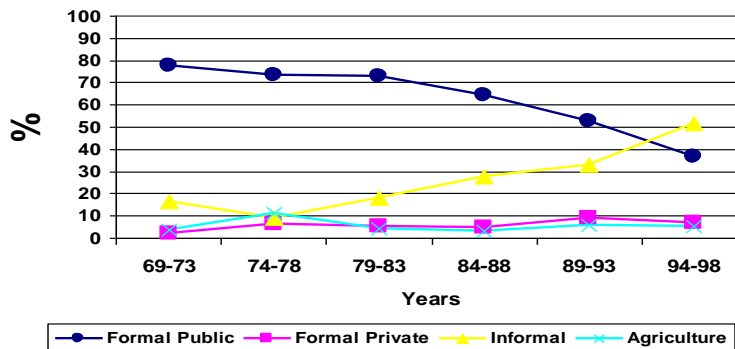
Source: Moktar and Wahba (2002).

Figure 16b: Percent Of Male New Entrants to Informal & Formal Employment: 18 Years or more



Source: Moktar and Wahba (2002).

Figure 16c: Percent Of Female New entrants to Informal & Formal Employment : 18 Years Old or more



Source: Moktar and Wahba (2002).

6.5 Summary

To sum up, in Egypt, to large extent unemployment is the result of the employment guarantees in the public sector for secondary and above graduates as well as the limited role of the private sector in job creation. Although the growth of the public sector in Egypt has slowed down, it still accounted for well over a third of job creation in the 1990s. Thus, the unemployed in Egypt based on the above analysis are basically those with secondary degree or above, young and new entrant to the labor market i.e. those are waiting for the public sector job. Thus, the unemployed in Egypt are essentially those who would have had a chance at a formal job in the public sector in the past and continue to have expectations of acquiring such a job.¹²

On the other hand in Morocco, the public sector share in total employment is quite small relative to that in Egypt and has shrunk further following the privatization process and the slowness of the government hiring in the nineties. Morocco embarked on economic reforms in the mid 1980s but has experienced low economic growth in the 1990s accompanied by rigid labor market regulations: minimum wages and hiring and firing requirements are the main cause of unemployment in Morocco.¹³ Examining the characteristics of the unemployed, although the highly educated have high probability of unemployment, those with primary education have the highest probability of unemployment. In addition, restructuring has led many to lose their jobs.

¹² See Assaad (1997).

¹³ See Agenor and El Aynaoui (2003).

In addition, in both Egypt and Morocco, it is clear that the probability of unemployment for the educated is quite high suggesting that there is a mismatch between the skills required in the labor market and those provided by the education system.

7. Conclusion

There is no doubt that high persistent unemployment rates are a major challenge for the MENA region. In addition, with the expected increase in the labor force of the region resulting from recent high population growth makes this problem not short lived. The pressing challenge facing the region in the coming two decades would be to create enough jobs for those already unemployed and those expected to join the labor market for the first time.

Poor economic growth has been blamed as the main culprit behind the high unemployment in the region coupled with low and poor human capital. Obviously, faster job creation is essential however, as is evident from the analysis, reforming of the distortionary labor market policies is crucial, in particular, rationalizing the role of the public sector. However, at the end of the day if MENA is to be able to reduce unemployment and utilize its human resources in order to be able to compete in a globalized world, then it has to invest in “better quality” educated labor force that has the needed skills required in the modern labor market.

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