

Short term economic responses to unemployment problems in the Arab Region

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1. Introduction

Along with its major political and social aspects, the “Arab Spring” was mainly underpinned by the lack of employment opportunities, especially for youths. Deficiency in competitiveness due to failures in trade liberalization, in line with poor economic growth have ranked unemployment in the Arab region as being among the highest in the world. This situation was caused due to a complex combination of different factors. In essence, the demographic transition that occurred in the region and the economic transformations that have taken place in former centrally planned countries had created a strong pressure on the job market.

The heart of the problem lies in the fact that while the labor demand is witnessing a rapid increase, the economy is unable to create enough jobs. Adding to that, job market rigidities do not allow recruiters to easily hire and fire workers. This reinforces a strong and well spotted mismatch between the demographic and economic structures in the Arab region. In evidence, The Arab Labor Organization (ALO) estimates that 20 million persons are currently unemployed in the region, and that the unemployment rate is growing at a fast pace. Other estimations show that the Arab Mediterranean Countries will need to create more than 1,500,000 additional jobs per year over the next 10 years in order to provide employment opportunities for new labor market entrants and to keep unemployment figures unchanged¹. Doing so requires the rates of economic growth to surpass those achieved in recent years. That is to say, reforms should be put in place in order to increase the labor content of growth and better transform economic growth into job opportunities.

In this chapter we put forward an overall presentation of the main characteristics and failures of the job market in the Arab region, covering the supply side, the demand side, and the structure of the job market.

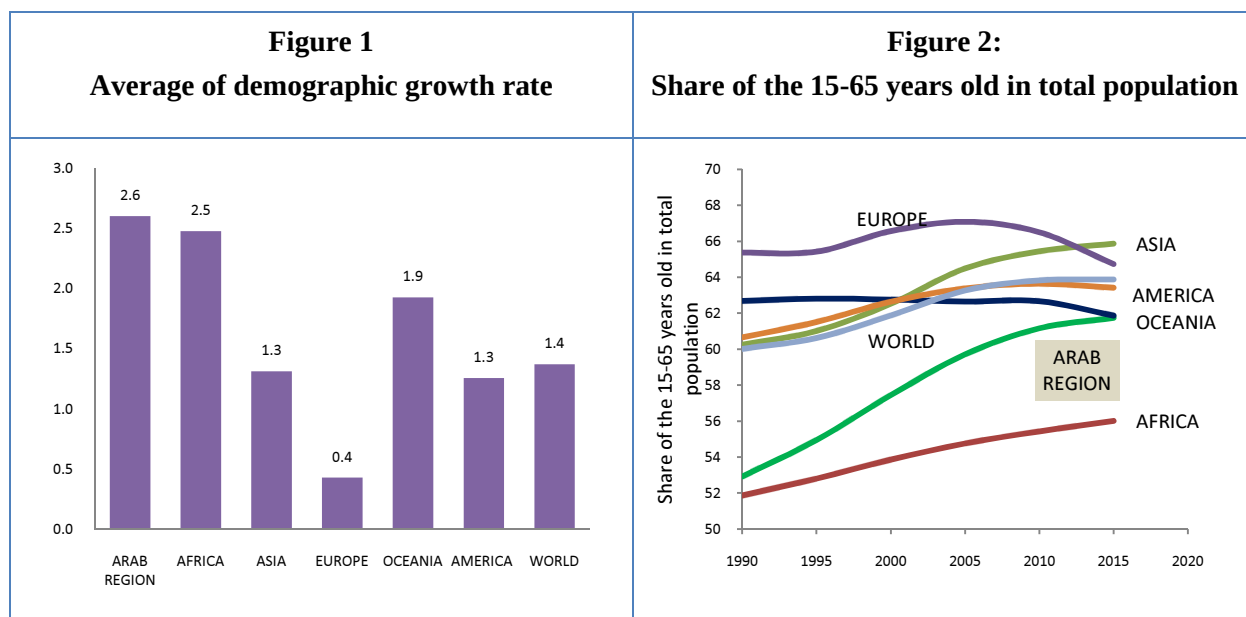
Section 1: Labor Market characteristic in the Arab Countries

1. The supply side:

Over the last decades the supply of labor in Arab countries has experienced major demographic changes. The region recorded one of the largest demographic increases in the world. High fertility rates and exceptional declines in mortality allowed the region to reach a demographic growth of 2.6% in 2010, compared to 1.4% as a world’s average. This figure was also seen as highest as oppose to Africa 2.5%, America 1.3%, Asia 1.3%, and Europe 0.4% (Cf. figure 1). The region is also undergoing a speed demographic transition occurring in all 22 Arab countries. According to (UNESCWA, 2009), the population of the 22 countries of the Arab region is expected to reach 385.2 million in 2015 and 631.2 million in 2050. Figure (2) shows

¹ Angel-Urdinola and Arvo Kuddoto, 2010.

that the region is facing one of the highest increases in the share of working age population in the world. Expectations reveal that this phenomenon will continue to increase over the next few years. Figure (2) also shows that the share of active labor force aged ranged between 16 and 65 could reach 60 percent of the total population in 2015. Such a situation will create a substantial pressure on the labor market. Its implications require the Arab region to carry out “more than the world average” efforts in terms of job creation.

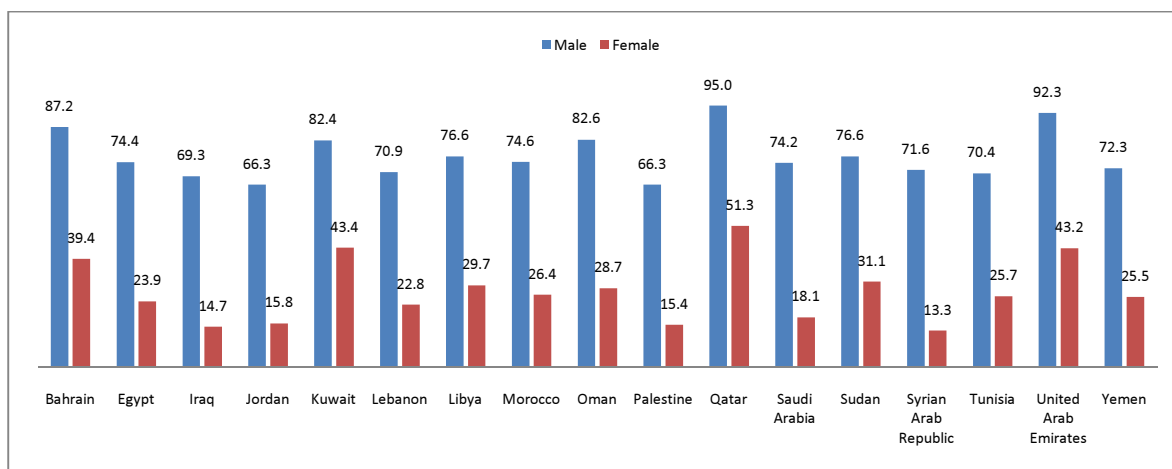


Meanwhile, the participation rate in the labor market remains low especially for women. Across the region and according to most recent estimates, out of a total of 202.7 million people belonging to the working age (DESA UN 2012),² only 101 million are recorded as being active in the labor market. More than three quarters of the labor force are men (78 million), and only one quarter is women (23 million). Interestingly, among the 9.6 million unemployed, women make up almost 40 per cent. In other words, available statistical data show that 70 to 80 per cent of women, belonging to the working age in the Arab region, are either inactive or unemployed. Low rate of participation of the female labor force is a key feature to all countries in the region. Although this may be typical for middle income countries across the globe the lowest level, on a world's average, lies just above 40 per cent (UNDP and ILO 2012). Rates reached in most Arab countries, however, average around 30 per cent at best (cf. figure 3). Stated explicitly, in low income countries, such as Palestine and Yemen, no more than 26 per cent of women are active in the labor market. Within the Arab region, countries of the Mashreq (Egypt, Iraq, Jordan, Lebanon and Syria) as well as Palestine and Saudi Arabia show the lowest women participation

² Note that numbers refer to the 17 ESCWA member countries unless indicated otherwise.

rates in the labor force. In comparison to the Arab region, in most other world regions, active women in the labor market constitute a remarkable percentage reaching above 50 per cent.³

Figure 3: Labor force participation rates in ESCWA member countries



Source: International Labor Organization (2011)

As a first glance, the GCC countries seem to show high female participation rates in the labor force (i.e. around 40 per cent). However, a closer look reveals higher percentage rates of female foreign labor participation. Among GCC nationals, women are hardly more active in the labor market compared to other women in the rest of the Arab countries. While the female active labor force in the other GCC countries broadly corresponds to the regional average (cf. table1), Saudi Arabia exceptionally records the lowest participation rate (i.e. around 14.7 per cent).

Table 1: Most Recent Data of Labor Force Participation Rate in the GCC Countries by Nationality

Country	Male national	Male non-national	Female national	Female non-national	Total national	Total non-national	Total
Bahrein (2010)	63.2	99.6	32.3	63.4	47.8	90.4	72.0
Kuwait (2011)	37.0	83.0	27.4	58.5	32.1	73.4	58.7
Oman	..	..	..	..	..	..	..
Saudi Arabia (2012)	61.5	94.4	14.7	37.1	38.1	79.7	53.4
United Arab Emirates(2009)	62.5	93.7	27.5	47.7	45.1	79.0	72.4
Qatar(2011)	63.6	98.0	34.1	58.6	48.7	91.3	86.7

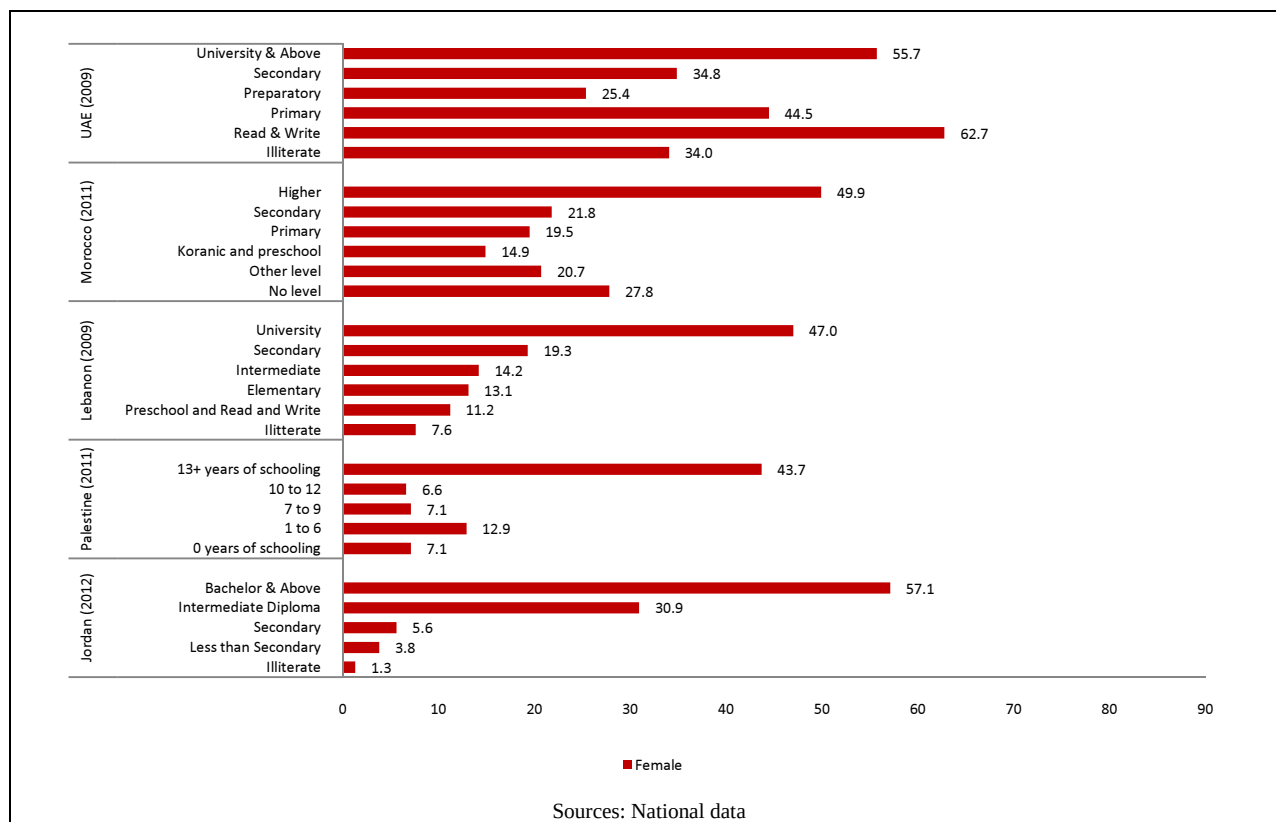
Source various national data

The underlying reasons for the absence of women from the formal labor market have not yet been sufficiently addressed. Cultural norms of patriarchic societies are often quoted as being

³ The world average is 51.1 per cent labour force participation rate for women. ILO - Global employment trends 2013

possible explanations.⁴ These go hand in hand with strict views on the kinds of jobs that may or may not suit Arab women – often reinforced by the labor legislation (ESCWA 2010). In some member countries such as Palestine, Iraq, and Yemen further reasons may include the prevalence of violence and physical dangers, which impede the freedom of the female labor force. The rates of dependency on women in familial and domestic responsibilities, which are recorded to have declined but still show significance in most countries, are other factors influencing the rate of female participation in the job market (Sugita, 2010). Other observations conclude that the level of education is positively correlated with women’s participation in labor market (cf. figure 4). That is to say as the female education rises across the region, their participation in the labor market increases. In Lebanon and Jordan, women with university degrees are more than twice as active in the labor market compared to those with secondary education.⁵ Similarly in Palestine, 65 per cent of women with more than 13 years of schooling participate in the labor force, as oppose to only 35 per cent of those whose education is below that level (PCBS 2011). Male activity rates, by contrast, do not seem to highly correlate with levels of education.

Figure 4: Female Labor Force Participation Rate by Level of Education, Selected Countries (in percentages)

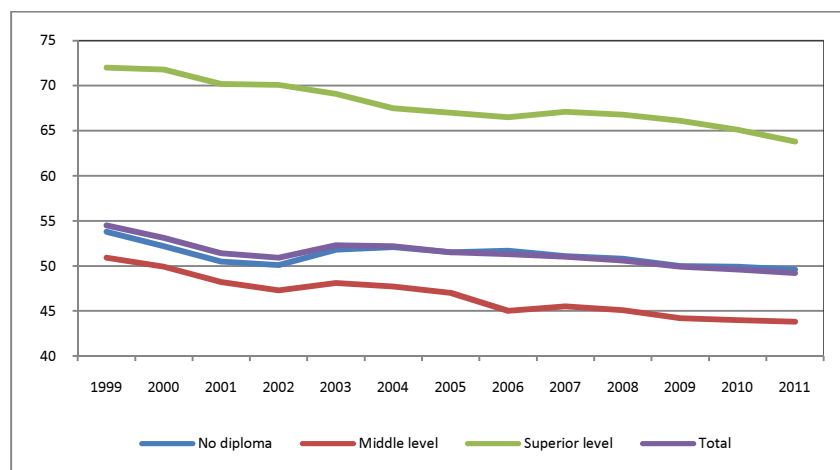


⁴ Moghadam, V., Women, Structure, and Agency in the Middle East: Introduction and Overview to Feminist Formations’ Special Issue on Women in the Middle East, p. 2

⁵ Lebanon Central Administration of Statistics and UNICEF: Multiple Indicator Cluster Survey Round 3, 2009

The complexity of labor force development may be illustrated in the case of Syria, where substantial growth rates in GDP over the past 10 years, prior to the current conflict, did not increase employment, but were accompanied by a surprisingly sharp decline in labor force participation. Although GDP growth rates in years 2001 – 2010 fluctuated around six percent annually, total labor force participation declined from 52 per cent in 2001 to 42.7 per cent in 2010 (Nasser, R. and Mehchy, Z., 2012). One of the main underlying reasons of the rather remarkable declination was a structural change in the agricultural sector in Syria. This change caused by alterations in the subsidies regime and strengthened by the impact of severe scarcity in various other sectors, has led to substantial job losses, especially for women (Aita, S., 2009). Instead of being registered as unemployed or taking up jobs in the informal urban sectors, an estimated number of 1,174 thousand individuals were believed to have dropped out of the labor force. Had these workers chosen to register as unemployed, calculations suggest that the real unemployment rate for Syria in 2009 would have been 25.3 percent rather than 8.6 per cent as officially reported by Nasser, R. and Mehchy, Z. (2012). Similarly in Morocco, labor force participation declined by about 5 per cent over the past 12 years, to the effect that by year 2011 less than half of the working age population (49 per cent) were active members in the labor market (Cf. figure 5). This declination was mostly obvious among the higher educated population, where participation rates fell from about 72 per cent in 1999 to 64 per cent in 2011.⁶ This development illustrates that the average economic growth rates of xxx per cent were not sufficient to embrace the growing working age population, discouraging an increasing percentage of the most educated talents.

Figure 5: Morocco, Labor force Participation Rate 1999-2011, by Educational Attainment



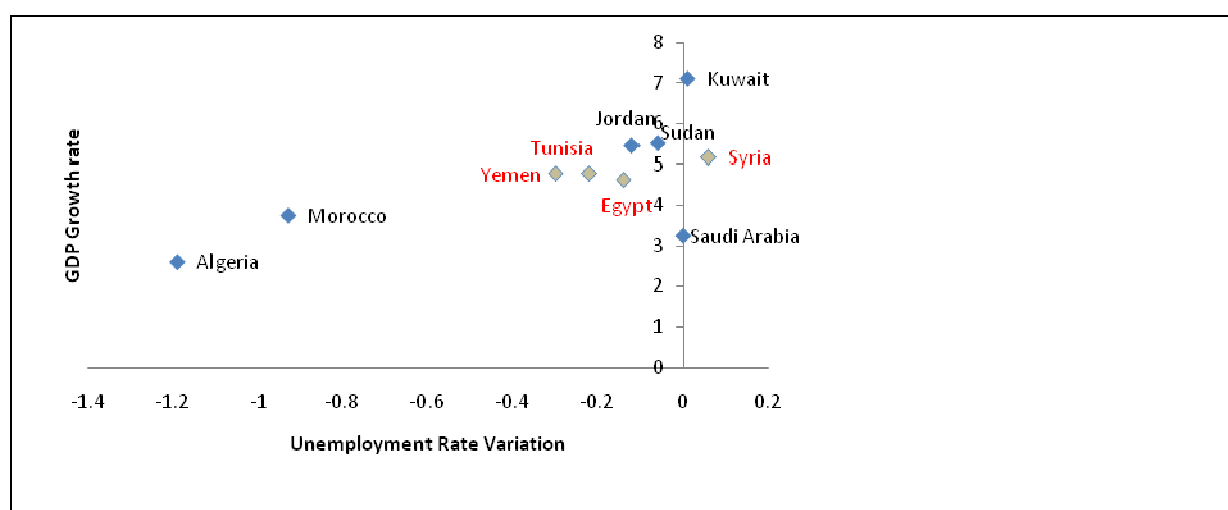
Source: Maroc Haut Commissariat au Plan (Direction de la Statistique): Enquête nationale sur l'emploi, available from http://www.hcp.ma/Taux-d-activite-national-selon-le-diplome_a370.html

⁶ http://www.hcp.ma/Taux-d-activite-national-selon-le-diplome_a370.html

2. The demand side

While some countries (Norway, United States, Finland, and Singapore) were able to combine strong economic growth with often rising labor utilization, the ability of the Arab region to transform growth into employment had been relatively low (Cf. figure 6). This ability, as estimated by employment to growth elasticity, had significantly decreased since 2004 especially in “Arab Oil importing countries”. Namely, employment to growth elasticity noted a variation from 0.62 between 2000 and 2004 to 0.47 between 2004 and 2008.

Figure 6:
GDP Growth rate (y-axis) and variation of unemployment rate (x-axis)



Source: UNESCWA 2011

This decrease especially occurred in countries like Egypt (from 0.82 to 0.57) and Tunisia (from 0.55 to 0.42) and had produced one of the most serious problems of youth unemployment in the world. (cf. Table 2).

Table 2:
Employment to Growth Elasticity in the MENA Region (See table A1 for details)

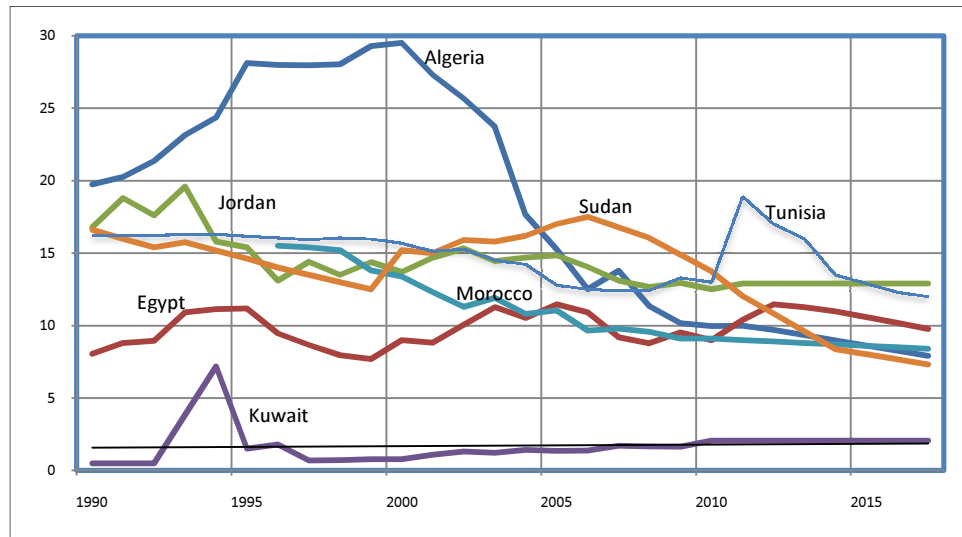
Country/region	Elasticity of employment to total GDP, 2000-2004	Elasticity of employment to total GDP, 2004-2008	Elasticity of employment to total GDP, 2000-2008
Developing oil exporters*	0.83	0.91	0.87
GCC oil exporters*	0.75	0.57	0.66
Oil importers*	0.62	0.47	0.55
MENA	0.73	0.65	0.69
2004-2008 some of the best performers+			
Norway	-0.04	18.23	10.09
United States	0.12	2.27	1.29
Finland	0.17	1.33	0.83
Singapore	-0.43	1.28	0.45

Source: (The World Bank, 2011a, p. 56); Author's calculations based on World Development Indicators World Economic Outlook Database, April 2012)

a. A Persistent and Volatile Unemployment

The high increase in labor demand and the insufficient capacity of transforming growth into employment opportunities generated an increase in unemployment in the 2000s.⁷ (cf. figure 7).

Figure 7:
Observed and Projected Unemployment Rate for a Sample of Arab Countries



Source: World Development Indicators World Economic Outlook Database (April 2012)

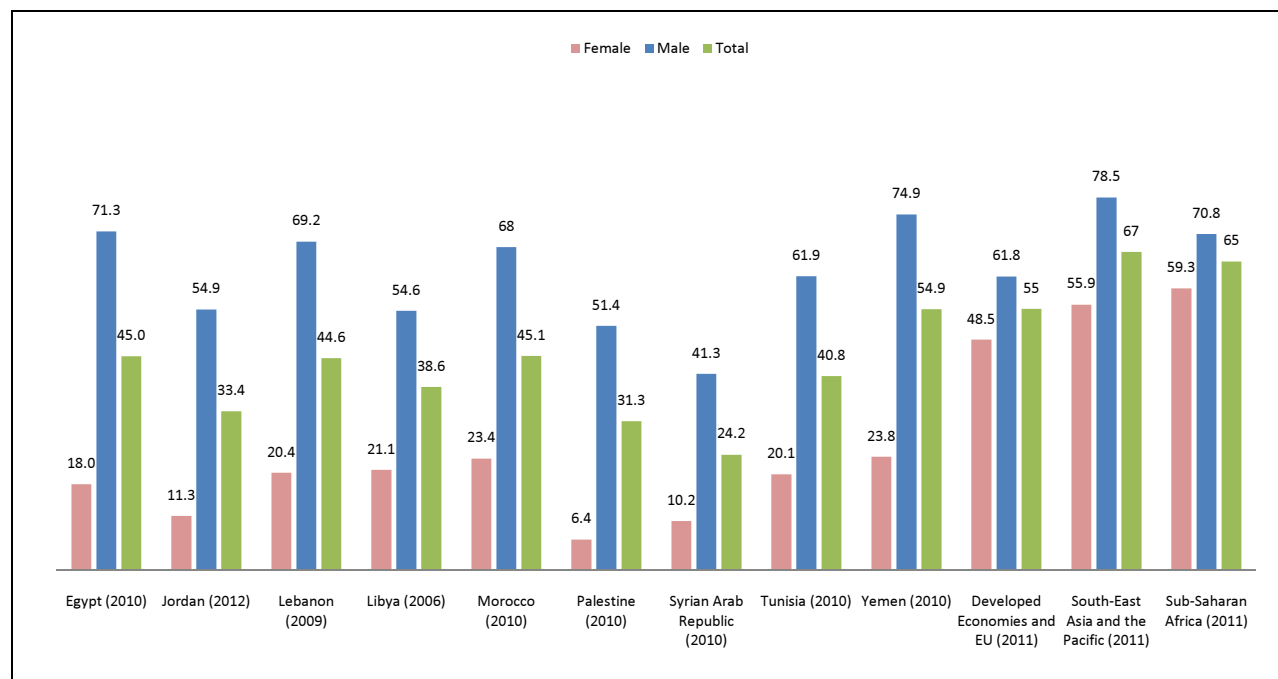
Most recent data (cf. figure 8 and 9) show that in Egypt, Morocco and Tunisia only around 40 per cent of the working age population reap gains from employment. In Jordan, Syria and Palestine the share of those gaining from being employed lies at an even lower percentage; around 30 per cent. In comparison to the world, gains from employment lie well above 51 per cent in many regions⁸. This is a rather low percentage level revealing that societies are quite vulnerable to economic shocks that might affect their means of living. The comparably high employment rates in the GCC countries result from the influence of labor migration. Taking only in account the proportion of the national working age population in employment reveals very low percentage rates, ranging from slightly above 20% in Bahrain, 30 % in Kuwait, 38% in the UAE to 48 % in Qatar. Most of the GCC countries have undertaken serious efforts to improve the balance between working nationals and foreigners through various nationalization policies that aim at increasing the percentage of national workers as oppose to foreigners. However, success has been limited so far. Any future advancement will possibly depend on increasing mobilization and a higher participation the female workforce in the economy. However, as mentioned earlier, in many of the countries of the Arab region, women taking part

⁷ With the notable exception of Algeria.

⁸ International Labour Organization 2013 Global employment trends –Recovering from a second jobs dip, Geneva pg 45

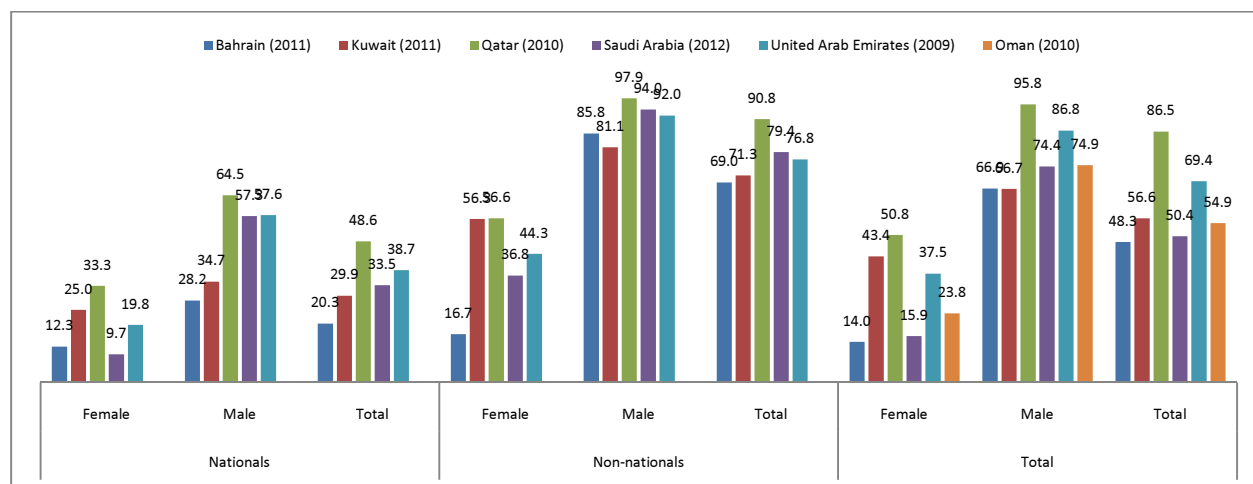
in the labor force are still exposed to the obstacles of labor market segmentation and segregation.⁹

Figure 8:
Employment Rates, Selected Countries and Regions, Most Recent Data (in percentage)



Sources: Authors' calculation from various national sources

Figure 9:
Employment rates, selected GCC countries, most recent data in percentages



Sources: Authors' calculation from various national sources

⁹ For a recent further discussion of female employment in the region please see: ESCWA, 2012, ADDRESSING BARRIERS TO WOMEN'S ECONOMIC PARTICIPATION IN THE ESCWA REGION, pp. 8, 19-28

Descriptive statistics show that over the last decade, the average of the unemployment rate was very high and also quite volatile (table 3). A wide regional disparity was displayed, ranging from 23% in West Bank and Gaza to 0.3% in Qatar. Algeria had an average of 20.1% of unemployment rate with a standard deviation of 7.8 followed by Syria and Morocco recording an average rate of 11% of unemployment with a standard deviation of 1.414. This high volatility of percentage average rate constituted an important feature of unemployment in the region.

Table 3:
Statistical Properties of unemployment

	ALG	EGY	JOR	KUW	MOR	KSA	SYR	TUN
Mean	20.1	9.4	13.9	1.2	11.6	15.2	10.8	14.2
Median	20.6	9.1	14.2	1.3	11.1	15.5	10.8	14.3
Maximum	29.5	11.4	15.3	2.0	15.4	17.4	16.7	16.0
Minimum	9.9	7.6	12.5	0.7	9.1	12.5	8.0	12.4
Std. Dev.	7.8	1.1	0.8	0.4	2.1	1.5	2.6	1.4
Skewness	-0.08	0.3	-0.2	0.1	0.5	-0.3	0.6	-0.0
Kurtosis	1.2	2.0	1.8	2.1	2.0	2.0	2.6	1.3
Jarque-Bera	1.7	0.8	0.9	0.47	1.1	0.8	1.0	1.5
Probability	0.4	0.6	0.6	0.7	0.5	0.6	0.5	0.4

Authors' calculation

b. A High Level of Youth Unemployment

Youth became the first victim of unemployment in the region. UNDEP 2010 showed that unemployment in Arab countries varies along different age groups and educational levels. It records that unemployment rates of youths aged between 15 and 24 in the Arab region - excluding Egypt- constitute the highest figures in comparison with other groups in all countries (Cf. Table 4).

Table 4:

Youth Unemployment versus Overall Unemployment in the Arab Region (last year figures)

	Youth (15-24) unemployment	Overall unemployment
Algeria	45.6%	10%
Bahrain	20.7%	5%
Djibouti	37.8%	41%
Egypt	25.8%	8%
Iraq	45.3%	30%
Jordan	38.9%	11%
Kuwait	23.3%	3%
Lebanon	21.3%	12%
Libya	27.3%	7%
Mauritania	44.3%	16%
Morocco	15.7%	10%
Oman	19.6%	7%
Qatar	17%	1%
Saudi Arabia	25.9%	5%
Somalia	43.4%	33%
Sudan	41.2%	21%
Syria	19.8%	21%
Tunisia	26.5%	14%
United Arab Emirates	6.3%	2%
West Bank and Gaza	33.1%	25%

Source: UNDP 2010.

IMF came also to the same conclusion and announced that unemployment in the MENA region is the highest in the world with youths constituting the largest population section among those unemployed. Namely, the share of youths aged between 15 and 24 in unemployment was at least as double as the overall unemployment rate. Moreover, at about 25%, the youth unemployment rate in the MENA region exceeded that of any other region in the world.¹⁰

c. High Unemployment Combined with Low Labor Productivity

Another issue of unemployment in Arab countries is that it is associated with low productivity. The conventional wisdom suggests that an increase in productivity resulting from introducing new technologies could lead to job destruction and increases in unemployment. However, even this basic interpretation of the unemployment-productivity relationship is inverted in the Arab region. In essence, productivity in Arab countries is very low compared to regions with low level of development. Namely, the rate of productivity growth during the period between 1991 and 2010 in Arab countries was noted as 0.9% compared to 1.9% for countries with low income and 4.2% in South Asia. The most striking element is that the average productivity growth was negative during the period 1991-1999 (-0.2%) and has increased significantly during the period 2000-2010 (see table 5).

Table 5: Productivity Growth

Growth rate of productivity (GDP per person employed (constant 1990 PPP \$))			
	1991-1999	2000-2010	1991-2010
Arab World	-0.2%	1.8%	0.9%
South Asia	4.0%	4.4%	4.2%
European Union	2.1%	1.1%	1.5%
East Asia & Pacific (all income levels)	2.9%	5.7%	4.5%
East Asia & Pacific (developing only)	4.9%	8.3%	6.9%
Middle income	2.2%	5.3%	4.0%
Low income	1.2%	2.3%	1.9%
High income	2.1%	1.2%	1.6%
North America	2.1%	1.5%	1.8%
World	1.7%	2.6%	2.2%
Sub-Saharan Africa (developing only)	-0.7%	2.7%	1.3%

Authors' calculation

However, recent papers show that productivity growth leads to higher employment. If productivity growth occurs in one industry it will cause job destruction at a firm or industry level (Nordhaus, 1995). Meanwhile, lowering prices will increase the global demand and productivity. This increase, in turn, will ultimately have a positive influence on labor demand and would offset the first order employment-lowering effect of higher productivity.

¹⁰ Youth Unemployment in the MENA Region: Determinants and Challenges by Masood Ahmed, Director, Middle East and Central Asia Department, International Monetary Fund; Dominique Guillaume, Deputy Division Chief, International Monetary Fund; Davide Furceri, Economist, International Monetary Fund. Published in the World Economic Forum's Addressing the 100 Million Youth Challenge—Perspectives on Youth Employment in the Arab World in 2012, June 2012.

As regards to the Arab region, productivity increases have been difficult to achieve over the past decades. As far as data are available, Arab countries show stagnating or declining labor productivity – with the notable exception of Syria and Kuwait¹¹. This situation reflects high labor input in economic output. It also reveals quite a notable participation of generally low-skilled labor force in the job market and points to the lack of any value added character to the majority of existing jobs, as mentioned earlier.

Table 6: Labour Productivity, selected Arab countries

Labour Productivity in Mining & Quarrying (in US dollars)(*)

Country	2004	2005	2006	2007	2008	2009	2010
Jordan	44,536	44,980	51,243	54,898	...	...	...
Kuwait	4,682,268	4,663,553	4,429,576	3,995,655	4,296,896	3,138,171	2,952,047
Palestine	42,976	53,356	42,208	51,603	68,029	46,338	44,296
Qatar	1,176,110	915,576	531,798	...	400,414	584,860	...
Saudi Arabia	...	...	1,016,446	977,557	986,294	919,080	...
Syrian Arab Republic	96,023	83,489	83,435	84,441	85,367	85,847	...
Tunisia	114,235	122,719	113,546	141,347	...	...	...
United Arab Emirates	993,150	898,245	983,436	875,290	808,205	...	...

(*) Labour Productivity indicates the value added of Mining & Quarrying, including electricity and water supply, per capita in constant 2005 US dollars

Labour Productivity in Manufacturing (in US dollars)(*)

Country	2004	2005	2006	2007	2008	2009	2010
Egypt	11,354	11,355	11,356	11,357	11,358	11,359	11,360
Jordan	13,051	13,061	14,790	14,411	14,428	15,003	...
Kuwait	60,029	60,431	59,369	58,143	46,823	50,274	54,677
Morocco	16,964	18,730	17,662	18,365	19,490	20,023	20,601
Oman	71,515	71,516	71,517	71,518	71,519	71,520	71,521
Palestine	10,182	10,946	8,207	9,159	9,704	8,749	...
Qatar	82,466	79,493	64,900	...	62,146	70,010	...
Saudi Arabia	...	...	47,685	48,300	48,409	47,349	...
Syrian Arab Republic	1,730	1,697	1,614	1,895	1,915	2,187	...
The Sudan	14,315	14,502	15,419	16,271	...	...	...
Tunisia	11,472	12,006	11,635	11,284	...	...	...
Yemen	7,752	7,349	6,178	11,426	11,747	9,654	8,419

(*) Labour Productivity indicates the value added of Manufacturing per employee in constant 2005 US dollars

Source: UNESCWA 2012

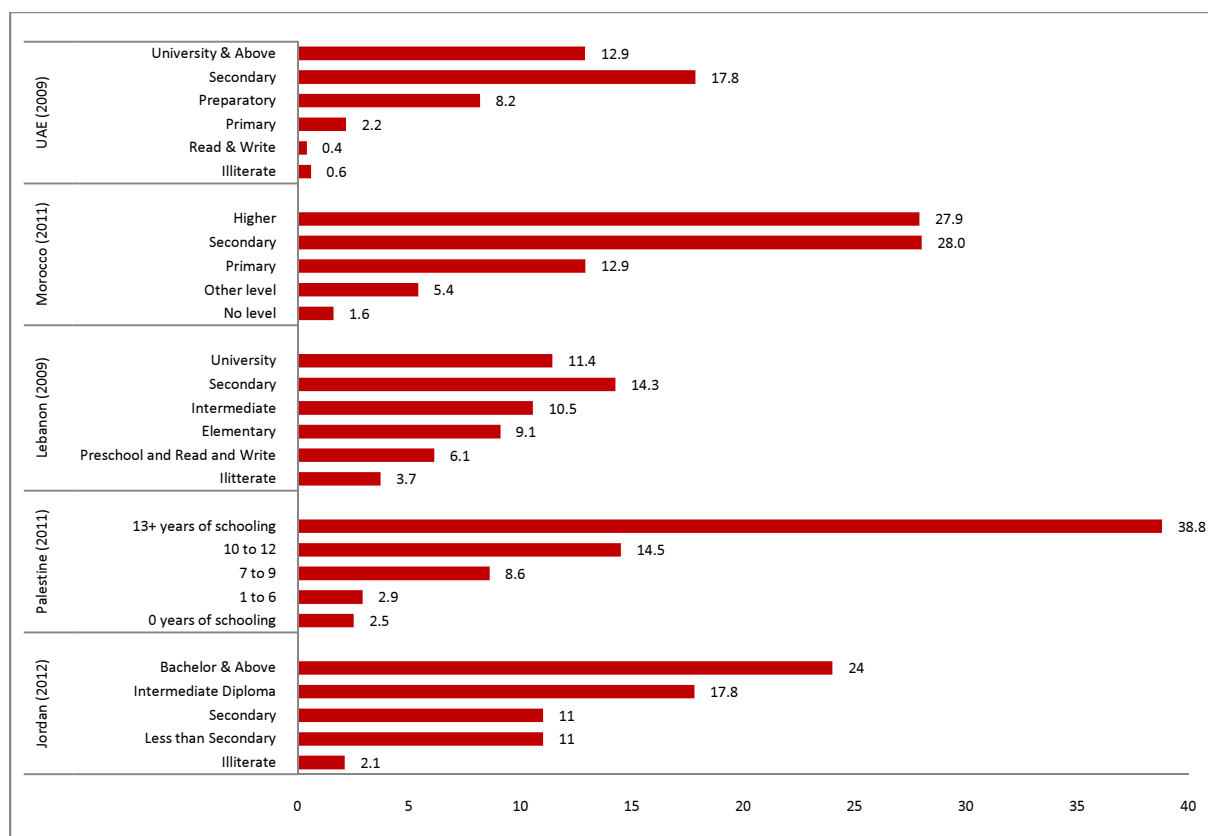
d. Low Labor Demand for Skilled Labor

Taking into account the knowledge content as well as productivity in sectors like construction, trade and transport, figures often lie far below those shown in Table 6. This further deepens the impression of highly divided economic structures between the extractive and the

¹¹ ESCWA, 2012, Bulletin of Industrial Statistics, p. 11

productive sectors. Available data show that in Egypt, Iraq, Palestine and Yemen between 40 and 55 percent of employed labor work in sectors with below-average productivity (ESCWA, 2012). Existing industries generate a high demand for uneducated low skilled labor, and thus it may come to no surprise that unemployment in Arab countries is especially high among the most educated in the workforce. In Tunisia, the unemployment rate of individuals with secondary education or higher levels of education reaches up to double the national average unemployment rate.¹² Also in Jordan, the unemployment rate of individuals with higher and secondary levels of education lies significantly above the rate of workers with lower education. In Palestine and Morocco individuals with higher levels of education are more than twice as often seeking employment than other people (cf. figure 10).

Figure 10: Unemployment rates by level of education and sex, selected countries (in percentages)



Source : Various national sources.

Interestingly, some recent research on Jordan found out that high-skilled Jordanians are often migrating or working abroad, while the country is importing low-skilled labor force, who are often employed in the informal sector. While importing foreign labor for little benefit or social security undercuts Jordanian wages, the inflow of remittances increases the reservation wage

¹² Tunisia, National Institute of Statistics, 2011. Calculations based on table 26, p. 24 and table 36, p.29

(Wahba, J., 2012). Such a divergence in wages brought about by importing foreign labor force on one hand and remitting to home country on the other hand may well constitute an important explanation of the prevailing low employment rates not only in Jordan, but possibly in other Arab countries¹³. Unlimited availability of cheap labor – either from abroad or from other regions within a country – reinforces imbalances in the economy and existing labor market segmentation. The most visible examples of this multiple fragmentation are labor markets in some countries of the GCC. In the United Arab Emirates, according to the 2009 labor force survey, mean wages were only around 29.4 per cent of mean income¹⁴. This reflects huge differences between national and foreign workers, the public and private sectors, the skilled and non-skilled workers, as well as across the different Emirates within the U.A.E.

3. The Job Market

Labor markets are essential to a number of related social and economic goals. On one hand, well functioning labor markets are able to provide the economies with human creativity, innovative capacity, skills and knowledge needed in order to stand well as national, regional and global competitors. On the other hand, social outcomes directly depend on the ability of the population to earn fair wages under decent conditions of employment. Current data, however, still point to substantial gaps in this regard. In essence, neither are the economies able to provide the quantity and quality of jobs people need, nor are companies able to benefit from a competitive economic environment and to satisfy all their human resources demands in the jobs market. Significant shares of especially young talents are not utilized and investment into education is wasted; both of which are further salient issues for Arab economies today. Substantial change in the economic structure, such as deviating from public sector employment, changing from agricultural to industrial economies, and increasing productivity require flexible adjustments of the workforce. It also requires a high capacity of the labor market for rapid re-allocation of human resources. That is to say, if labor markets are too slow and rigid to adjust, structural changes may result in increased unemployment. In general, the more the labor market is divided and people move only within limited segments of the economy, the smaller is the possibility of the economy to adjust to shocks and changes.

The analysis of the regulation of a formal job- labor market in many Arab countries shows that like many other developing countries, labor laws in the region have been elaborated during the 1950s and the 1960s. This was a period of full employment where new independent states were trying to improve employers' rights and to build a development model based on social progress. This period of "job abundance", especially for skilled workers, has now finished and

¹³ The employment rate, or employment to population ratio, measures the percentage of the working age population that is actually employed. Low rates of labour force participation combined with high rates of unemployment thus lead to low employment rates.

¹⁴ United Arab emirates National Bureau of Statistics 2009 Labour Force Survey, Monthly Mean and Median wages and Monthly Mean and median income, accessed on 18/10/2012 from www.uaestatistics.gov.ae/ReportDetailsEnglish/tabid/121/Default.aspx?ItemId=1850&PTID=104&MenuId=1

the upsurge of unemployment in these countries has dramatically changed the bargaining power of job applicants. According to Doing Business report in 2012, the current labor regulation in the region had made recruiting and firing employers extremely complex, even when compared with relatively developed economies facing less demographic pressures.

a. Difficulties to Recruit:

Table 7, shows that the ratio of minimum wage to the value added per worker is relatively high in the majority of Arab countries. In essence, it reached 0.69 in Morocco, 0.58 in Syria and 0.24 in Tunisia. These ratios need to be compared with 0.21 in USA and Germany, 0.34 in Norway, Finland and the UK, 0 in Denmark, Singapore and Sweden.

**Table 7:
Recruiting workers indicators.**

	Fixed-term contracts prohibited for permanent tasks?	Minimum wage for a 19-year old worker or an apprentice (US\$/month)	Ratio of minimum wage to value added per worker
Arab countries			
Morocco	Yes	246.5	0.69
Syrian Arab Republic	No	205.8	0.58
Mauritania	No	74.5	0.49
Yemen, Rep.	No	74.9	0.46
Algeria	Yes	204.8	0.38
Jordan	No	199.9	0.34
Lebanon	No	318.0	0.29
Iraq	Yes	98.7	0.28
Tunisia	No	115.9	0.24
Oman	No	506.9	0.21
Egypt, Arab Rep.	No	31.8	0.10
Kuwait	No	166.2	0.04
Bahrain	No	0.0	0.00
Djibouti	Yes	0.0	0.00
Qatar	No	0.0	0.00
Saudi Arabia	No	0.0	0.00
United Arab Emirates	No	0.0	0.00
West Bank and Gaza	No	0.0	0.00
A sample of comparator countries			
Norway	Yes	3,608.9	0.34
Finland	Yes	1,989.5	0.34
United Kingdom	No	1,655.0	0.34
Germany	No	1,145.5	0.21
United States	No	1,242.6	0.21
France	Yes	782.0	0.14
Denmark	No	0.0	0.00
Sweden	No	0.0	0.00
Singapore	No	0.0	0.00

Source: doing business 2012

b. Difficulties to fire

Firing costs for formal contracts are considered as high in the Arab region (table 8). Several countries have amended their labor legislation with the aim of achieving balance and flexibility in hiring and firing employees. Changes in legislation throughout the region, included in Egypt

(2003), Tunisia (1994 and 1996) and Jordan (1996) (Haider, 2011). Analysis show that these rules are, however, still seen as overly rigid. Firing remains costly for employers due to lengthy bureaucratic procedures, high payments and biased labor court decisions. Severance payments are often relied upon as insurance for unemployment because social insurance systems are rare (Kolev, 2009; ETF, 2006). Table (8) shows that severance pay regarding redundancy and dismissal of workers with 1, 5 and 10 years of tenure is equal to 26.7 weeks in Egypt, 23.1 weeks in Yemen, 13 weeks in Morocco and 7.8 weeks in Tunisia. In comparison, the same procedure is “free” in the United States, Denmark, Singapore and Finland and “costs” 11.6 weeks in Germany, 4.6 weeks in France and 2.7 weeks in United Kingdom.

Table 8:
Severance pay for redundancy dismissal

	for a worker with 1 year of tenure, in salary weeks	for a worker with 5 years of tenure, in salary weeks	for a worker with 10 years of tenure, in salary weeks	for a worker with 20 years of tenure, in salary weeks	average for workers with 1, 5 and 10 years of tenure, in salary weeks
Arab countries					
Egypt, Arab Rep.	4.3	21.7	54.2	119.2	26.7
Yemen, Rep.	4.3	21.7	43.3	86.7	23.1
West Bank and Gaza	4.3	21.7	43.3	86.7	23.1
Qatar	3.0	15.0	30.0	60.0	16.0
Saudi Arabia	2.2	10.8	32.5	75.8	15.2
Kuwait	2.1	10.7	32.5	75.8	15.1
Morocco	2.2	10.9	27.3	76.4	13.5
Algeria	13.0	13.0	13.0	13.0	13.0
Tunisia	1.7	8.6	13.0	13.0	7.8
Mauritania	1.1	5.4	11.9	27.1	6.1
Syrian Arab Republic	0.0	0.0	0.0	0.0	0.0
Jordan	0.0	0.0	0.0	0.0	0.0
Norway	0.0	0.0	0.0	0.0	0.0
Lebanon	0.0	0.0	0.0	0.0	0.0
Iraq	0.0	0.0	0.0	0.0	0.0
Oman	0.0	0.0	0.0	0.0	0.0
United States	0.0	0.0	0.0	0.0	0.0
Bahrain	0.0	0.0	0.0	0.0	0.0
Djibouti	0.0	0.0	0.0	0.0	0.0
United Arab Emirates	0.0	0.0	0.0	0.0	0.0
A sample of comparator countries					
United States	0.0	0.0	0.0	0.0	0.0
Denmark	0.0	0.0	0.0	0.0	0.0
Sweden	0.0	0.0	0.0	0.0	0.0
Singapore	0.0	0.0	0.0	0.0	0.0
Finland	0.0	0.0	0.0	0.0	0.0
Germany	2.2	10.8	21.7	43.3	11.6
France	0.9	4.3	8.7	23.1	4.6
United Kingdom	0.0	2.7	5.3	10.6	2.7

Source: doing business 2012

c. Difficulties in Formalizing Jobs

Almost all economies of the region are marked by their fragmentation into multiple segments and their highly paradoxical economic and employment structures. The economic sectors with the largest shares in GDP, like the oil and gas industries, provide a rather small share of employment. Whereas,

economic sectors contributing rather small shares to GDP, like construction, tourism and other services provide the highest shares of employment (ESCWA 2012). The result is a wide split between the relatively small segments which offer a secure and rewarding employment in the formal public and private sectors and the large stratum of unskilled, low-productive labor force that hardly contributes in adding any value to existing jobs; believed to be generally informal jobs.

Recent estimates accord to about one third of GDP and two thirds of employment being generated in the informal sector (World Bank, 2011). Available data on Egypt, Jordan, Palestine, Syria and the United Arab Emirates all point to higher average wages in the public sector than in the private sector, especially with the inclusion of data from the informal private sector. In Jordan the wage distribution exhibits a very wide base of low wages, with the majority of workers (52.6 per cent) making less than 300 Jordanian Dinar (JD) per month¹⁵. Estimates reveal that around 14.9 per cent earn less than 200 JD as a monthly salary, while the established minimum wage lies at 190 JD per month. The National Employment strategy of Jordan acknowledges that the large supply of low wage foreign workers creates pressure at the bottom end of the wage scale.¹⁶ The case of Jordan illustrates that wages in the informal sector tend to be at the lower ends of the wage scales, being marked as significantly below those of formal sector workers. The size of the gap between informal and formal sectors varies across Arab countries. In evidence, while the gap in wages is estimated to be around 10 per cent higher in the formal sector in Syria, in Morocco the wages difference has reached around 50% among youths. In Egypt and Lebanon the gap amounts to 30 percent, reaching even to 50 percent for women in Egypt (World Bank, 2011). Minimum wage legislation exists in most countries of the region, but is not necessarily always enforced. Such disadvantages in wages in the informal sector have to be diagnosed in connection with other disadvantages related to higher working hours, less annual leave, poorer working conditions and absence of insurance coverage by existing social security systems (i.e. pension schemes or health care insurance). In the Arab region almost 70 percent of workers are not covered by social security schemes.¹⁷ Table 9 shows that the share of informal employment in total non-agricultural sectors has reached 71% in Morocco, 45.9% in Egypt, 51% in Yemen and 35% in Tunisia. This situation explains also the increasing role of the informal sector as one of the major jobs providers in the region. A paper by Nasser (2011) estimates that informal employment reached 10.8 million in Egypt in 2008, representing 48.1% percent of total employment.

Table 9:
Share of Informal Employment in Total Non-Agricultural Employment

Country	1975-79	1980-84	1985-89	1990-94	1995-99	2000-07	Latest
Algeria	21.8		25.6		42.7	41.3	41.3
Morocco		56.9			44.8	67.1	67.1
Tunisia	38.4	35	39.3		47.1	35	35
Egypt	58.7		37.3		55.2	45.9	45.9
Lebanon						51.8	51.8
West Bank and Gaza						43.4	43.4
Syria				41.7	42.9	30.7	30.7
Yemen				57.1		51.1	51.1

Sources OECD, 2009

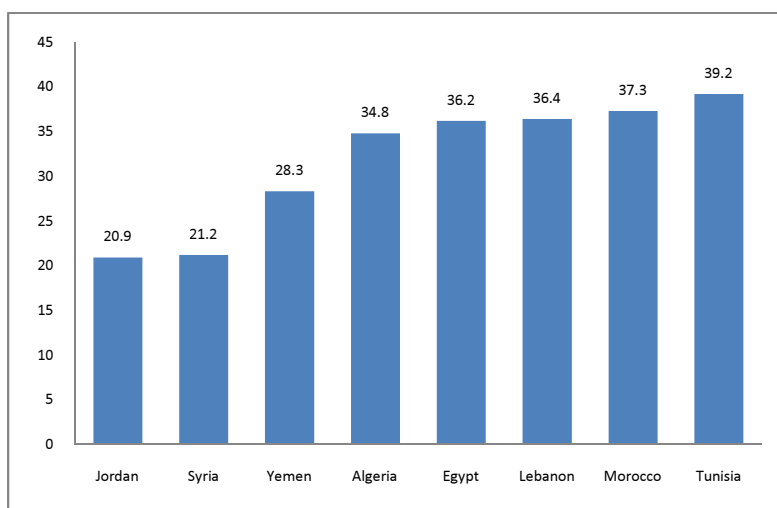
¹⁵ According to the 2011 Employment and Unemployment Survey available from http://www.dos.gov.jo/dos_home_e/main/index.htm accessed on 18/9/2012

¹⁶ Kingdom of Jordan 2012 National employment strategy 2011-2020, Amman, Jordan pg 60

¹⁷ Ibid, p. 6

Schneider index (Figure 11) that measures the share of production not declared to regulatory and tax authorities shows that between 1999 and 2004 the rate of growth of this index in the region increased by 0.42 percent per year; a level that is comparable to Europe and Central Asia. According to this index, Tunisia followed by Morocco display the highest levels of informality. Undeclared high levels of production increased the issues of revenue collection for non- oil countries and enhanced fiscal resources losses for the states.

Figure 11:
Schneider index (% of GDP)



Source : WorldBank (2012)

Low employee mobility from the informal to the formal sector highlight issues of reformation that should be undertaken to facilitate the costs of registration, the procedures of employment, the minimum capital requirements and the removal of barriers to entry.

Section II: Short term economic responses to unemployment in Arab Region

Job creation is today on top of the regional and national agendas. In 2011, unemployment has increased in the MENA countries, with the largest increase recorded in Tunisia (about 7 percentage points) and Egypt (about 3.5 percentage points)¹⁸. Most recent data shows that Egypt observed a three per cent increase in unemployment. Namely, between the last quarter of 2010 and the first quarter of 2011, unemployment in Egypt has recorded about 800 thousand additional unemployed persons. In the first quarter of 2012, this number has increased even further to almost one million (961,000) in comparison to end of year 2010. Similar development challenges the government of Tunisia, where between May 2010 and May 2011 the number of unemployed has risen by 213 thousand people; about five per cent of the labor force.

¹⁸ Egypt and Tunisia are at the centre of the ongoing regional changes, and as they are also countries with relatively well established statistical systems, whereby the effects of their crises can be traced. Other countries like Libya, Syria or Yemen are facing even bigger problems, but updated statistics are not currently available.

Over the longer term, recent social and political changes in the region may be able to pave the way for solutions to the deeply rooted economic and social challenges facing the MENA countries. But for the moment, difficulties seem to have visibly increased. Employment statistics, despite highlighting only a part of the challenges faced, show clearly how the crises directly affect peoples' lives. Particularly, they reveal that the development model that was used before the crisis needed to be revised to be more inclusive regarding job content. Those statistics also point out that higher growth rates are required to accommodate population growth and widen the economic base, to have a more diversified economic structure. Add to that, improvements in productivity can be applied such that overall growth may enhance the standard of living.

Actions undertaken by the replaced governmental bodies will be ultimately judged by their abilities to tackle unemployment and ease social tensions. To reach these objectives, economic literature and international experiences show that this requires a well structured industrialization policy. In essence, this includes an enhancement of competitiveness, business environment and governance landscape. The mismatch between labor supply and demand requires also a deep reformation of the education system to tackle the inconsistency of this mismatch and the requirements of the labor market. These reformations should also target at increasing women's employment incentives and ensuring a better social protection system.

Meanwhile, putting in place this new development paradigm requires a long term action plan to produce tangible results. But new governments do not have such momentum. They need short term solutions that could ease the social tension, while putting in place the long term reforms. It is the purpose of this paper to propose a sample of short term reforms that could ease the unemployment problem in the region and help new government better translate growth into job creation. These reforms need, meanwhile, to be further analyzed in a country by country basis. Their implementations need to be also well designed in order to avoid miss-application.

1. Improving labor impacts of macroeconomic policies

A comprehensive survey of the fiscal and monetary policies in the Arab region and their relation with job creation (UNESCWA 2012c) revealed also a number of inconsistencies and contradictions between public policies and job creation in the region. This contradiction explains a part of the unemployment problem facing the Arab region (Figures 1 and 2). On the fiscal side, the report revealed a negative correlation between public expenditure, tax regimes and employment creation. The same conclusions occur when studying the monetary and exchange rate policy regimes. The historically inverse relationship between the rate of unemployment and the rate of inflation in an economy (Phillips curve) appears to be turned upside down in the Arab region. Namely, pegged exchange rate regimes applied by the majority of these countries have affected their competitiveness and hindered them from creating jobs. As recommended by the Arab Development Challenges Report 2011, the region needs to adopt more accommodating macroeconomic and sectoral policies. The foremost priority is to use public investment to facilitate economic activity in those formal sectors that have high potential of providing decent

job vacancies. This would contribute to the competitiveness of Arab economies and encourage more investment in production.

Figure 1:
Correlation Between Employment Variation and Public Expenditure Growth

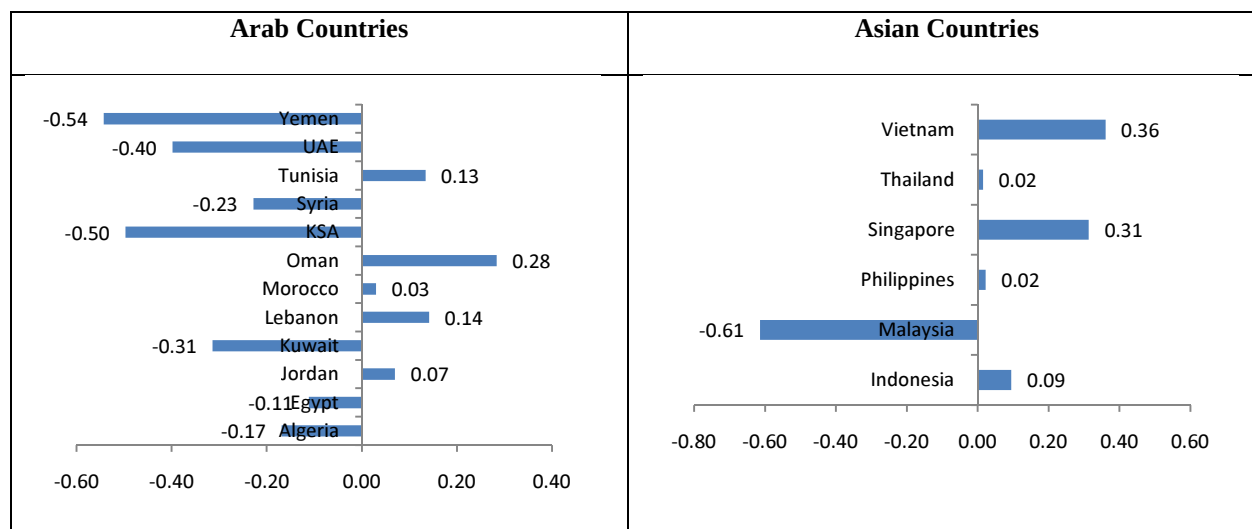
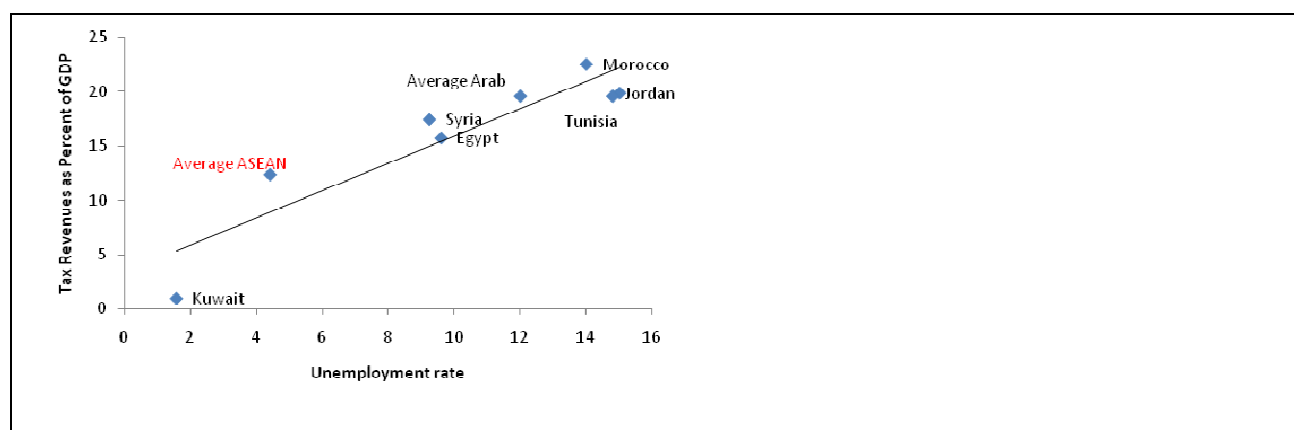


Figure 2:
Correlation Between Unemployment Variation and Tax Revenues as a Percentage of GDP



Source: UNESCWA 2011

1.1. On the Tax Collection Side:

The Arab region needs to address issues related to corruption and governance. Low (or adequate) tax rates that stimulate growth and job creation– embedded in an effective regulation system - need to be reliable and predictable over a long period of time to encourage people to work, save, and invest within formal markets. The Arab Region is characterized by two distinct approaches of taxation:

- (i) Countries that generate revenues through exporting oil re-distribute parts of these revenues to their population without imposing income taxes. This is the case in most of GCC countries and Libya.
- (ii) “ non-oil Arab states—which have much lower per-capita incomes, depend on foreign markets or some foreign sources of income such as aid and workers’ remittances (Tunisia, Lebanon and Jordan, for example) or a mixture of aid and rent sources, such as in Egypt, which contains natural sources and the Suez Canal” (Saif, 2011).

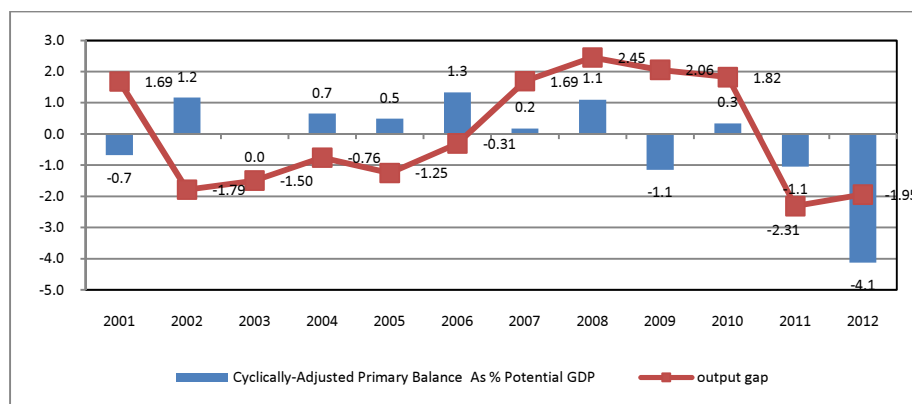
In the absence of progressive and comprehensive tax scales, the second group of countries relies on revenue-generation through value-added taxes. Those are direct taxes that do not distribute the tax burden on the basis of the size of personal income or corporate profit. Gradually, countries in the region are realizing that fairer taxation systems have a politically stabilizing effect and initiate necessary steps. For example, with its new 2011-12 government budget, Egypt is suggesting a capital gain tax on profit from capital operations, such as stock and real estate profit, raising taxes on the highest income bracket by 5% (Saif, 2011).

1.2. On the Spending Side:

1.2.1. Adopting a Prudent Keynesian Policy

Cyclical unemployment could be addressed by policies of temporary stimulus such as the policy of "Go & Stop" implemented in Tunisia since 2012 (Figure 2). This policy is designed as a temporary and substantial increase in investment at the expense of operating expenditures. It results in widening the budget deficit to an acceptable level while meeting the conditions of medium-term debt sustainability. The analysis of the absence of good macroeconomic management in Tunisia during the crisis shows that this could lead the country to the inability of stimulating aggregate demand and thus of managing the Keynesian component of unemployment.

**Figure 3:
Fiscal Impulsion in Tunisia**



1.1.1. Increasing the Development Part of Government Expenditure

A panel econometric analysis conducted on a set of the Arab countries¹⁹ shows that the investment rate is the only statistically significant variable that explains unemployment in the region. Namely, a variation of 1% in the investment rate reduces the unemployment rate by 0.24%. However, economic growth achieved through investment does not stand as a job-creating indicator. In essence, no significant statistical relationship has been spotted between growth and unemployment even when we capture the change of structure during this period by adding the period-fixed effect. In this case, inflation becomes negatively correlated with unemployment as expected by the Philips curve. An increase of 10% in the inflation rate should reduce unemployment by about 0.2% which is very small compared to the effect of investment. Investment appears to be a crucial strategy in reducing unemployment in Arabic countries.

Table 1:
Explanation of the Unemployment Rate in the Region

Variable	Cross Fixed Effect	Period and Cross Fixed Effect
C	17.72***	19.7***
Investment rate	-0.24***	-0.31***
Inflation Rate	-0.00018	-0.027***
GDP growth rate	0.01	-0.01
R-squared	0.79	0.85
Adjusted R-squared	0.78	0.81
S.E. of regression	3.01	2.83
Sum squared resid	1775.38	1321.01
Log likelihood	-518.14	-487.39
F-statistic	68.42	21.62

Authors' calculation

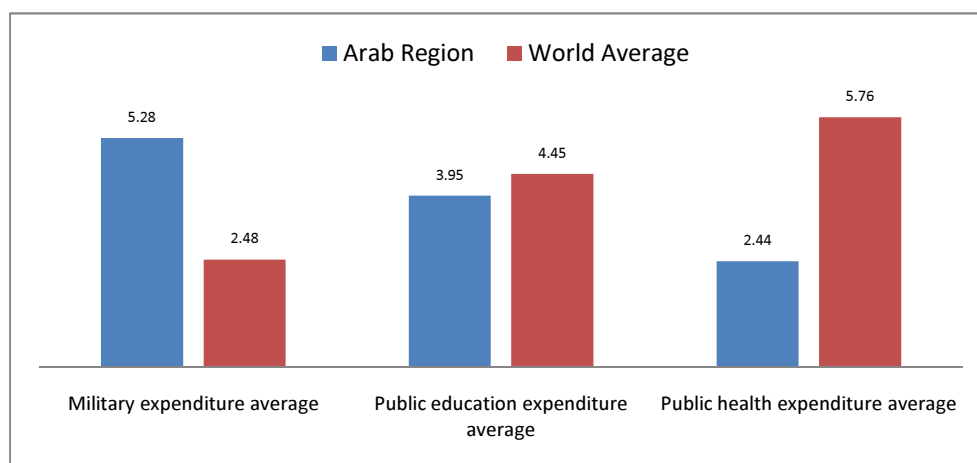
1.1.2. Reallocating a Part of the Military Expenditure

Figure 4 shows that Arab countries allocate more than 5% of their GDP to military expenditure. This is more than twice the world's average level. Expenses on military has an opportunity cost as it prevents efficient allocation of government resources into education and public health. Arab countries allocate 3.95% of their GDP to education while the world's average

¹⁹ Including Okun Law and Philips curve and other mechanisms. The panel data is an unbalanced panel from 1980 to 2011 for nine countries. We estimate the equation with fixed effect (cross-country and period) and without (period). We attempt to explain the unemployment rate by the rate of investment, GDP growth, and inflation rate. We expect that Okun and Philips law will allow the presence of a negative correlation between GDP Growth, investment rate and unemployment. We introduce others variables that do not reveal any statistical significance. Only pertinent results are report. (Cf Table A5)

is 4.45%. The formers also allocate 2.44% of their GDP to public health expenditure by the time the world's average records 5.75%.

Figure 4:
Public Expenditure as a Percentage of GDP (2005-2009 Average)



The bar diagram, depicted above, shows the bias of Arab countries' expenditure in military, education, and health sectors. Namely, it reveals lower expenditure in the health and education systems relative to military expenditure. It is worth noting that, a large part of military expenditure consists of buying imported goods. These expenditures do not have any economic consequences and can not affect the Keynesian multiplier as they do not support the domestic manufacturing or any other kind of value-adding to the industry. Reforms of government spending patterns need to address this outlined bias otherwise countercyclical measures that many countries in the region are planning to adopt for the forthcoming years will have no significant impact on unemployment reduction. Taking into account the population growth, associated with an increase in youths searching for meaningful employment, Arab countries should find a way for resolving future conflicts that might arise.

1.1.3. Extending Public Work Programs (PWP) and Active Labor Policies (ALP)

Concerning PWP, UNESECWA (2012) proposed their extension as instruments through which governments can directly assist especially vulnerable groups. Public working programs- serving as poverty alleviation tools- are usually designed to provide employment and income to the parts of the population that are most severely affected by economic crises. In the Arab region, Egypt, Iraq and Yemen have experience in operating large-scale public working programs with a volume of several million US dollars, predominantly spent in rural areas. These programs pursue the twin objectives of firstly creating employment and secondly developing a vital economic and social infrastructure in often marginalized areas.

ALP are policies that have been previously applied in the Arab region. It basically consists of governments intervening in labor markets to provide certain protection against some fluctuations of economic conditions. In essence, governments intervene to support the match between labor supply and demand, raise the quantity and the quality of human resources available to the economy, and improve the functioning of the labor market. Instruments employed range from reforms of labor market regulations and the overhaul of employment services and training programs to public working programs, employment subsidies and the promotion of SMEs²⁰. The potential of such programs as a quick response mechanism in crisis situations is currently being exploited in Tunisia, where several donors along with the government have initiated employment creation through labor intensive working programs. The focus is on improving the living conditions in economically weak regions in the country and in urban areas²¹. Among the GCC countries, Saudi Arabia has started targeting activation policies to address the low levels of labor force participation among women. By implementing more forcefully a law dating from 2006, Saudi women are now supposed to replace male foreign migrant workers in most retail shops²². At the same time, the ministry of labor has started an initiative to encourage women to work from home²³. The MANFORME program in Tunisia,²⁴ the Al Manar project in Jordan,²⁵ Vocational Education projects in Egypt and Morocco, and parts of the MEDA project in Jordan, Lebanon and Syria²⁶ have absorbed hundreds of millions of financial supporters aiming at enriching labor programs.

As a note of caution, these types of programs should be implemented very delicately in such a way that they do not affect long term macroeconomic stabilities in these countries. Specifically, studies of the programs need to be undertaken in order to address the consequences of their failures. For example in countries like Tunisia the implementation of these programs -seen as a new form of public jobs- has created a serious burden on the budget. In addition, analysis suggests that the mentioned reform programs have generated ‘islands of excellence’ but failed to initiate broader systemic changes²⁷. It is worth mentioning that systemic changes in terms of a structural transformation of Arab economies, diversification away from rents and a move into other technologically advanced sectors has been on the Arab agenda for a while, and in some aspects it is on an encouraging path. The share of the manufacturing sector, as well as services such as telecommunications, trade and tourism are increasing rapidly. Manufacturing is now the

²⁰ For a recent overview of labor market policies in Arab countries see: ESCWA 2012, Integrated Social Policy Report IV: Labor markets and labor market policy in the ESCWA region and ESCWA 2012, Active labor market policy in Arab countries.

²¹ ILO Newsletter, No.3, May 2012

²² Financial Times, 2012c

²³ Financial Times, 2012b

²⁴ For further information see DIFID-WB Collaboration on Knowledge and Skills in the New Economy, Knowledge and Skills in the MENA Region Tunisia, October 2003

²⁵ For further information see Jordan, National Center for Human Resources Development, Al Manar Project <http://www.almanar.jo/almanaren/WhoWeAre/tabid/168/language/en-US/Default.aspx>

²⁶ For further information see European Union, MEDA Program

²⁷ European Training Foundation, 2006, p.64

second largest sector in Egypt and Jordan.²⁸ However, many manufacturing enterprises continue the low-skill, low-value-added and low-productivity trend in the region – often utilizing foreign migrant labor, which further emphasizes the rather low knowledge content of the economy.

2. Reforming Labor Market Legislation in Order to Reduce Rigidities While Maintaining Social Security Mechanisms

A number of countries have reformed labor legislation; notably Egypt, Oman and Yemen in 2003, Iraq and Qatar in 2004, Saudi Arabia in 2005, the United Arab Emirates in 2007, and Jordan, Kuwait and the Syrian Arab Republic in 2010²⁹. Most reforms relaxed the conditions of fixed term contracts, making it easier for employers to adjust their workforce to economic conditions. However, new and more radical approaches seem to be required. The persistence of the employment crisis in Arab countries, despite the considerable funds and efforts vested by governments and international donors, has been a source of concern over the past decade. In this regard, two broad views concerning the role of labor-market regulation in economic performance co-exist today in the literature. Some critics known as the ‘distortionists’ argue that government regulations in labor markets – such as minimum wages, social security contributions, job security, and collective bargaining – create distortions (World Bank, 1990). In this view, labor-market regulations can stand as obstacles in the face of growth for at least three reasons. First, they prevent wages from being equal to their marginal product in equilibrium which leads to a misallocation of resources. Second, they hinder the adjustment of the labor market to shocks. Third, labor regulations that redistribute economic rents from capital to labor reduce profitability of investment and lead to lower growth rates. Other critics, known as the ‘institutionalists’ claim that market failures generate a divergence from the ideal world and emphasize the benefits of government interventions in the labor markets (ILO, 1991). Labor regulations fulfill redistributive roles for low-wage workers or act as an insurance against adverse market outcomes (Standing and Tokman, 1991). Labor standards force employers to focus on enhancing their labor force through either training or technical innovation (Freeman, 1993). Finally, standards on mandatory benefits may help solve moral hazard or selectivity issues that prevent firms from offering socially desirable benefits or contracts (Summers, 1988). Typically, the conventions issued by the International Labor Organization reflect the ideal regulatory framework from an institutionalist perspective -as their ratification gives them legal status- thus superseding domestic regulations on those issues (Forteza and Rama, 2006). In fact, many labor advocates support ILO conventions stemming from the view that the bargaining power of employees is seen as weaker than that of employers. This translates into conventions that are designed to restrict the ability of employers to decide on the terms and conditions of work. That is, labor advocates tend to focus on issues related to microeconomic matters of labor exploitation rather than macroeconomic matters related to the economy’s performance. Nevertheless, while the signing

²⁸ ESCWA, 2012a, p.48 and Annex table 11

²⁹ ESCWA, 2012a, pp. 103-106

of ILO conventions may make it more likely that legislatures will later pass regulations in a country it is not clear such regulations will, in fact, be binding or enforceable.

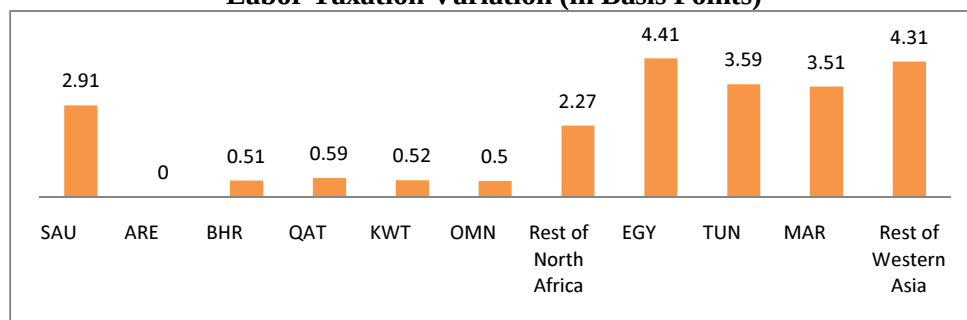
2.1. Implementing Unemployment Insurance While Reducing the Firing Costs.

This is a classical example of a non-binding regulation. Economic efficiency and worker protection could be achieved if the labor code is set as an overarching goal “to protect the income of workers as opposed to protect particular jobs”. For reaching this objective, ESCWA is proposing a combination of:

- (i) A reduction of the firing cost ; and
- (ii) The creation of a mandatory public Unemployment Insurance system (UI).

There is large consensus to consider UI as an important automatic economic stabilizer. On one hand, UI allows consumers to cope with the risk of large fluctuations in income due to job losses. On the other hand, it provides a method of smoothing consumption for the unemployed, particularly for consumers who are constrained in borrowing. Meanwhile, the overall effect of such policy on the national economy is quite complex. In this context, and in order to obtain a first order estimation of the impact of establishing a mandatory labor insurance mechanism in all the Arab countries, we conduct a CGE simulation using a modified version of the MIRAGE³⁰ model. This involves creating in 2013 an institution that provides unemployment benefits to all unemployed persons in the Arab region. The benefit level is supposed to be equivalent to 25.6% of current workers earnings; a level equal to the OECD’s average (cf. Annex 2). This benefit is supposed to be totally financed by additional labor taxation to maintain the net labor benefit at its initial level. In this simulation we do not assess the impacts of reducing firing cost, though this policy is supposed to increase the growth-employment elasticity. We thus assume that labor elasticity remains unchanged. That means the estimation of the economic cost of this policy is a maximal estimation. According to our simulation creating an UI in the Arab countries will imply a sensible increase in labor taxation. For non-oil producing countries and Saudi Arabia (countries where unemployment is relatively high) this increase reaches 3 to 4 basis points (cf. figure 5).

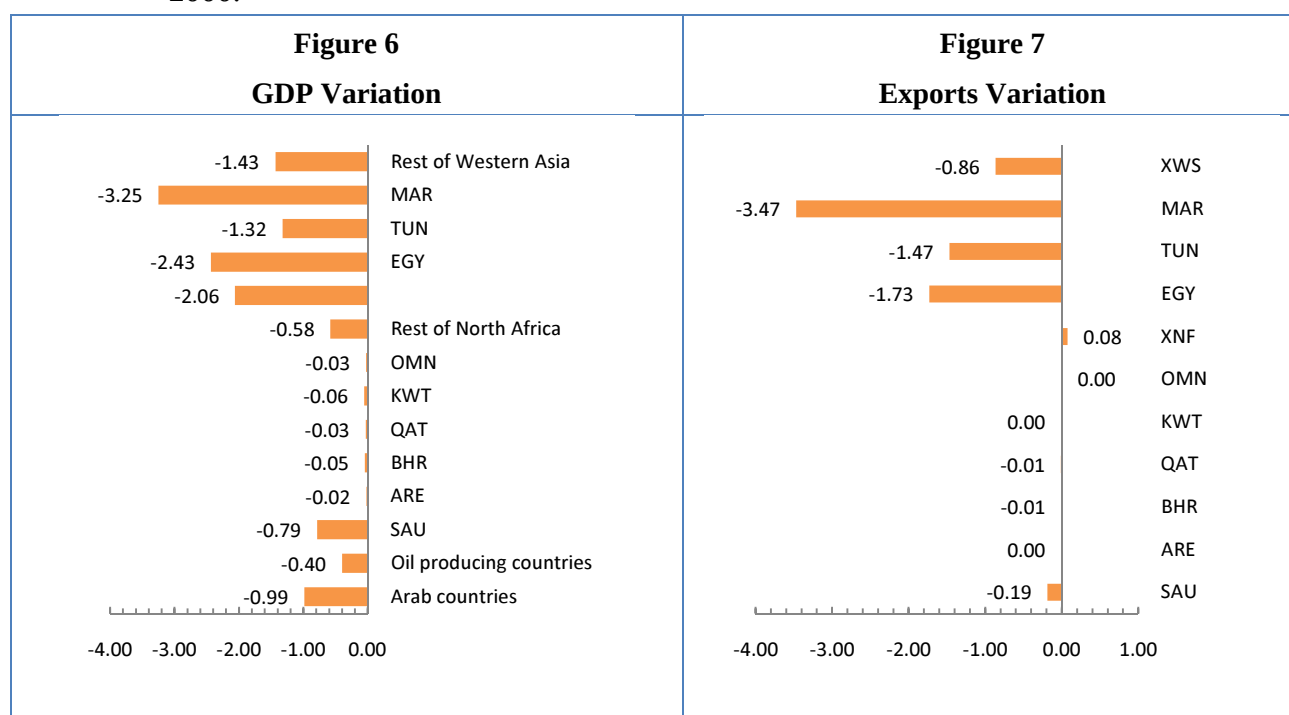
Figure 5
Labor Taxation Variation (in Basis Points)

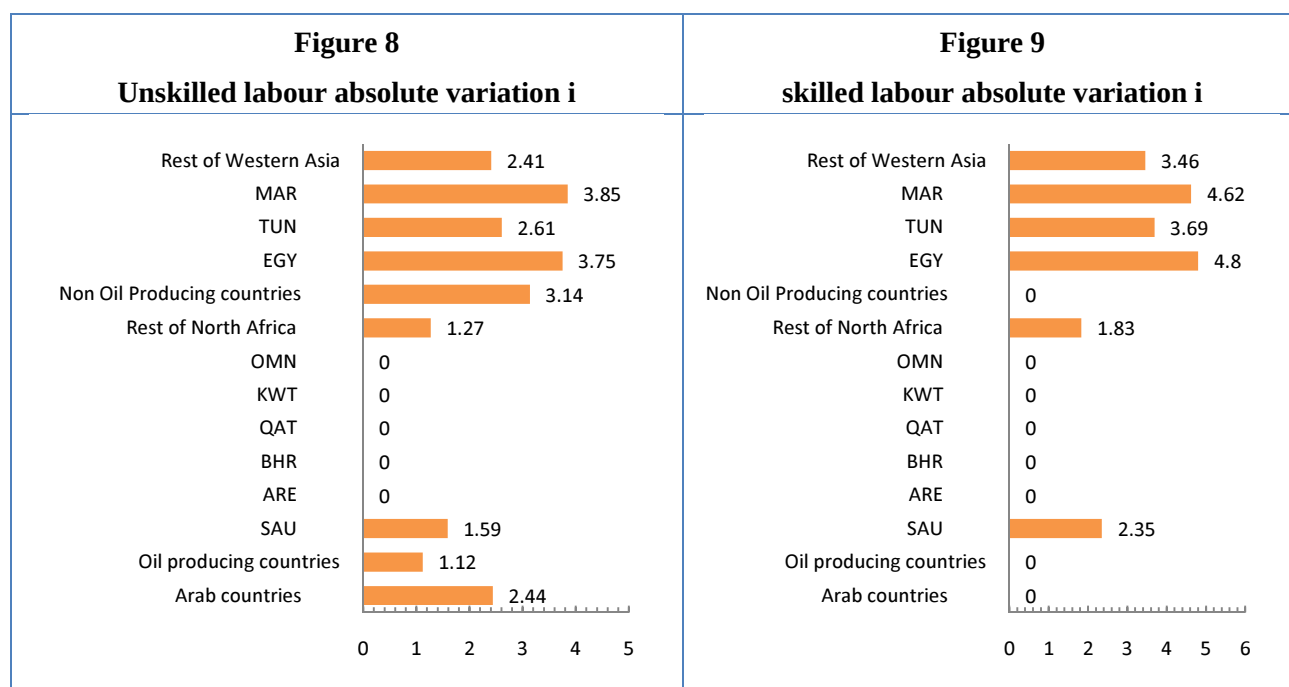


³⁰ Cf. Annex 1 and Bchir et al 2002..

The increase in labor costs generates a 1% GDP loss for the entire Arab region (cf figure 6). GDP decrease is more important in non-oil producing countries (NOPC) where GDP loss could reach - 2.06% with a -3.25% loss in Morocco (MAR), -2.43% in Egypt and -1.32% in Tunisia. Salary increased will also have two main important impacts:

- (i) A decrease in economic competitiveness especially for non-oil producing economies. This explains the reduction in their total exports (figure 7).
- (ii) An additional impact on the labor market. The increase of brut wages (as net salaries are supposed to remain unchanged) will reduce labor demand and as a consequence, increase unemployment rates for both skilled and unskilled labor (figure 8 and 9). This result confirms empirical evidence as presented by Calmfors and Holmlund, 2000.





Source Author's simulation using MIRGAE

Meanwhile, the impact of these variations should be compared with the unemployment programs that are currently applied in many Arab countries. As an example, the World Bank estimates that in Tunisia 11 employment programs existed and that their overall cost exceeded 1.5% of the GDP. The analysis of costs and benefits and implementation mechanisms should also take into consideration additional microeconomic and social effects. This proposition is supported by Angel-Urdinola and Kuddo (2010) who concluded that appropriately designed unemployment insurance schemes can provide adequate protection to workers in the context of a more flexible labor market. They draw attention to the fact that Algeria, Egypt, Iran, and Kuwait have some kind of UI systems but these systems are being hardly utilized. This is linked to the fact that the public lacks awareness of UI benefits among its plan members, add to that the restrictive eligibility conditions, the difficulty of -and the stigma attached to- documenting a “just-cause” firing decision, and low overall lay-off risk regarding covered and open-ended contract employees.

- From a positive side UI is certainly a good tool to cover the myopia of workers that underestimate the eventuality of being unemployed. Hamermesh and Sleznick (1995) show that in the United States, the welfare of benefit recipient households is on average only 3 to 8 percent lower than the welfare of otherwise identical households. Also in the absence of unemployment insurance, average consumption expenditures would fall by about 20 percent (Gruber, 1997).
- On the other side, the introduction of a UI program may also affect employment decisions. First, they influence job-search efforts and the reservation wages of recipients. This may either prolong unemployment periods by making leisure more attractive, or

shorten them by providing additional resources, thus enabling a more effective job search. Second, unemployment benefits improve the bargaining position of workers. This leads to higher wages and hence a higher equilibrium unemployment (Blanchard and Wolfers, 2000). UI may also affect the allocation decisions of economic agents such as influencing enterprise restructuring and layoff decisions.

Several countries also consider introducing unemployment insurance. At present, schemes are effective in Egypt and Bahrain. In Jordan, unemployment insurance is currently phased in as a defined contribution scheme.³¹ Saudi Arabia³² and Oman³³ introduced a program of unemployment benefits in 2011 while the United Arab Emirates are debating a similar move.³⁴

2.2. Implementing a Social VAT Mechanism

In a Bismarckian system, social benefits are financed by payroll taxes. These are taxes revealing the difference between the gross salary actually paid by the employer, and net pay income actually received by the employee. In this context, the reduction of labor costs encourages firms to hire more employees. It also allows them to improve their margins and profit tax of devaluation to improve competitiveness.

One of the causes frequently put forward to explain the persistence of the high unemployment rate is the cost of the work or the wage wedge. That is the difference between what pays the employer and what affects the employee. The example of Tunisia shows the salary structure normalized to 100%. The social and fiscal wage wedge represents the difference between the total amount paid by the employer- normalized to 100- and the cost that he incurs. The figures show that the tax wedge has increased by around 4% in the period from 1990-2000 (23.5%) to 2000-2010 (27.6%) . In the recent period of 2008-2010, the tax wedge continued to record an increase reaching 28.2% which is the cost to the employer. Reducing unemployment rate could require reducing the tax wedge (cf. Table 2).

Table 2:
Fiscal and social wage wedge in Tunisia

	Average19 90-2000	Average2001- 2010	Average 2008-2010
I. Employer cost	<u>100%</u>	<u>100%</u>	<u>100%</u>
Social contributions	10.1%	10.3%	9.8%
Others employer contributions	2.7%	3.4%	4.4%
II. Gross Wage	<u>87.3%</u>	<u>86.3%</u>	<u>85.9%</u>
Employee social contribution	5.0%	5.8%	5.0%

³¹ Global Extension of Social Security (GESS) (accessed 20-11-12)

³² Wall Street Journal, 2012

³³ See IMF, 2011

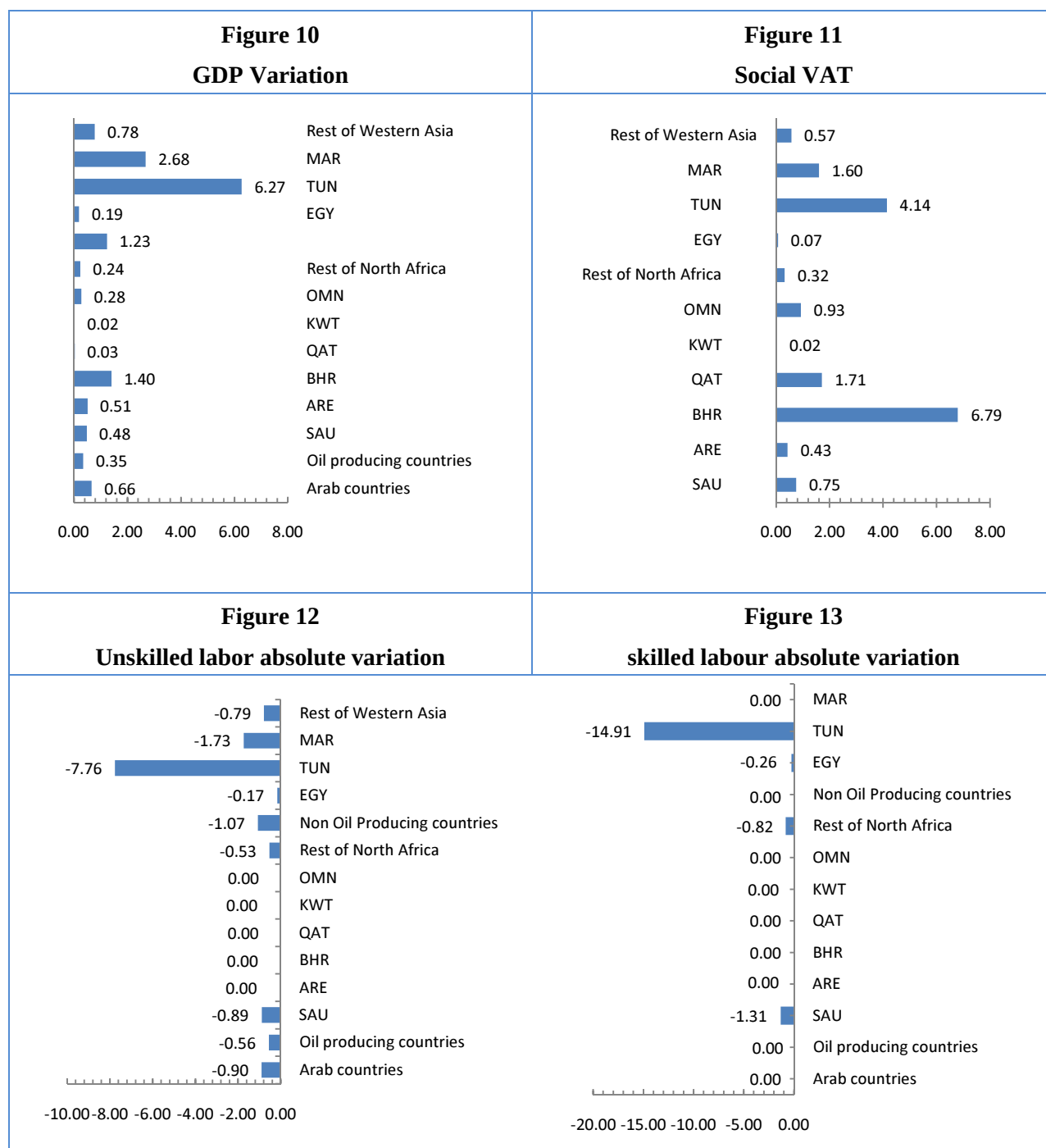
³⁴ For more information see National (the), 2012

Tax	5.8%	8.5%	9.1%
III Wage	<u>76.5%</u>	<u>72.4%</u>	<u>71.8%</u>
Fiscal and social wedge	23.5%	27.6%	28.2%

The principle of social VAT is to reduce the contributions paid by employers and offset this reduction by increasing the VAT rate to continue to finance social protection of employees. The simplicity of this mechanism and its immediate effect on labor costs has led many countries to implement it or to explore the possibility of doing so. Countries like Denmark and Germany are best known for their success in introducing social VAT. Namely, in the late 1980s and early 1990s, Denmark had experienced an increase in its unemployment rate, large public deficits and a big deficit in its balance of payments. To address this problem, the socialist government of Denmark had put in place a package of reforms including the introduction of social VAT. The immediate effect was an improvement of the competitiveness by 5% and a slight inflation with improved profit margins. The impact on unemployment however was seen as mixed, but the country has been able to reduce it from 10% in the early 90s to 4% in 2011. Germany had also introduced in 2007 a system of social VAT which led to an increase in VAT from 16 to 19% to fund a reduction in unemployment contributions. A VAT point was sufficient to compensate for the reduction of social contributions. In France, the debate is running for a long time and continues to be. In essence, the issue was discussed in 2007 and returned in the public debate recently. Several studies have been initiated and simulations show that a VAT point offsets 1.5 social contribution points. DGTPE was estimated at more than 300,000 extra jobs in the medium term with lower social contribution concentration on low wages, financed by higher VAT per 1.5 contribution points.

Applying such a mechanism in some countries in the Arab region could constitute a possibility to reduce labor costs faced by employers without reducing social safety net benefits. The assessment of the economic impact of implementing social VAT mechanisms has been tackled using the simulated modified version of MIRAGE model. The simulation consists of a 50% reduction of labor taxation while maintaining social security benefits. The gap between social security contributions and benefits is supposed to be financed by an additional indirect taxation commonly known as social VAT. Simulation shows that the level of social VAT that needs to be applied differs between countries. The difference ranges from 7% in Bahrain, 4.14% in Tunisia to 0.07% in Egypt (cf. figure 11). The variations in results stem from the difference in the initial level of social security contribution that prevailed in these countries. On the unemployment level, the reduction of labor cost has its consequences on the level of unemployment in these countries. Figures 12 and 13 show that unemployment rate decreases in all the countries with a notability to the important decrease in Tunisia recording -7.7 basis points for unskilled unemployment and -14.9 for skilled unemployment rate. Thus, Tunisia is indeed a country where social security contribution is extremely high. As a consequence of the pro competitiveness effect along with the new employment dynamics and the sensible decrease of unemployment, all the Arab countries are expected to create additional growth possibilities that

the model estimates to reach 0.66% for the whole region. As for Tunisia, growth possibilities are estimated to reach more than 6%. The latter country seems to reap major benefits from this reform. In countries like Egypt where the social security coverage is limited, due to high informality, the impacts of such a policy remain limited.



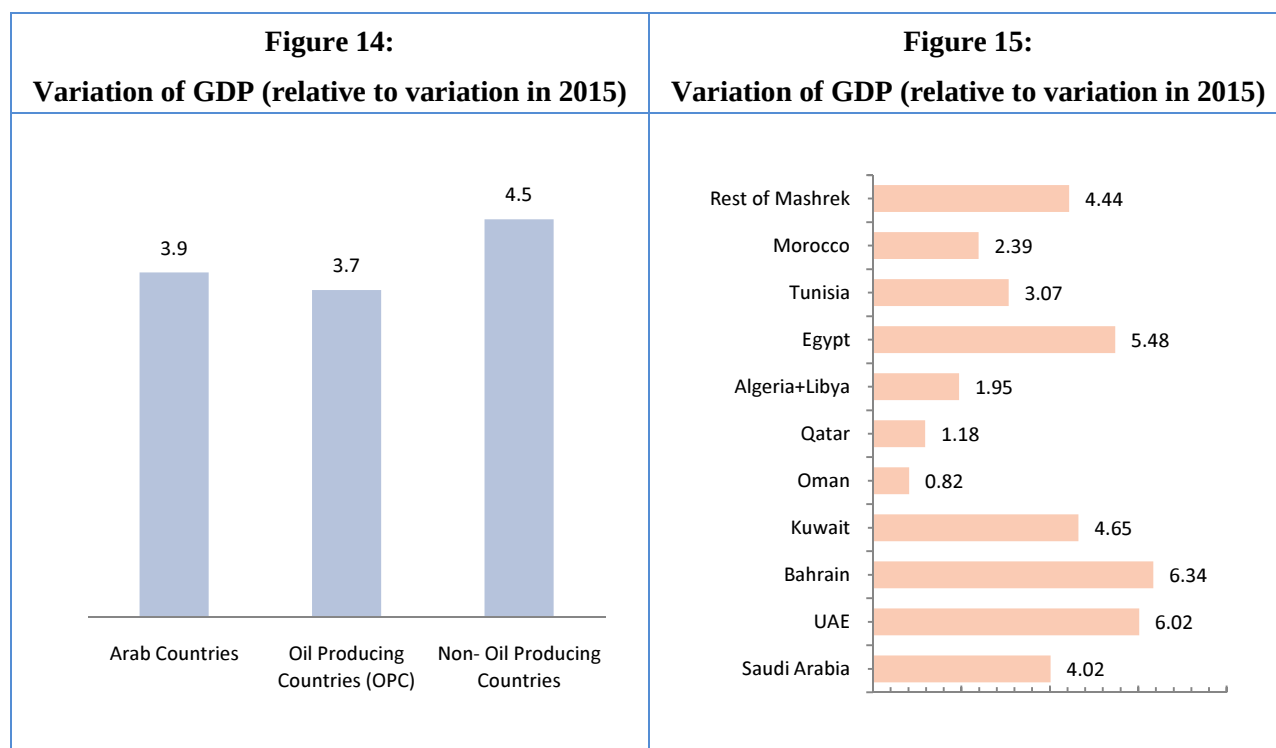
Source Author's simulation using MIRGAE

3. Reinforcing Migration Policy Within the Arab Region

As part of its assessment of the economic and social impacts of strengthening Arab integration, ESCWA (2013c) demonstrated that AI is a strong instrument to promote growth and reduce unemployment in the region. A simulation was implemented and it consists of:

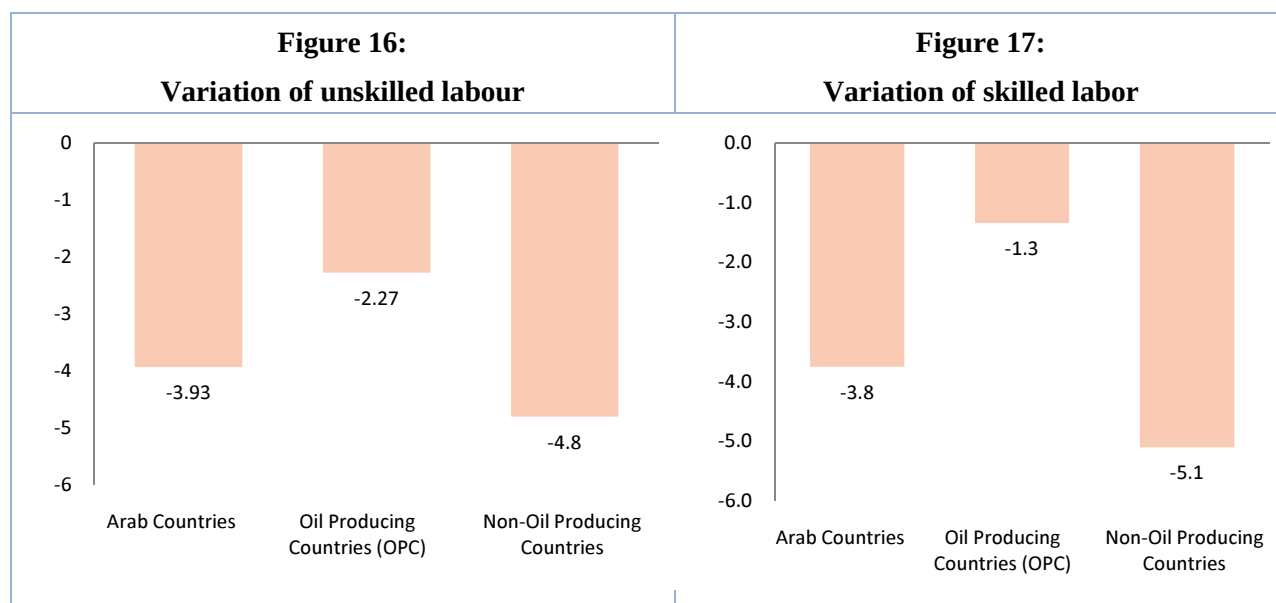
- (i) Removing all tariffs barriers between Arab countries and regions in 2013
- (ii) Reducing transportation cost by 50 per cent between all Arab countries
- (iii) The adoption of a custom union between all Arab countries that covers all non-agricultural sectors
- (iv) Substituting 20 per cent of non-Arab migrants in oil-producing countries and all future flows of non-Arab migrants by Arab nationals.

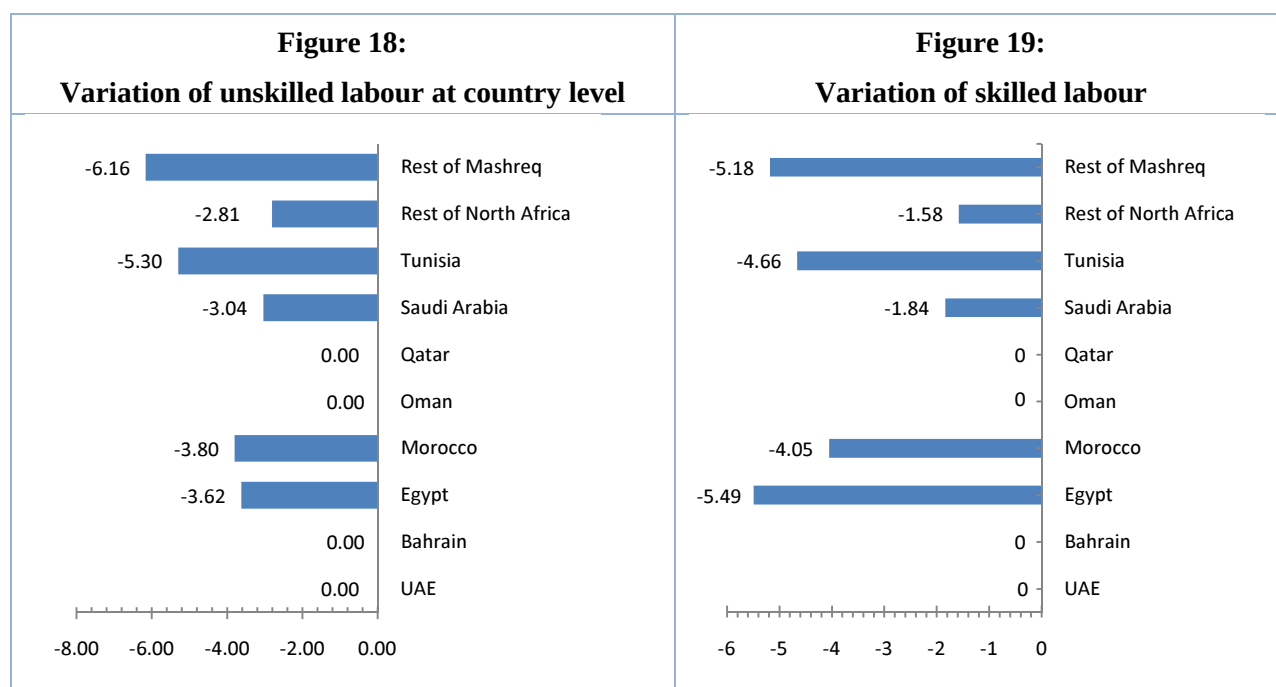
Simulations show that if such policy is implemented the Arab region could register a 3.9 increase in GDP. This GDP gain will benefit all the countries in the region. Egypt could be one of the largest benefiting countries from this process with a GDP gain of 5.48%. Tunisia and Morocco could register respectively a GDP gain of 3.07% and 2.39%. Oil producing countries also will benefit from the regional integration process as they will make profits from better market access and from migrants that have a larger propensity of consumption in hosting countries.



Source: ESCWA 2013c

ESCWA (2011c) shows also that regional integration policy scenarios will also have an impact on the level of unemployment in the whole region, especially in countries suffering from high unemployment level such as Egypt, Tunisia and Morocco. Figures 16 and 17 show that both skilled and unskilled unemployment rates can be reduced significantly by around 4 basis points. Those figures also reveal that the impact is most important in the non-oil producing countries that will experience a reduction in both unskilled and skilled unemployment by around 5 basis points. In addition, as expected, policy scenario 4 will greatly reduce unemployment in most Arab countries. For example, Tunisia could register around a 5 basis points reduction of unskilled and skilled unemployment. Egypt and Morocco would have both their unskilled and skilled unemployment rate reduced by around 40 per cent. Therefore, on a country's level, Egypt, Tunisia, and Morocco will benefit from a sensible decrease in both of their skilled and unskilled unemployment. Figure 17 shows that skilled unemployment in Egypt could be reduced by 5.5 basis points, in Tunisia and Morocco the reduction could reach 4.66 and 4.05 basis points, respectively. In rest of Mashreq countries, skilled unemployment could be reduced by 5.18 basis points. It is worth pointing out that unskilled unemployment also will be sensibly reduced in countries that suffer from high unemployment rates. Figure 16 shows that unskilled unemployment could be reduced by 5.3 basis points in Tunisia, 3.8 basis points in Morocco, 3.62 basis points in Egypt and 6.16 basis points in the rest of the Mashreq countries.





Source: ESCWA 2013c

Reinforcing migration policy in the Arab region has no cost in terms of public finance and could serve as the first and most urgent solution to the unemployment problem in the region. Putting in place this policy will just need a regional political will. Namely, policy makers in the region will have to draw lessons from the recent political events especially regarding the uprising movements that have been taking place between countries. They also have to take into consideration that the rise of unemployment in one country will have a regional impact on the region. Accordingly, the solution to the unemployment problem needs to be also tackled on the regional level.

4. Reforming the Public Employment Services

UNESCWA (2012 a) showed that one of the main limitations of public employment offices in the Arab region is their low coverage and limited number of benefits. According to the study, the percentage of jobseekers employed through employment offices has been quite low. For example, descriptive statistics reveal that in Bahrain, from 2005 to 2007, 18 per cent of jobseekers who registered at the Employment Service Bureau of the Ministry of Labor found jobs through the Bureau. In Egypt, from April to June 2010, 29 per cent of registered jobseekers found a job through the Central Department for Employment and Labor Market Information. In Jordan, from 2004 to 2010, 3 per cent of registered jobseekers found a job through the national employment center. In Lebanon, between 1998 and 2005 the National Employment Office received only 1,370 job requests, offered 450 job offers year and placed a no more than 210 jobseekers in jobs. In Palestine, in 2008, while more than 300,000 unemployed were registered in

the Directorate of Labor, the latter was capable of facilitating the employment of only 87 individuals. As for Saudi Arabia, in 2008, the employment offices of the Ministry of Labor facilitated the employment of 57 per cent of the unemployed registered in the offices. In Tunisia, in 2005, the Public employment agencies registered 300,000 jobseekers and 110,000 job offers fulfilling on average 100,000 job positions. In order to improve the efficiency of these agencies and to increase their rate of placement, UNESCWA(2012) developed a comprehensive reform package that covers the following topics:

- Developing an integrated employment approach for public employment services: This new approach draws lessons from reforms implemented in GCC countries in order to build new agencies that provide services and career guidance for job seekers. This approach also determines their weaknesses and potential and develops training courses based on their needs and the requirements of private businesses. It is worth noting that coordination with private businesses is carried out to identify job opportunities and facilitate the recruitment process.
- Promoting the role of private employment offices: private employment offices can play an important role if their activities are better regulated. In essence, while the regulation of private training institutes is being developed, that of private employment offices lags behind. In effect, with Jordan being an exception, the development of private employment offices remains absent from the labor policy agenda in the ESCWA region.
- Mainstreaming equality in the design of PESs: Some data indicate that issues of gender equality and regional distribution are not consistently mainstreamed in the design and delivery of employment services. In Egypt, for example, only 19 per cent of the positions filled, from April to June 2010, through the labor offices were by female jobseekers. Available information indicates also that in most Arab member countries, employment offices are distributed in different governorates, regions, or areas . Yet, in some cases, they tend to be concentrated in capital cities or urban areas. For example, in Iraq, one third of employment offices are in Baghdad, in Saudi Arabia, one fourth are in Riyadh, and in Lebanon employment offices are located only in the three major cities. The concentration of employment offices in capital cities and urban areas might be justified by high levels of urbanization, but it also sets the challenge of reaching out to rural areas. In addition, it is not clear how the budget is distributed or if services of the same kind and quality are equally available in all offices. The budget distribution for PESs by governorate, region or area is generally unavailable, and the quality of employment services may be uneven. For example, in Egypt, the percentage of job vacancies filled by the employment offices varies from one governorate to the other. In Saudi Arabia large regional variation is spotted in the number of vacancies posted by the employment offices. These trends should be examined with caution. Particularly, while these trends might reflect variations in the levels of efficiency of employment offices, they might also be the result of the specific conditions of the labor market in different areas of a country.

In addition, public employment offices will be in charge of the management and of the labor insurance mechanisms. They will also take responsibility of registering unemployed, distributing unemployment insurance benefits, and following the evolution in the labor market.

Section III. Conclusion

As a first step towards structural change, a corporate dialogue between policy makers and the private sector would be useful in order to revisit the overall policy objectives and to discuss the development paths of individual countries.

This discussion might lead to the general impression that some Arab countries and especially the Gulf States, seem to maintain conflicting agendas. On the one hand, almost all development plans and models for the future set the objective of building an enhanced economy, putting high investments in education and enhancing infrastructure. On the other hand, however, many countries maintain a business model, which is based on cheap labor, low skills and low productivity. This business model is not capable of utilizing the growing knowledge and abilities of a young and ambitious workforce. It does not offer attractive jobs to those young people, who have been well educated under great expenses, and as a result those educated individuals are forced to fill positions of the unemployed and malcontent.

The profits of individual corporations or businesses do not necessarily benefit the country that they are based in and might not correspond to national development ambitions. The availability of cheap labor, often even in combination with subsidized energy resources, does not encourage sufficient investment in innovation and technology. Therefore businesses tend not to give an importance to investing in strategies that can increase creativity and competitiveness. In fact, they become dependent on low prices and high factor inputs, and thus find it difficult to survive otherwise.

Solutions to unemployment problems in the Arab region are not obvious and will ultimately need a new inclusive development model. Meanwhile, designing, implementing and getting the results of this model need time and social stability. The paper proposed a sample of innovative reforms that could, on the short term, create the necessary landscape to launch the long term reforms. It proposed five policies; namely, (i) Improving labor impacts of macroeconomic policies; (ii) Implementing unemployment insurance while reducing the firing costs, (iii) Implementing a Social VAT mechanism, (iv) Reinforcing migration policy within the Arab region, and (v) Reforming the Public employment services. It has presented a global assessment of the economic impacts of these reforms using a Global Computable General Equilibrium Model. Results showed that the impact varies across countries and depends on specific initial conditions. The paper has also demonstrated that regional integration and modernization of public employment appear to be relevant issues to all Arab countries.

This paper needs to be considered as a primary assessment of these policies. An in-depth analysis of each country should be conducted in order to take into consideration the individual, social, and economic structure in line with the institutional framework characterizing countries.

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Annexes

Annex 1

Short description of the MIRAGE model

The assessment is done using the GTAP 8 data base and a modified version of MIRAGE that includes a migration block.

GTAP data base:

The Global Trade Analysis Project (GTAP) is a global database describing bilateral trade patterns, production, consumption and intermediate use of commodities and services. The current version GTAP 8 contains 128 regions including the 6 GCC countries. For the purpose of the current study we will use the following regional desegregation: (Egypt; Tunisia; Morocco; Rest of North African countries; Bahrain; Kuwait; Oman; Qatar; Saudi Arabia; United Arab Emirates; USA; European Union; Japan; China; India; Turkey; Rest of the world.

MIRAGE Global CGE model

MIRAGE is a multi-sector, multi-country Computable General Equilibrium model initially devoted to trade policy analysis and more recently applied to long term growth and environmental issues. MIRAGE is a relatively standard neo-classical model of economic activity and is based on the latest release of the GTAP data set, version 8.0. It is designed for analyzing dynamic scenarios, which are solved as a sequence of static equilibria, with the periods being linked by dynamic variables (population and labour growth, capital accumulation, and productivity).

Policy scenarios are compared to a baseline, or business-as-usual, scenario. The following section briefly describes the dimensions of the model and its main features.

- Demand: The demand side is modelled in each region through a representative agent, whose utility function is intra-temporal, with a fixed share of regional income allocated to savings and the rest being used to purchase final consumption. Below this first-tier Cobb-Douglas function, consumption tradeoff across sectors is represented through a LES-CES function. Each sectoral sub-utility function is a nesting of CES functions, comparable to the standard nested Armington – Dixit-Stiglitz function (see e.g. Harrison et al., 1997), with two exceptions: First, domestic products are assumed to benefit from a specific status for consumers, making them less substitutable to foreign products than foreign products between each other; Second, products originating in developing countries and in developed countries are assumed to belong to different quality ranges.
- Supply: Production makes use of five factors: capital; skilled labour; unskilled labour; land; and natural resources. The first three are generic factors; the last two are specific factors. The production function assumes perfect complementarity between value-added and intermediate consumption. The sectoral composition of the intermediate consumption aggregate stems from a CES function. For each sector of origin, the nesting is the same as for final consumption, meaning that the sector bundle has the same structure for final and intermediate consumption. The structure of value-added is intended to take into account

the well-documented skill-capital relative complementarity. These two factors are thus bundled separately with a lower elasticity of substitution (0.6), while a higher substitutability (elasticity 1.1) is assumed between this bundle and other factors. Constant returns to scale and perfect competition are assumed to hold in agricultural sectors.

- Capital, markets clearing and macroeconomic closure: The capital good is the same whatever the use sector, and capital is assumed to be perfectly mobile across sectors within each region. At the regional wide level, capital stock is assumed to be constant in the core simulations of this paper. Natural resources are also perfectly immobile and may not be accumulated. Both types of labour (skilled and unskilled), as well as land, are assumed to be perfectly mobile across sectors, while production factors are assumed to be fully employed. As for macroeconomic closure, the current balance is assumed to be exogenous (and equal to its initial value in real terms), while real exchange rates are endogenous.
- Dynamics: In a typical recursive dynamic framework, the time path of the model is solved as a sequence of static equilibria in each year. In other words, the solution in any given year is not a function of forward-looking variables, though it may be an explicit function of past variables, though known and therefore exogenous. While there are drawbacks in the recursive dynamic framework, particularly in the modelling of savings and investment behaviour, its one key advantage is that it is much easier to set up and solve. (Van der Mensbrugghe, 1998) There are several backward linkages linking one period to another, covering population growth, productivity increases and capital accumulation. Most of these linkages can be resolved outside of the modelling framework, or in other words, in between solution periods. One exception is the capital accumulation function. Before running any policy simulations in a dynamic framework, it is often necessary to define a reference, or “business as usual” (BaU) scenario. The BaU scenario makes some assumptions about a broad range of dynamic variables — population and labour supply growth rates, the growth rate of factor productivity, and other exogenous variables. If all productivity variables, including population growth rates, are pre-determined, the growth rate of real GDP is endogenous. However, the path trend in real GDP growth may be unrealistic, or at least.
- Unemployment: In addition to the standard version of MIRAGE, This exercise supposes that labour market is imperfect and that unemployment results from a minimum wage level that is beyond the equilibrium wage. For both skilled and unskilled labour, the minimum wage is dynamically calibrated in order to reproduce the level observed and projected unemployment rates for all the regions.
- Bilateral Migration and remittances: The data is extracted from the World Bank Global Bilateral Migration Database and aggregated in order to fit with the study’s aggregation., when taking into account migration, demographic evolution is in country (r) in period (t) given by:

- o the level of **Unskilled labour** $L(r, t)$:

$$L(r, t) = L(r, t - 1)(1 + g^L(r, t)) + \sum_s [FMIG^L(s, r, t) - FMIG^L(r, s, t)]$$

- o the level of skilled labour $H(r, t)$,

$$H(r, t) = L(r, t - 1)(1 + g^H(r, t)) + \sum_s [FMIG^H(s, r, t) - FMIG^H(r, s, t)]$$

Where $g^L(r, t)$ and $g^H(r, t)$, the rate of natural growth of unskilled and skilled labor. This data is extracted from the UN projections when supposing that the share of skilled remains constant, and $FMIG^L(s, r, t)$ and $FMIG^H(s, r, t)$ are the flows of skilled and unskilled migrants from county (s) to country(r). The stock of unskilled (resp. skilled) migrants from county (s) in country (r) $MIG^L(s, r, t)$ (resp. $MIG^H(s, r, t)$) is given by:

$$MIG^L(s, r, t) = MIG^L(s, r, t - 1) + FMIG^L(s, r, t)$$

$$MIG^H(s, r, t) = MIG^H(s, r, t - 1) + FMIG^H(s, r, t)$$

Remittance by migrant $S_REM(r, s)$ is supposed to be constant. The level of remittances from county (r) in country (s) is then given by:

$$REM(r, s, t) = S_REM(MIG^L(s, r, t) + MIG^H(s, r, t))$$

Remittances are modelled as a transfer from Households in country (r) to households in country(s).

- The transport cost is extracted from the GTAP database

Annex 2

Unemployment benefits (As % of previous earnings in the OECD countries)

	2001	2007	2009
Australia	24.8	20.8	21.2
Austria	30.5	30.4	30.8
Belgium	37.1	38.7	41.8
Canada	15.3	12.0	15.2
Chile	..	..	..
Czech Republic	5.9	6.3	6.3
Denmark	58.0	53.5	52.6
Estonia	..	..	..
Finland	36.5	35.5	34.8
France	42.8	38.1	38.8
Germany	29.1	22.9	23.2
Greece	13.9	12.4	9.6
Hungary	11.6	11.7	11.4
Iceland	38.1	29.1	35.5
Ireland	27.0	38.0	43.2
Israel	..	..	..
Italy	33.3	31.3	30.4
Japan	12.0	12.6	12.7
Korea	9.7	9.2	8.9
Luxembourg	25.3	25.6	25.6
Mexico	..	..	..
Netherlands	52.0	33.9	33.8
New Zealand	30.2	27.0	32.3
Norway	58.4	56.5	33.4
Poland	11.3	10.1	9.9
Portugal	40.5	42.5	43.1
Slovak Republic	11.3	8.3	8.3
Slovenia	..	..	..
Spain	34.0	33.4	32.8
Sweden	37.9	35.3	39.3
Switzerland	37.5	32.7	32.7
Turkey	..	9.8	11.4
United Kingdom	14.8	13.3	12.1
United States	13.0	12.9	24.3
OECD-Total	28.3	25.6	26.1

Source: OECD Employment Outlook

Annex 3

Employment to growth elasticity in the MENA region

Table A3.1 Econometric explanation of unemployment in the Arab Region

Dependent Variable: UNEMP?

Method: Pooled Least Squares

Date: 10/03/12 Time: 15:17

Sample: 1980 2011

Included observations: 32

Cross-sections included: 9

Total pool (unbalanced) observations: 208

White cross-section standard errors & covariance (d.f. corrected)

Cross sections without valid observations dropped

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	17.72374	1.267141	13.98719	0.0000
INV_GDP?	-0.241598	0.058073	-4.160253	0.0000
INF_AVE?	-0.000184	0.008266	-0.022246	0.9823
G_GDP?	0.011374	0.028711	0.396156	0.6924
Fixed Effects (Cross)				
_AL--C	9.256791			
_EG--C	-3.389135			
_JO--C	1.854744			
_KU--C	-12.07855			
_MO--C	1.025616			
_SA--C	-2.771311			
_SU--C	2.339089			
_SY--C	-1.825274			
_TU--C	3.215176			
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.793375	Mean dependent var	12.30291	
Adjusted R-squared	0.781779	S.D. dependent var	6.442707	
S.E. of regression	3.009658	Akaike info criterion	5.097491	
Sum squared resid	1775.376	Schwarz criterion	5.290041	
Log likelihood	-518.1391	Hannan-Quinn criter.	5.175348	
F-statistic	68.41615	Durbin-Watson stat	0.357066	
Prob(F-statistic)	0.000000			

Table A3.2. : Econometric explanation of unemployment in the Arab Region

Dependent Variable: UNEMP?
Method: Pooled Least Squares
Date: 10/03/12 Time: 15:19
Sample: 1980 2011
Included observations: 32
Cross-sections included: 9
Total pool (unbalanced) observations: 208
White cross-section standard errors & covariance (d.f. corrected)
WARNING: estimated coefficient covariance matrix is of reduced rank
Cross sections without valid observations dropped

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	19.70140	1.605785	12.26901	0.0000
INV_GDP?	-0.311312	0.066896	-4.653674	0.0000
INF_AVE?	-0.027642	0.011924	-2.318188	0.0217
G_GDP?	-0.018616	0.028340	-0.656861	0.5122
Fixed Effects (Cross)				
_AL--C	10.32523			
_EG--C	-3.919357			
_JO--C	2.341503			
_KU--C	-12.08724			
_MO--C	1.653412			
_SA--C	-2.577732			
_SU--C	3.124004			
_SY--C	-1.737373			
_TU--C	2.877551			
Fixed Effects (Period)				
1980--C	-3.926506			
1981--C	-2.376277			
1982--C	-1.127585			
1983--C	-1.468383			
1984--C	-3.061200			
1985--C	-3.966083			
1986--C	-2.373229			
1987--C	-2.971742			
1988--C	-2.463448			
1989--C	-2.697416			
1990--C	-0.024645			
1991--C	2.122744			
1992--C	2.005708			
1993--C	2.933224			
1994--C	3.362739			
1995--C	2.264881			
1996--C	1.252816			
1997--C	1.008834			
1998--C	0.507496			
1999--C	-0.063485			
2000--C	-0.047801			
2001--C	-0.714084			
2002--C	0.053335			
2003--C	0.056723			
2004--C	0.052138			
2005--C	-0.619749			

2006--C	-1.074761
2007--C	-0.790020
2008--C	-0.982924
2009--C	-1.271495
2010--C	-1.688542
2011--C	-1.497796

Effects Specification

Cross-section fixed (dummy variables)

Period fixed (dummy variables)

R-squared	0.846256	Mean dependent var	12.30291
Adjusted R-squared	0.807121	S.D. dependent var	6.442707
S.E. of regression	2.829506	Akaike info criterion	5.099950
Sum squared resid	1321.007	Schwarz criterion	5.789922
Log likelihood	-487.3948	Hannan-Quinn criter.	5.378939
F-statistic	21.62412	Durbin-Watson stat	0.482279
Prob(F-statistic)	0.000000		
