

AMERICAN UNIVERSITY OF BEIRUT

THE EFFECT OF EDUCATION ON THE PARTICIPATION
OF WOMEN IN ARAB LABOR FORCE

by
DINA OSMAN KHATTAB

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by
DINA OSMAN KHATTAB

Approved by:

Dr. Darius Daniel Martin, Assistant Professor
Economics

First Reader

Dr. Nisreen Salti, Assistant Professor
Economics

Second Reader

Date of project presentation: May 31, 2011

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AN ABSTRACT OF THE PROJECT OF

Dina Osman Khattab for Master of Arts in Financial Economics
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Over the past few decades, the labor force participation rate of Arab women has increased slightly, accompanied by improvements in education. In 1980, only 21.3% of women aged 15 and above were in the Arab labor force, whereas in 2009 it's around 26%. In this study, I explain this increase. In particular, I'll measure the importance of increased education and literacy levels. Female adult literacy has hugely increased from 38.6% in 1980 to 73.9% in 2009. However, there are important disparities among the Arab countries themselves.

In this paper, I'll provide a literature review and empirical study on the status of women in Arab countries. I'll shed light on the improvements in education, working skills, and social status which helped in increasing their empowerment. Moreover, I'll study the differences among the Arab countries and justify them.

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CHAPTER I

INTRODUCTION

This paper examines the effects that educational attainment has on the female labor force participation. Female labor force participation has increased from around 21 percent in 1980 to 26 percent in 2009. This study will tell us if female education has a role in this increase and if there are any other important factors affecting female labor force participation.

Female labor force participation in Arab countries showed an increasing trend over the past thirty years. However, women are concentrated in the services sector in most Arab countries, except those where agriculture is the main sector of the economy. Their participation was mainly driven by education in addition to improvements in working skills and social status. In particular, literacy and enrollment rates at all levels have increased which helped Arab women in improving their status in the society.

The intentions behind this paper are to analyze the development of education over the past thirty years, to examine the current status of women in the labor market, and to evaluate the key effect of increased education on labor force participation. Trends of education and labor participation will be discussed in detail. Two empirical models will be presented in order to prove the hypothesis that education affects female labor participation positively.

The results of the two models show that education can explain the growth in female labor force participation, where secondary and tertiary attainments affect it positively. As for the other studied factors, some have a positive impact, like public expenditure on education and the proportion of females in the Arab parliaments, while others affect it negatively like the marital status and the presence of children. However,

not all tested variables were significant. These results indicate that improving female education and women status in the Arab world is a way to promote employment.

The rest of this paper is organized as follows. Chapter 2 provides a literature review on the importance of education and women participation and their relationship with economic development. Chapter 3 states the data sources and explains how the data used in this paper was attained. The current trend of education development for Arab women is thoroughly discussed in Chapter 4. In Chapter 5, I study the current status of Arab women in the labor force. Disparities among Arab countries are highlighted in Chapter 6. Chapter 7 focuses on female unemployment in the Arab world and its effect on female labor participation. In Chapter 8, the hypothesis of U-shaped effect between economic development and female labor force participation is explained. Chapter 9 presents the two empirical studies that show how education has a positive effect on labor force participation. Chapter 10 concludes.

CHAPTER II

LITERATURE REVIEW

Female labor force participation is determined by many factors. These factors vary between educational attainment, fertility, social status, and many others. However, little research has been done in the Arab world regarding this issue. The Arab world is characterized by its rapid transformations in the economic sector. In addition, the demographic structure of the Arab world and gender inequalities in employment makes the Arab world a specific case to be thoroughly studied. In this section, I list some literature concerning women and female labor force participation in general. Then, I highlight some specific studies on the Arab world.

A large literature on gender and the labor markets exists. Some authors have focused on labor force participation and fertility, while others have studied women's participation in the labor market. For example, Lam and Duryea (1999) used data from Brazil to measure the effects of schooling on fertility, labor supply, and investment in children. They highlighted the race between increasing productivity from home on one hand, and from work in the labor market on the other. This shows that higher wages push better educated women into the labor force. They concluded that effects of schooling on the labor force participation may be reduced when additional variables are taken into consideration (Lam and Duryea 1999, 160-92). Besides, in 1995, the World Bank's report on demographics and labor supply noted that development often comes with high female participation and higher levels of schooling for girls.

Sackey (2005) uses data from Ghana in order to estimate a female labor force participation model. In both probit and multinomial logit models on female labor participation, he shows that female education has a positive effect on labor market

participation. Moreover, he concludes that education attainment is important for increasing their employability and empowerment (Sackey 2005). In addition, Münch and van Wijnbergen (2009) analyze the determinants of female labor force participation in the European Union. They estimate female labor market participation separately for eight age-groups. They found that tertiary education in particular has a positive and significant effect on women participation rates (Münch and van Wijnbergen 2009).

Comparing the Arab region to the rest of the world, there is a scarcity of research and studies with respect to gender and development issues. The major authors who wrote and edited books on this subject are mainly: Julinda Abu Nasr, Henry T. Azzam, Kailas C. Doctor, Nabil F. Khoury, and Valentine M. Moghadam. *Women, Employment, and Development in the Arab World* gave an overview of Arab women in population, employment, and economic development. The authors noticed that rapid transformations mostly occur in the economic sector, and economic change may affect women's education and employment. Nonetheless, in order to understand the state of female participation in the economy, various things should be taken into consideration such as the value system, demographic characteristics, economic structure, and legal system. The value system in the Arab world stresses that one important value in the Arab society is honor, whereby female's modesty must be protected. The demographic structure of the Arab countries is characterized by the youthfulness of the population, large families, and early marriage. Studies have confirmed that there is an inverse relationship between fertility and education, and a positive relationship between education and the female labor force participation rate. Besides, education has improved the work potential of Arab women and their employment opportunities. As for the structure of the economy, significant changes have occurred accompanied by the

emergence of new skilled services and the growth of the oil sector in addition to economic development, modernization, and diversification which influenced women's participation in the labor force. On the legal side, most Arab countries proclaim the equality among citizens (Abu Nasr, Khoury, and Azzam 1985, 1-37).

Issues in employment and education have been studied in the book *Education and Employment Issues of Women in Development in the Middle East*. The authors stress the role of education and study its patterns and trends between 1965 and 1985. They also highlight the profiles of women in the labor force motivated by traditions, cultural values, and demographic patterns, whereby women are mostly engaged in agricultural work then services. They point out some sex inequalities in employment on one hand and related progress in women's education to employment on the other (Khoury and Doctor 1991, 1-45).

The authors of the book *Gender and Development in the Arab World: Women's Economic Participation: Patterns and Policies* focus on women's share in employment and economic development. They point out that the scarcity of research on gender issues and the conservative attitudes prevailing in the Arab world make it hard to see the positive relationship between women's socio-economic integration and the Arab world development. They argue that more empirical research on gender-specific issues; in particular women's participation in the economy is needed. They highlight factors such as educational attainment and discriminating practices which limit women's employment opportunities. They conclude that Arab women are the unutilized human reserve that needs to be tapped to enhance their status and ensure their promotion (Khoury and Moghadam 1995, 1-34).

These studies recite the factors that determine female labor force participation. In particular, in the Arab world, higher fertility and gender inequalities in employment affect female participation in the economy negatively. On the other hand, higher educational attainment leads to higher female employability and empowerment. Yet, more empirical research on these gender-specific issues in the Arab world is needed.

CHAPTER III

DATA

Data used in the coming chapters was retrieved from 3 different databases. The 3 databases are:

- World Development Indicators (WDI): The primary World Bank collection of development indicators, compiled from officially-recognized international sources. Data on education is compiled by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics from official responses to surveys and from reports provided by education authorities in each country.
- Passport - Euromonitor International: The world leader in strategy research for consumer markets. Their premier database solution, Passport, provides strategic analysis, market size and market share data, and monitors key industry trends. Passport is a global market analysis software platform, analysing industries in 80+ countries around the world.
- UNESCO Institute for Statistics (UIS): It's a data center that contains over 1,000 types of indicators and raw data on education, literacy, science and technology, culture and communication. The UIS collects the data for more than 200 countries from Member States and international organizations.

The indicators with their definitions and sources are presented below:

- Adult literacy rate: Persons aged 15 years and older, who can, with understanding, both read and write a short simple statement on his or her everyday life.

Source: Euromonitor International from UNESCO/national statistics

- Total enrollment rate of females for primary education: The number of pupils of the school-age group for primary education, enrolled in primary education, expressed as a percentage of the total population in that age group.

Source: WDI from UNESCO Institute for Statistics

- School enrollment, secondary, female (% net): The ratio of children of official school age based on the International Standard Classification of Education 1997 who are enrolled in school to the population of the corresponding official school age. Secondary education completes the provision of basic education that began at the primary level, and aims at laying the foundations for lifelong learning and human development, by offering more subject- or skill-oriented instruction using more specialized teachers.

Source: WDI from UNESCO Institute for Statistics

- Ratio of female to male primary enrollment (%): The ratio of the female to male gross enrollment rates in primary school.

Source: WDI from UNESCO Institute for Statistics

- Ratio of female to male secondary enrollment (%): The ratio of the female to male gross enrollment rates in secondary school.

Source: WDI from UNESCO Institute for Statistics

- Ratio of female to male tertiary enrollment (%): The ratio of the female to male gross enrollment rates in tertiary school.

Source: WDI from UNESCO Institute for Statistics

- Distribution of students by field of study and female share in each field

Source: UNESCO Institute for Statistics

- **Government Expenditure on Education:** The data refers to all non-repayable payments by General Government. Capital expenditure includes expenditure for construction, renovation and major repairs of buildings and the purchase of heavy equipment or vehicles. Current expenditure includes expenditure for goods and services consumed within the current year and which would need to be renewed if there were a need for prolongation the following year. It includes expenditure on: staff salaries and benefits; contracted or purchased services; other resources including books and teaching materials; welfare services; and other current expenditure such as furniture and equipment, minors repairs, fuel, telecommunications, travel, insurance and rents.

Source: Euromonitor International from International Monetary Fund (IMF)

- **Labor participation rate, female (% of female population ages 15+):** The proportion of the population ages 15 and older that is economically active: all people who supply labor for the production of goods and services during a specified period.

Source: WDI from International Labor Organization (ILO)

- **Percentage of female employment in the economic sectors**

Source: WDI from ILO

- **Proportion of women in parliaments**

Source: Inter-parliamentary Union

- **Female Unemployment Rate:** Ratio of unemployed females (15 years and older) to total number of females in that age group. Unemployed females are those "without work", "currently available for work" and "seeking work".

Source: Euromonitor International from ILO

CHAPTER IV

STATUS OF EDUCATION

Arab countries have made significant strides in education but there are still many concerns. Literacy rates have risen and female enrollment at all educational levels has increased. Nevertheless, educational achievement is still poor when compared to other regions in the world. In this section, I will study the trends of the different education levels since 1980 in order to give an overview about the status of education in the Arab world and measure how this trend will affect women employment later in the empirical study.

A. Quality of Education

One of the major problems of education in the Arab world is its poor quality. This is reflected in graduates' low level of knowledge attainment and poor analytical capacity, in addition to resource constraints and poor coverage in rural areas, and this has led to a significant mismatch between the labor market's needs and graduates' skills (UNDP 2002).

Besides, there's a concern that education systems in the Arab world may be divided into two levels, one with high-quality private education available only for wealthy citizens, and another with low-quality public education, for everyone else. This means that education is no longer a means for achieving social development. Instead it is a tool for social and economic poverty (Roudi-Fahimi and Moghadam 2003). Although education is increasing quantitatively, it's not providing the knowledge and skills required for social advancement and development, so poor quality may undermine the effect of education on labor participation. Education with low quality may not help

students in thinking innovatively. As a result, there would be a significant mismatch between labor market's needs and graduates' skills.

B. Literacy

Low literacy rates are evidence for the low quality of education in the Arab world. Although Arab countries showed tangible progress in improving literacy, literacy rates are still lower than the world average and even lower than the average of developing countries. Adult (fifteen years and older) literacy rates have increased in the Arab States from 50 percent in 1980 to around 80.5 percent in 2009, whereas the world rate is around 84.6 percent and that of developing countries is around 81.8 percent.

Figure 1 shows this significant improvement in literacy, but it's still lower than the developing countries and world averages.

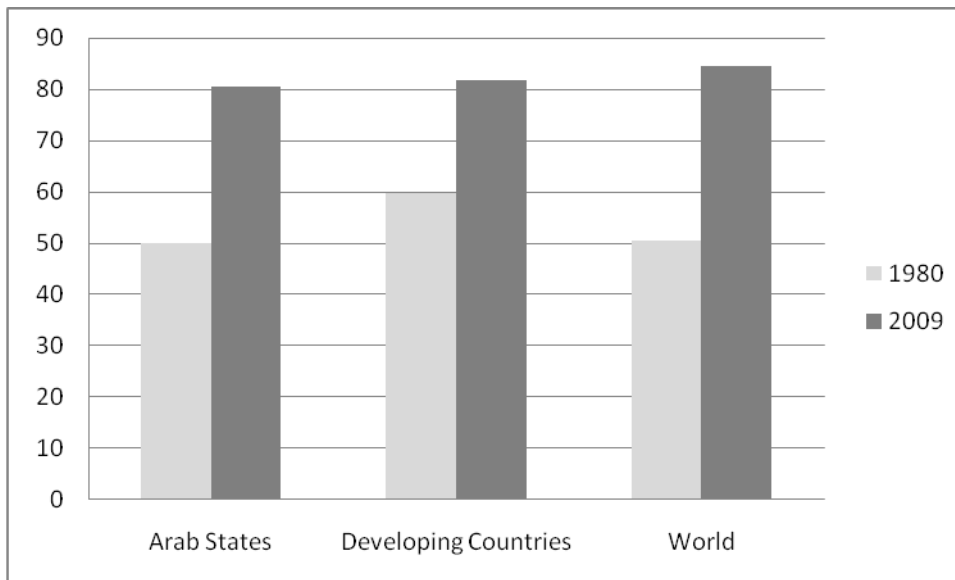


Figure 1: Literacy Rate (%), Arab States, Developing Countries and World, 1980 and 2009

The illiteracy rates have clearly decreased, but the rapid growth of the population size in some countries is causing overall illiteracy to increase. For example in Morocco, although the literacy rate has increased from 28.8 percent in 1980 to 57.5 percent in 2009, the number of illiterate adults grew from 8.3 million to 9.8 million as a result of the population growth.

Likewise, in spite of the huge expansion in female education, female illiteracy hasn't been completely eliminated. Female literacy rates are still relatively lower than male literacy rates. Figure 2 shows the difference between male and female literacy rates, indicating that there's an educational gap between genders in the Arab world. As a result, women would be less likely to participate in the labor force than men. More importantly, "it should be noted that illiteracy among males in Arab countries is not expected to disappear before the end of the first quarter of the twenty-first century, and for women, not until 2040" (UNDP 2002). However, the increase in female literacy rates is a good indicator for the developing educational status of women.

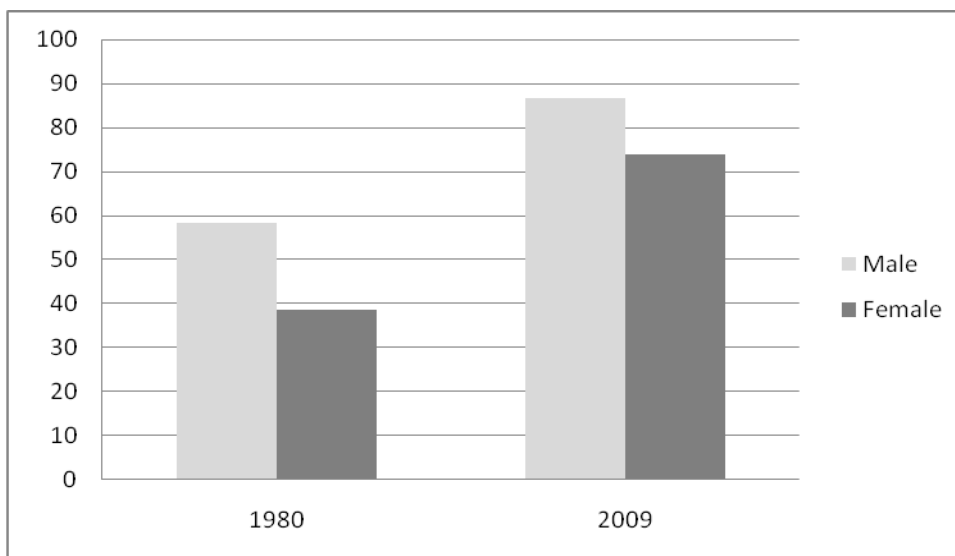


Figure 2: Literacy Rate (%), by gender, in Arab countries

C. Enrollment at Different Education Levels

Since 1980, school enrollment for both males and females has been increasing steadily at all levels. However, according to the Arab Human Development Report (2005), Arab women are still not well-prepared to participate effectively in the economy, since they haven't yet acquired the needed education. In the coming sections, I'll present the trends of the three different education levels since 1980 till 2009.

1. Primary Education

Primary education is usually the root of education, and it provides basic mathematical, reading and writing skills. The total enrollment rate of females for primary education in the Arab world is around 85 percent in 2009, whereas in 1980 it was around 70 percent. This shows a significant increase and a consistent rising trend.

Comparing males to females, the ratio of female to male primary enrollment rose from 80 percent in 1980 to reach 96 percent in 2009. This indicates that the educational gap at the primary level between the two genders has been reduced in most Arab countries in the past 30 years. Figure 3 shows the ratios in 2009 of some selected Arab countries.

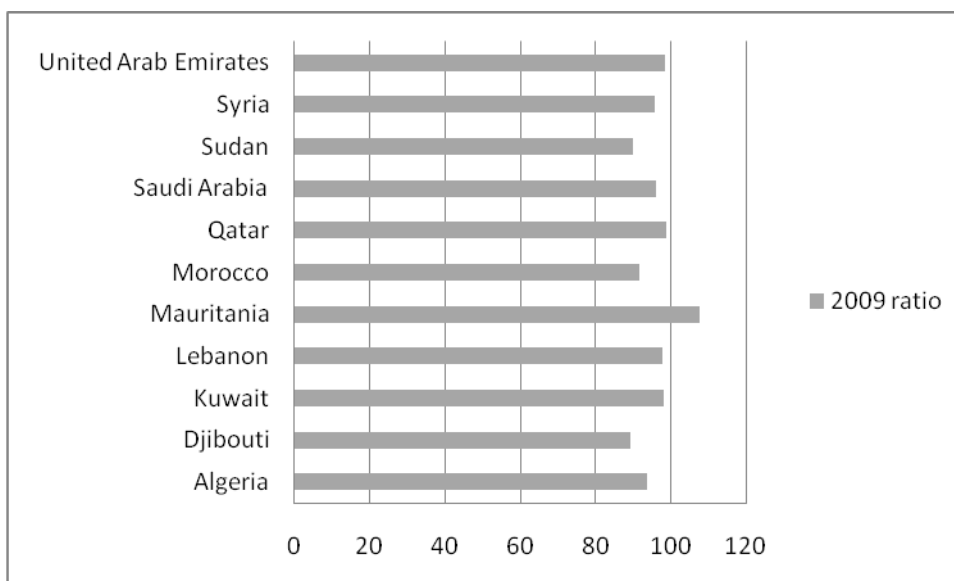


Figure 3: Ratio of female to male primary enrollment (%)

3. Secondary Education

Secondary education usually follows primary education and consists of several programs. The total enrollment rate of females for secondary education in the Arab world in 2009 is around 76 percent which is lower than that of primary education. Usually, family economic reasons are one of the main factors behind this decrease (UNDP 2006). In addition, the facilities available, willingness of parents to continue schooling of their children, and marriage affect the secondary enrollment. So some females tend to quit school after completing the primary level without progressing to secondary.

However, as for the gender gap, most Arab countries were able to bridge it completely as the average ratio of female to male secondary enrollment exceeded 100 percent in 2009 after being around 69 percent in 1980. Figure 4 shows the ratios in 2009 of some selected Arab countries.

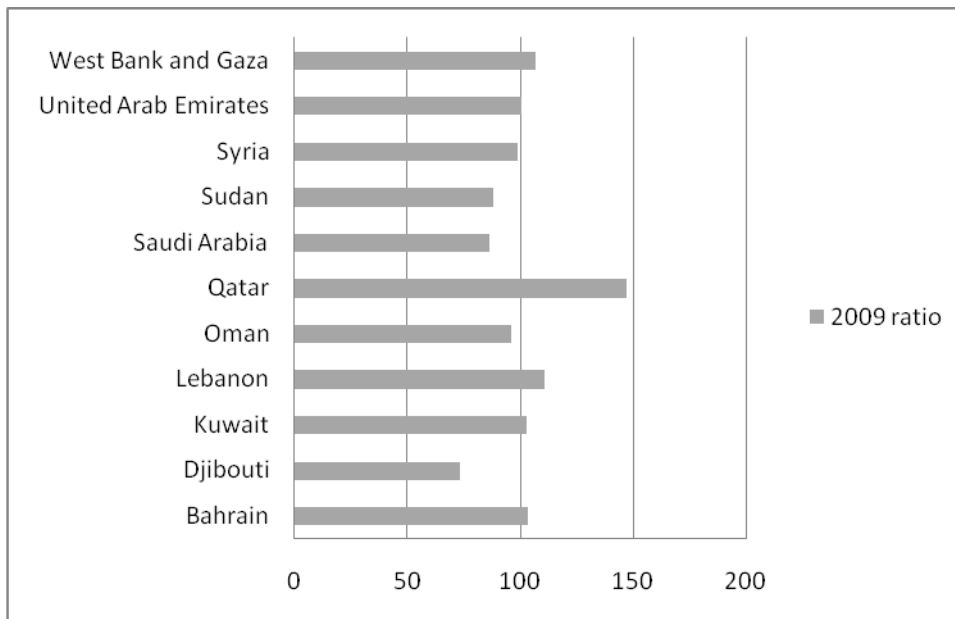


Figure 4: Ratio of female to male secondary enrollment (%)

4. Higher Education

The attainment of higher education by women is interesting because it might change their traditional view in the society (Münch and van Wijnbergen 2009). The enrollment of Arab women in higher education has been increasing for the past 30 years. Ratio of female to male tertiary enrollment has increased from 80 percent in 1980 to above 100 percent in 2009. Figure 5 shows this ratio for some Arab countries. This increase in tertiary education level for females, although small, may be an indicator that women are acquiring the education needed for their participation in the labor force. However, one of the reasons that male enrollment seems to be lower than that of females is that some Arab males tend to travel abroad in order to get their university degrees.

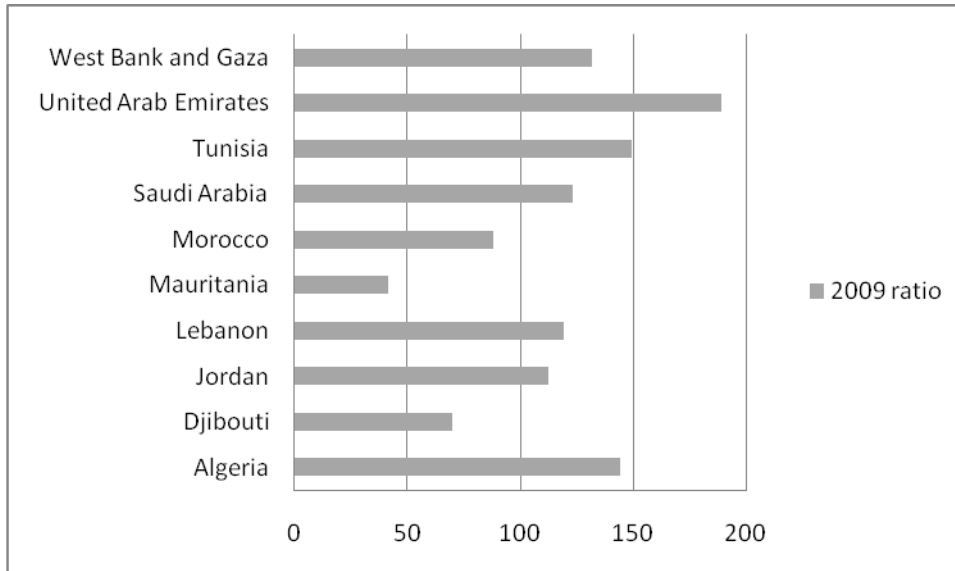


Figure 5: Ratio of female to male tertiary enrollment (%)

As for the female share in each field of study, women are mostly concentrated in specializations such as education, humanities and arts. On the other hand, female's share in engineering, manufacturing and construction is distinctly lower. This type of education may be useful to females for employment in the education and services sectors, in addition to helping her raise the socio-cultural level of her milieu as a wife and a mother (Khoury and Doctor 1991, 1-45). Another reason behind this may be due to the fact that most women tend to apply for part-time jobs that do not interfere with their role in the family (UNDP 2006). Table 1 shows the distribution of females among the different fields of study.

Even if their participation was limited to a small number of occupations and professions, these women are becoming more enlightened citizens, wives, and mothers who can participate effectively in national development (Khoury and Doctor 1991, 1-45). In the empirical analysis performed in Chapter 9, I'll study whether this remarkable progress in female's education did open employment opportunities for women.

	Education	Humanities and arts	Social sciences, business and law	Science	Engineering, manufacturing and construction
Algeria	69	75	59	61	31
Bahrain	51	83	70	75	21
Jordan	80	60	40	53	30
Lebanon	90	64	52	54	25
Morocco	38	52	48	44	27
Oman	57	80	51	57	27
West Bank and Gaza	70	66	41	47	30
Qatar	83	87	65	68	24
Saudi Arabia	73	73	53	59	2
United Arab Emirates	92	76	55	55	29

Table 1: Distribution of females on different fields of study

D. Education Spending

In order to analyze education spending, we look at the rise in public expenditure on education in the Arab world which became clear after 2000. More precisely, looking at per capita public expenditure reveals tangible achievements for education. However, the rate of increase is significantly lower than that of developed and industrialized countries. Per capita public expenditure on education in selected Arab countries increased from around \$300 in 2001 to \$700 in 2010, whereas that of developed countries rose from \$1400 to \$2300. Figure 6 shows the difference between the two regions. This increase in the public expenditure on education indicates that Arab countries are giving more importance to education, but it's still insufficient for them to catch up with the developed countries.

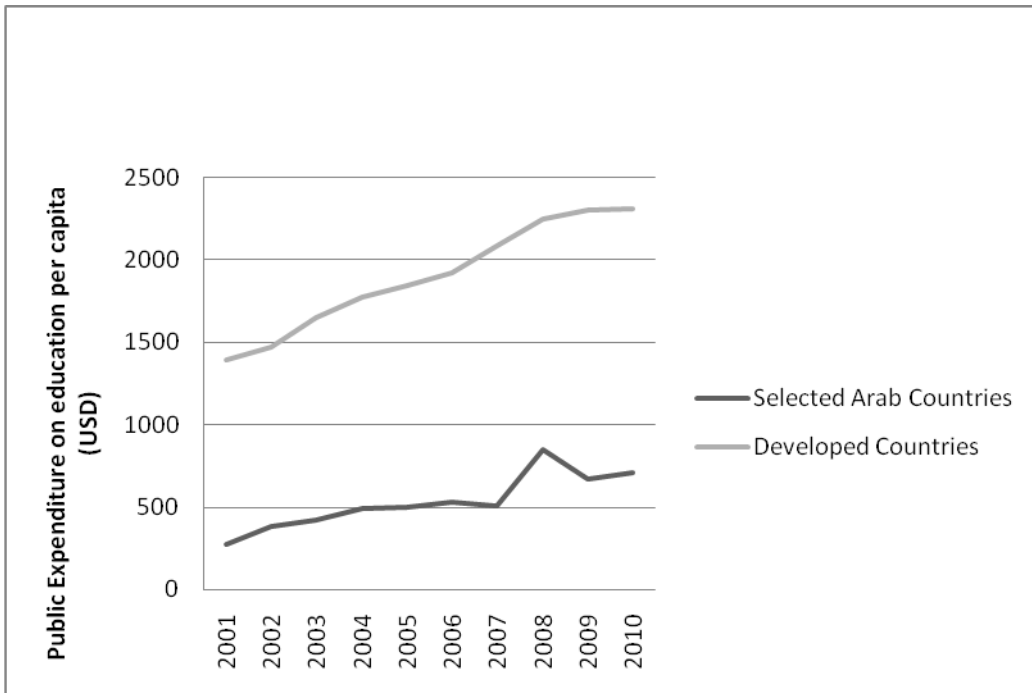


Figure 6: Public Expenditure on education per capita (USD)

CHAPTER V

WOMEN'S PARTICIPATION IN THE ECONOMY

As more women are attaining higher levels of education in the Arab world, their employment is increasing but not at the same rate. The female (fifteen years and older) labor participation rate has increased from 21 percent in 1980 to around 26 percent in 2009. However, this rate of activity is still the lowest rate of all regions in the world. Figure 7 shows this difference between the Arab region and other regions. In this section, I'll highlight the status of employed women in the Arab world, how they are distributed over the economic sectors, and their participation in the political sphere since these are also factors affecting female labor participation rates.

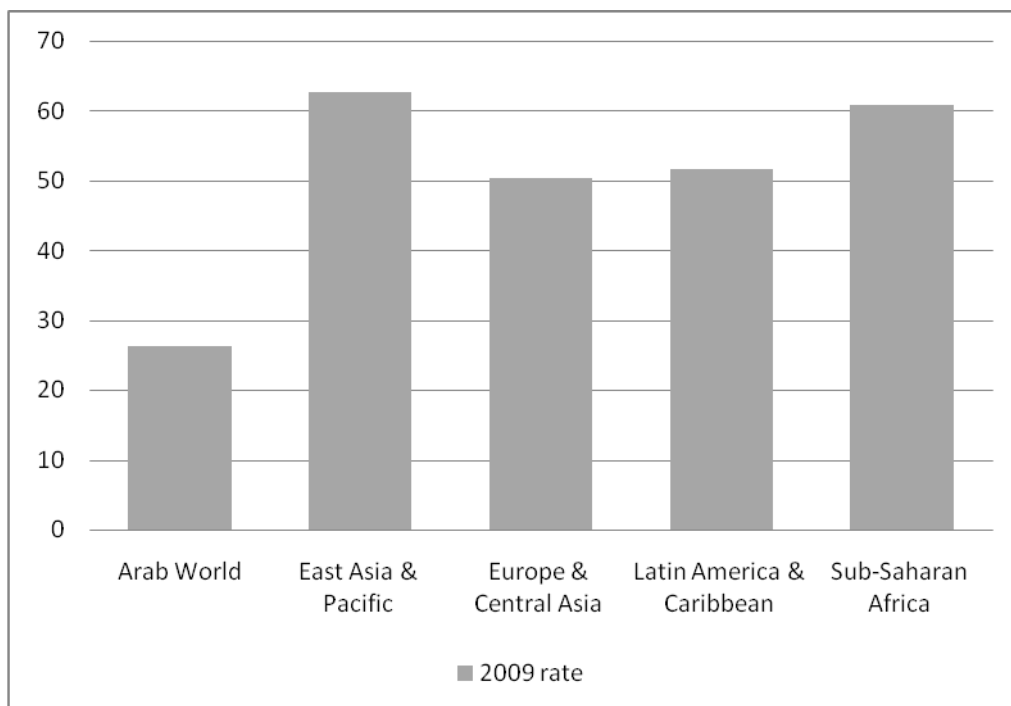


Figure 7: Female labor participation rate (ages 15+)

One of the reasons for the difference between the Arab region and other regions is the slow growth in the economy which lowers the demand for female labor. In addition, it is noticed in the Arab world that when there is economic recession, women are the first fired; while when there is economic expansion, women are the last hired (UNDP 2006). This was illustrated by Nader Fergany in his paper “Dynamics of Employment Creation and Destruction, Egypt”, where he pointed out that during the slow growth period in 1990 in Egypt, female employment decreased whereas male employment increased at the same time (Fergany 1998). So the prevailing male culture is another reason for this lag. Nevertheless, counter to these practices, it should be noted that according to field surveys done in 2005, the majority of Arab public opinion favor women’s right to have equal opportunities, equal employment benefits, and equal work conditions (UNDP 2006).

Yet, on the positive side, looking at women’s achievements in education and their greater potential for learning, some demographic projections expect that the female rate of activity in the Arab world may reach around 43 percent in 2020. This will make it necessary to create around 42 million jobs as a result of this increase and the general increase in the working age population (Martín 2006, 145-9).

A. Distribution among Economic Sectors

International databases lack the sufficient data for studying the distribution of female labor force among economic sectors. However, there was available data for some Arab countries like Egypt, Morocco, Qatar, Saudi Arabia, United Arab Emirates, and West Bank and Gaza. The graph in Figure 8 shows that the majority of women are engaged in the services sector. This sector is characterized by its low productivity and

remuneration (UNDP 2006). For example, in the Gulf countries, like Saudi Arabia, Qatar, and United Arab Emirates, the capital-intensive petroleum industry dominates their economies. That's why women are concentrated in the services sector. But in countries with a large agricultural sector, like Morocco and Yemen, the concentration of women tends to be higher in this primary sector. It's worth to be noted that the agricultural sector has even lower productivity and remuneration than services (UNDP 2006).

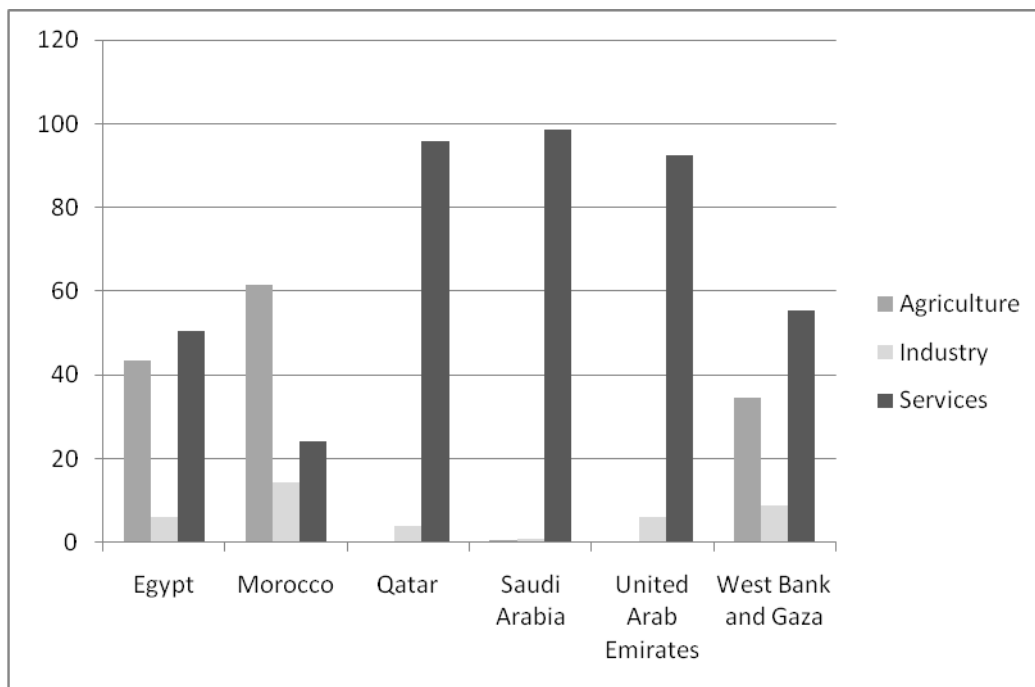


Figure 8: Distribution among economic sectors (%)

B. Improvements in Working Skills

According to previous studies, women used to work either as salaried employees or laborers in addition to their work in the private sphere as family workers. However in the recent years, Arab women were able to engage in managerial and administrative positions due to their acquiring of various skills.

According to the International Labor Organization, skills development is essential in order to improve productivity. Skills development systems connect education to technical training and then to labor market entry, but the Arab world is somehow deficient in these systems.

However, Arab women leaders have pointed out in their “Arab Women Leadership Outlook 2009-2011” that most Arab women were able to develop numerous skills, ranging from critical and analytical skills to decision making, that enabled them to reach high positions.

C. Social Status

Women’s status in the Arab world is shaped by different patterns ranging from cultural to religious heritage (UNDP 2006). On the cultural side, the family is considered to be the first social institution in which women grow, and this institution is characterized by patriarchal relationships where the father has authority over his children and the husband has authority over his wife.

Improving women’s status can be achieved through social and economic self-determination, such as giving them their full rights in decisions affecting their lives. Besides, giving them access to education and employment is one of the major steps in improving their status. Usually better educated women are expected to improve their status and improve the societies they live in. However, it should be noted that these new directions in women’s roles should be in harmony with the cultural norms prevailing in the society and should not come into conflict with the reading of religious edicts (Khoury and Doctor 1991, 1-45).

Recently, women were able to maneuver and defend their rights by forming women organizations. Their participation in these organizations and in civil society helped in accepting the female presence and replacing the traditional feminine image with an image of a woman characterized by freedom, production, and creativity (UNDP 2006). Arab women were able to make political and economic reform which was reflected in their increasing presence in the civil and political society.

D. The Political Sphere

The political status of Arab women is a critical issue. Their political participation is even lower than their participation in the labor force. According to the Inter-Parliamentary Union, the Arab world is the lowest region in terms of percentage of women in parliaments. When the female proportion in Arab parliaments is around 11.4 percent in 2010, it's 22.4 percent for the Americas and 41.6 percent for the Nordic countries. Figure 9 compares the Arab States to other regions of the world.

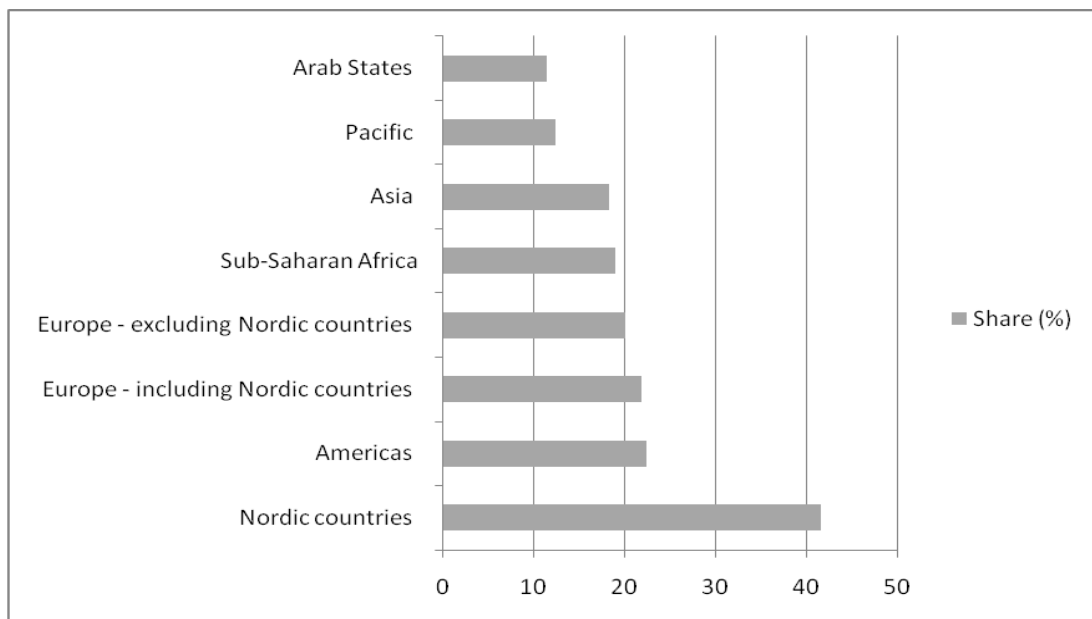


Figure 9: Proportion of women in parliaments

Reasons behind this may go back to the cultural and traditional view of Arab women. Their role was bound to children and family raising and concentrated in the agricultural and services sector. Besides, some Arab countries, especially in the Gulf, were late in getting the suffrage.

Women obtained the right to vote and stand for elections successively in most Arab countries. It started with Lebanon in 1952, and the last country to give these two rights was Kuwait in 2005. However, in Saudi Arabia, women still do not have suffrage. Table 2 shows the percentage of women in parliaments for the last elections held in each country. It is to be noted however that some countries like Saudi Arabia, Qatar and United Arab Emirates have no democratic elections. Instead, the parliament representatives are selected by the king or ruler.

Country	Elections	No. of Seats	No. of Women	% Women
Sudan	4 2010	446	114	25.6
Iraq	3 2010	325	82	25.2
UAE	12 2006	40	9	22.5
Mauritania	11 2006	95	21	22.1
Djibouti	2 2008	65	9	13.8
Syria	4 2007	250	31	12.4
Jordan	11 2010	120	13	10.8
Morocco	9 2007	325	34	10.5
Algeria	5 2007	389	30	7.7
Kuwait	5 2009	65	5	7.7
Libya	3 2009	468	36	7.7
Lebanon	6 2009	128	4	3.1
Comoros	12 2009	33	1	3
Bahrain	10 2010	40	1	2.5
Yemen	4 2003	301	1	0.3
Oman	10 2007	84	0	0
Qatar	7 2010	35	0	0
Saudi Arabia	2 2009	150	0	0

Table 2: Proportion of women in parliaments for the last elections (%)

Looking at the positive aspects, we can clearly say that during the past ten years, some breakthroughs have occurred. The share of women in the political sphere is clearly increasing, promising a major role for Arab women in their societies. Table 3 shows the differences in the proportion of women in the parliament between previous and most recent elections held in some selected countries.

Country	Previous elections	Most recent Elections
Sudan	9.7	25.6
UAE	0	22.5
Mauritania	3.7	22.1
Djibouti	10.8	13.8
Syria	12	12.4
Jordan	5.5	10.8
Algeria	6.2	7.7
Kuwait	0	7.7
Lebanon	2.3	3.1
Bahrain	0	2.5

Table 3: Trends of female proportion in parliaments (%)

Going over the trends of Arab women employment in this section shows that female participation rates have increased in line with improvements in their social status and working skills and enhancements in their participation in politics. For this reason, I'll study in the empirical analysis whether female proportion in the parliaments is a significant factor in determining their participation in the economy.

CHAPTER VI

DISPARITIES AMONG ARAB COUNTRIES

It should be noted that the Arab world is not a homogeneous region. The degree of development varies from one country to another. Thus, the Arab world can be divided into four groups:

- Gulf Cooperation Council Countries:

This group includes Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. For the last thirty years, this region has witnessed a steady increase in women participation through wider access to human rights and developments in work and education (Al-Yousef 2006). The female labor participation rate in this group has increased significantly from 17.58 percent in 1980 to 35.4 percent in 2009. Qatar has the highest female participation rate in the labor market, around 50 percent, whereas Saudi Arabia has the lowest, 17.4 percent.

This increase in female participation may be due to the abundance of financial resources in this region which depends on oil exports, but mainly it's a result of the development in education. In addition we should also consider the educated non-citizen males and females who work in this region. Female literacy levels have increased from 53.9 percent in 1980 to 87.25 percent in 2009. Moreover, the ratio of female to male tertiary enrollment in the GCC countries exceeds 200 percent which indicates that females constitute higher share in universities. This may be justified by the fact that many males in this region get their higher education overseas.

- The Maghreb Countries

This group includes Algeria, Libya, Morocco, and Tunisia. The significance of the increase in female labor participation rate for this group is less than that of Gulf Cooperation Council Countries. It has increased from 18.3 percent in 1980 to 28.4 percent in 2009. However, the increase in female literacy rates was larger where it increased from 24.6 percent in 1980 to 66.25 percent in 2009. Some factors behind this increase for Maghreb countries lie in the fact that feminist associations in this region have demanded economic participation and social rights and many reforms have occurred. So this was a major reason behind the development of education in this region. (Moghadam 2007)

- The Mashreq Countries

This group includes Jordan, Syria, Iraq, West Bank and Gaza, Lebanon, and Egypt. This group is characterized by the limited resources these countries have and the difficulty of creating new job opportunities. The female labor participation rate has increased from 14.87 percent in 1980 to 19.9 percent in 2009. Although this increase is not significant but it also has a major effect on the Arab labor force since they constitute a large proportion of the Arab female labor force.

Nevertheless, this region is distinguished by the high quality of education. For example, the educational system in Lebanon is one of the most advanced in the Arab region concerning quality and gender equality (National Report prepared for the AHDR 2002). Literacy rate in Lebanon exceeds 90 percent in 2009. Moreover the ratios of female to male in secondary and tertiary enrollment in the Mashreq region tend to be higher than 100 percent.

- Less Developed Countries

This group includes Yemen, Sudan, Somalia, Mauritania, Comoros, and Djibouti. The literacy rate in this region is around 55 percent, while the female labor participation rate has increased from 44.6 percent in 1980 to 50.23 percent in 2009.

The reason behind this high participation rate is the fact that these countries have civil wars and instability, so women would be the breadwinners of the family while men are in war. Moreover, the major economic sector in almost all of these countries seems to be agriculture. Since working in the agricultural sector doesn't require high levels of education as compared to other sectors, education levels tend to be low, unlike labor participation.

CHAPTER VII

FEMALE UNEMPLOYMENT

“Unemployment is a human-development tragedy as well as a drag on economic progress” (UNDP 2002). More specifically, some Arab countries suffer from double-digit unemployment for females. In 2009, the female unemployment rate in the Arab world was around 19 percent, whereas that of males was 7.4 percent. This shows a trend towards feminization of unemployment.

Furthermore, female unemployment has other effects on the labor market. In particular, female unemployment has a double effect on the participation of women in the labor force. These effects are known as the discouraged and added worker effects.

The discouraged worker hypothesis works as follows. When there is an unfavorable labor market situation marked by high unemployment rates, potential participants may decide to withdraw from the labor market. They believe that their chances of finding a suitable job are low because of the bad situation. In this way, high unemployment rates would cause the rates of women searching for jobs, and generally economically active women rates to decrease (Euwals, Knoef, and van Vuuren 2007).

However, the added worker effect works in a different way. When there are high levels of unemployment in the economy, and some men are unemployed, their wives would be more willing to search for job and work, especially if their husbands were high-earning men. This effect counteracts the discouraged worker effect during economic downturns. However, this effect would be small as compared to the previous one. Moreover, in this case, the participation of women in the labor force is related to the husbands' labor market status (Euwals, Knoef, and van Vuuren 2007).

Since female unemployment rates are high in the Arab world especially in the least developed economies in this region, it is expected that the discouraged worker effect is predominant. I'll determine in the empirical analysis in Chapter 9 which effect exists in this region, the added or discouraged worker effect.

CHAPTER VIII

U-SHAPED RELATIONSHIP BETWEEN ECONOMIC DEVELOPMENT AND FEMALE LABOR FORCE PARTICIPATION

The literature has come to a consensus that there is a U-shaped pattern between economic development and female labor force participation. For example, female labor participation decreased during the initial stages of economic growth in the United States after which it increased exhibiting a U-shaped curve (Goldin 1995). Furthermore, Tansel (2001) investigated the long-term relationship between female labor force participation and economic development. He used data for 67 provinces in Turkey for 1980, 1985, and 1990 and his results affirmed the U-shaped hypothesis (Tansel 2001). However, some researchers like Durand (1975) and Steel (1981) do not agree with this (Durand 1975; Steel 1981, 153-67).

The argument for a U-shaped relationship between economic growth and female labor participation is based on the following story. When the economy is poor, and level of income is low, women usually participate mostly in the agricultural sector as unpaid family workers. As economic activity develops in the form of new manufacturing sector and new technology, female's labor force participation will decline. This may happen for many reasons. For instance, men will have greater economic opportunities than women and would increase the family income. Social custom, tradition, culture, and household responsibilities may also hinder women's employment in manufacturing (Tansel 2001). Besides, educational attainment plays a major role since women have lower educational attainment than men, they may not be able to compete with them. In this declining portion of the U-shaped curve, income

effects dominate a small own-substitution effect. “Income effect is the change in labor supply as a result of a change in household income. The own-substitution effect is the change in the labor supply of individuals with respect to a change in their wage, holding income constant.”(Tansel 2001).

However, when women’s education improves in addition to their transferable skills, they would find more suitable jobs in the expanding sectors of the economy (Mammen and Paxson 2000, 141-64). This would lead to the rising portion of the U-shaped curve. In this portion, the substitution effect of higher wages dominates the small income effect (Tansel 2001).

So the whole story of the U-shaped relationship between female labor force participation and economic development is summarized as follows. In less-developed countries, female labor force participation is usually high in the agricultural sector. Development drives women out of the labor force because of the increase in men’s opportunities and social barriers holding women from entering the manufacturing sector. But as countries develop, women’s education rises, and enter back the labor force (Mammen and Paxson 2000, 141-64). We can say that for countries on the left arm of the U-shape, agriculture constitutes a great share of the gross domestic product (GDP), and a big share of the labor force works in the agricultural sector. However, for countries on the right arm of the U-shape, a small share of GDP is generated through agriculture, and industrial and manufacturing activities are predominant (Tansel 2001). Testing the hypothesis of U-shape relationship in Arab countries, I added the logarithm of GDP per capita and its square in the empirical study performed in the coming chapter.

CHAPTER IX

EMPIRICAL ANALYSIS

Female labor force participation is determined by many factors. These factors vary between social, demographical, and economic aspects. In this section I'll present two empirical studies; first a cross-country analysis among the Arab countries, then taking Jordan as a specific case study. In the first study, I'll determine the effects of educational attainment, proportion of women in parliaments, and public spending on education on female participation in the economy. Besides, I'll study the effects of female unemployment and economic development on female labor force participation. In the second empirical study, I'll measure the effects of educational attainment in addition to the marital status of women and presence of children.

A. Cross-country analysis

Female labor force participation rates vary across the Arab region. This indicates differences in the behavior of women that may be determined by several factors. This empirical study determines these factors within a cross-country analysis. The results show evidence of positive effects of educational attainment, proportion of women in parliaments, and public expenditure on education on one hand, and a negative discouraged worker effect of female unemployment on the other, on female labor force participation. The study also shows evidence of a U-shaped relationship between economic development and female labor force participation.

1. Data

The data set used in this empirical study is an annual panel data covering the period 1980-2010 for 16 Arab countries distributed over the 4 groups (GCC countries, Maghreb countries, Mashreq countries, and less developed countries). Six Arab countries are not included in the study because of missing data. The data used in this study are collected from different databases. The table in Appendix I give an overview of the variables, definitions, and their sources.

Female labor force participation rate is the dependent variable. The participation data is taken from the World Development Indicators database (2011). The female participation rate used is the number of women (15 years and above) either working or actively looking for a job divided by the female population (Münch and van Wijnbergen 2009).

The focus of this empirical study is on educational attainment effects on the female participation rates. Educational attainment data is taken from the Barro and Lee dataset (2010). This dataset provides cross country education indicators from 1950 to 2010, but in intervals of five years. The data provided distinguishes between the three levels of education, primary, secondary, and tertiary. In this study, I will include only secondary and tertiary levels.

Other explanatory variables will also be included in this study. These social and economic variables are female unemployment rate, GDP per capita, public expenditure on education, and proportion of seats in parliaments held by women. The dataset should contain 112 observations since there are 16 countries and 7 time periods, however, some observations were dropped because of missing data, and the resulting dataset contains 36 observations. The table in Appendix II presents these observations.

The data shows a large variation in female participation and educational attainment rates across the countries.

2. The Empirical Model

The decision of a woman to participate in the labor market depends on the costs and benefits she gets (Münc and van Wijnbergen 2009). If the remuneration benefits from work exceed the loss of benefits from home production and utility of leisure, she will participate. The earnings that a woman gets from work depend on her level of education, her experience and work skills, and the availability of work. On the other hand, women may face some restrictions resulting from cultural attitudes and gender discrimination. I will estimate the female participation rate using a simple ordinary least squares (OLS) regression model.

$$FLP = \alpha + \beta * X$$

Where FLP is the female labor participation rate and X is the vector containing all explanatory variables. X includes the secondary and tertiary educational attainment rates for women, unemployment rate, logarithm of GDP per capita and its square, public expenditure on total schooling, and number of seats held by women in parliaments in addition to the regional dummies.

I believe that secondary and tertiary educations will have a positive effect on female labor market participation because they increase potentials and productivity. The female unemployment rate and logarithm of GDP per capita represent the economic situation. If the labor market situation is poor, women might leave the labor force believing that they wouldn't find an appropriate job. Thus, female unemployment rate is expected to have a negative discouraging effect on female participation in the labor

force. I also believe that there is a U-shape relationship between female labor force participation and economic growth. As income per capita increases, women will shift out of agriculture sector and into home production. Thus, their participation in labor market decreases at a certain level and rises again as more job opportunities open in the services sector. In this empirical analysis, I'll include both logarithm of GDP per capita and its square.

As indicator of women's social status, the proportion of seats held by women in the parliaments is included. I expect this will affect labor participation positively. Furthermore, as the government spends more money on educational purposes like teachers' salaries, books and teaching materials, the quality of education is expected to increase. Thus I expect that public expenditure on education has a positive impact on female labor force participation.

3. Empirical Results

Some data was missing and this resulted in a sample of 36 observations. Including multiple observations from different countries across time may introduce bias from country-specific effects, such as cultural norms and traditions, religion, and attitudes towards women. This may be solved by using a fixed-effects model. However, upon conducting the Hausman test, it was found that the random effects model is consistent and efficient. So the empirical analysis estimates the female participation using Pooled Least Squares including random effects. Table 4 reports the results of this regression.

Dependent Variable: Female Labor participation rate

	Coefficient	Std. Error
Secondary Education	0.317782***	0.068476
Tertiary Education	0.495362***	0.188431
Female Unemployment rate	-0.328893**	0.165856
Logarithm of GDP per capita	-0.786956***	0.179429
Squared logarithm of GDP per capita	0.04558***	0.010186
Public Expenditure on Education	0.106481	0.448751
Share of women in parliament	0.064085	0.133847
GCC	0.16116	0.115368
Mashreq	0.116246*	0.071312
Maghreb	0.236021***	0.074792

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 4: Random Effects model

The results show that the level of educational attainment has a strong effect on female labor force participation. The effect of secondary education is positive and highly significant at the 1 percent level. Similarly, the effect of tertiary education is positive, bigger in magnitude, and significant at the 1 percent level. As for the female unemployment rate, it has a negative discouraging impact and highly significant. The coefficient of the logarithm of GDP per capita is negative whereas that of its square is positive, indicating a U-shaped relationship between economic growth and female labor force participation. Both coefficients are significant at the 1 percent level. However, both public expenditure on education and the share of women in parliament have the expected positive effect on female labor participation, but insignificant. This may be due to the reduced number of observations in the small data sample. As for the region dummies, all of them are positive, but only the coefficients for Mashreq and Maghreb regions are significant.

Testing the U-shaped relationship between economic development and female labor force participation, it's shown in the empirical results that the coefficient of the linear term is negative while that of the quadratic term is positive. This verifies the U-shaped hypothesis. Furthermore, after calculating the fitted values of female labor force participation at the mean values of the other explanatory variables and plotting them give the result shown in the Figure 10 below.

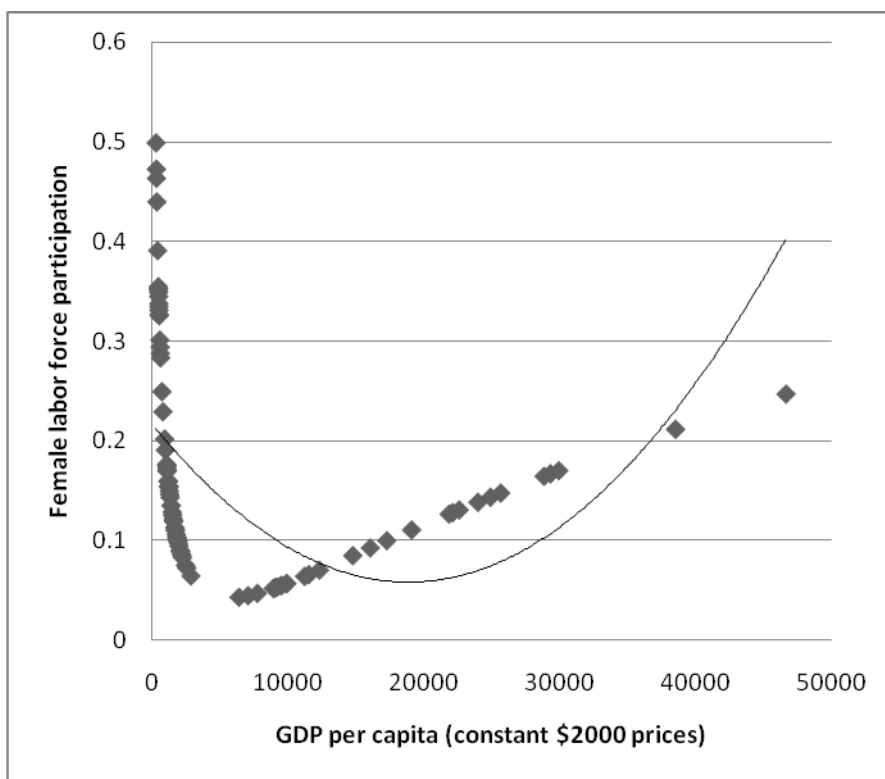


Figure 10: U-shaped relationship between economic development and female LFP

The graph shows that as GDP per capita increases, female labor force participation rates decrease. This mainly exists for countries with low income and economic development. However, after a certain level, in this graph it's shown to be around \$19,000, the female labor force participation starts to increase with economic

development. This is true for countries with high income like Qatar, Kuwait, and United Arab Emirates.

B. The Case of Jordan

In this empirical model, I'll study the effect of educational attainments and other factors on female labor force participation in Jordan. Census data seems to be more reliable than macroeconomic data. Since there is access to individual-level rather than country-level data for Jordan, a deeper study of the individual determinants of female labor force participation can be performed.

1. Data

The data used in this model is from the Integrated Public Use Microdata Series International (IPUMS). It is a project dedicated to collecting and distributing census data from around the world. In 2004, a random sample of about 10 percent of the Jordanian population was interviewed. The sample contains 510,646 persons. I restricted my data to women aged 15 years and above. After removing observations with missing or unknown values, 153,650 observations were left.

Female employment status is the dependent variable. Its values are either 0 or 1. It takes the value of 1 if the woman is economically active, currently employed or searching for a job and 0 otherwise. Again in this model, the focus is on the effects of secondary and higher education on female employment. Secondary education variable takes the value of 1 when the highest level of education attained is the secondary level and 0 otherwise. The higher education variable also takes the value of 1 when it is the highest level completed and 0 otherwise. Other explanatory variables included were age

and the marital status of the female, taking the value of 0 if the woman is single, divorced, widowed, or has no spouse, and 1 if she is married. I also included the dummy variable of whether or not the woman has children. It takes the value of 1 if she has 1 or more children and 0 otherwise. In addition, I added interaction terms between educational attainment, marital status, and children. Table 5 shows the summary statistics of the included variables. Notice that the mean age of the sample is 33 years old and about 35 percent of females included in the sample have completed secondary school, and only around 8 percent have attained higher education. Besides, more than half of the sample are married and have children.

Variable	Mean	Min	Max	# Obs
age	33.74895	15	97	153650
secondary education	0.3490726	0	1	153650
higher education	0.0863846	0	1	153650
marital status	0.5655971	0	1	153650
children	0.5440872	0	1	153650
sec_mar	0.2047836	0	1	153650
sec_child	0.1845493	0	1	153650
high_mar	0.0519232	0	1	153650
high_child	0.044276	0	1	153650

Table 5: Summary Statistics

2. The Empirical Model

In order to study the determinants of female labor force participation, a Logit model is used. The female employment status equals one if the individual is economically active, and zero otherwise.

$$FLP = \alpha + \beta * X$$

where X is the vector containing all explanatory variables. These explanatory variables are age, educational attainment, marital status, children, and four interaction terms

between educational attainment, marital status, and the presence of children. The probability of a woman participating in the labor force is:

$$\Pr(FLP = 1) = \frac{e^{(\alpha + \beta X)}}{1 + e^{(\alpha + \beta X)}}$$

It is expected that secondary and tertiary education would have a positive impact on female labor force participation. On the other hand, being married and having children is expected to affect it negatively.

3. Empirical Results

The empirical analysis estimates the female participation using a Logit model. 153,650 observations were included. Table 6 reports the results of this regression.

Dependent Variable: Employment Status		
	Coefficient	Std. Error
Age	-0.0020392***	0.0006011
Secondary Education	0.7946855***	0.0203504
Higher Education	3.16832***	0.0399101
Marital Status	0.0069385	0.0313284
Children	-1.6101***	0.0349966
sec_mar	-0.2483942***	0.0462299
sec_child	1.141***	0.048393
high_mar	-0.8029334***	0.0703907
high_child	1.236599***	0.0677146
Constant	-1.469712***	0.0208333

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 6: Logit model

Since logit regressions show the effects of explanatory variables on the log odds ratio of the employment status, the regression was recalculated in order to interpret

the effect of each explanatory variable on the probability of getting employed. Table 7 reports the results of this regression.

Dependent Variable: Employment Status		
	Coefficient	Std. Error
Age	-0.0002688***	0.00008
Secondary Education	0.1139307***	0.00318
Higher Education	0.6465017***	0.00686
Marital Status	0.0009142	0.00413
Children	-0.2261346***	0.0049
sec_mar	-0.031127***	0.0055
sec_child	0.1890303***	0.00939
high_mar	-0.0821904***	0.00542
high_child	0.2272635***	0.0154

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 7: Marginal Effects of Logit model

The estimation results show that age affects the probability of entering the labor force negatively. As for secondary education, it affects women employment status positively and significantly. So women who have completed secondary education are more likely to be economically active. In specific, secondary education increases the probability of getting employed by about 11 percent, other variables being fixed. Moreover, the marginal effect of higher education seems to be larger in magnitude than that of secondary education, indicating that its impact on the employment status is significantly larger. Higher education increases the probability of a woman to be employed by 64.6 percent.

However, the marital status effect is insignificant. This shows that married status alone doesn't affect the probability of being employed. The results also show that the marginal effect of children is negative and highly significant. It indicates that the

presence of children has a negative impact on female labor participation. Having children makes the probability of a woman to enter the labor force to decrease by 22.6 percent. The result as expected to be where usually women having children would prefer to raise their children than entering the labor force. This is in alignment with the fact that Arab women are sometimes bound by the traditional view of their reproductive role and rising of the family.

As for the interaction terms, all of them are highly significant. In specific, having secondary education and being married decreases the probability of entering the labor force by 3 percent, and having higher education and being married decreases the probability by 8 percent. However, having secondary education and children has a positive marginal effect of 18.9 percent, and having higher education with children has a positive marginal effect of 22.7 percent. This can be summarized by stating that being married with secondary or higher education decreases the probability of entering the labor force, and having children increases this probability.

Upon testing the joint significance of `sec_mar` and `high_mar` in order to see if the level of education has different effects on entering the labor force for married women, the F-statistic value is very high. This shows the significance of education and the difference between the effects of the two levels. However when testing the joint significance of `sec_child` and `high_child`, the F-statistic value is low, indicating that when there are children, the level of education has the same effect on the probability of entering the labor force.

Table 8 shows the distribution of the females included in the sample. NM is for not married; M is for married women.

	NM; childless	NM; has children	M; has children	M; childless
< secondary	20.67	4.89	26.63	4.26
secondary	13.78	0.65	17.81	2.67
higher	3.28	0.16	4.26	0.93

Table 8: Distribution of the sample (%)

In order to get more concrete results on the effects of education on female labor force participation, I calculated all the estimated probabilities of labor force participation. Table 9 shows the probabilities of labor force participation for women having no spouse; single, widowed, or divorced. Δ is the difference in probabilities between secondary and less than secondary on one hand, and between higher and less than secondary on the other.

	NM; no children	Δ	NM; has children	Δ
less than secondary	17.9		3.9	
Secondary	32.3	14.4	29.7	25.8
Higher	84.7	66.8	59.1	55.2

Table 9: Probabilities of LFP for unmarried women

Table 10 shows the probabilities of labor force participation for married women.

	M; has children	Δ	M; no children	Δ
less than secondary	4.07		17.7	
Secondary	18.6	14.53	29.1	11.4
Higher	61.9	57.83	66.6	48.9

Table 10: Probabilities of LFP for married women (%)

Interpreting the results above indicates that education affects women differently according to their status. Looking at the effects of higher education, it can be noticed that higher education makes an unmarried childless woman 66.8 percent more likely to enter the labor force, and a married childless woman only 48.9 percent more likely. So marriage reduces education's effect on female labor force participation. Reasons behind this may be due to the fact that married women may not be very eager to search for job or enter the labor force since they have a spouse whom they can depend on. However, looking at the effects of secondary education, it seems that the highest effect is for unmarried women who have children. Secondary education makes unmarried women having children 25.8 percent more likely to enter the labor force, whereas it makes a married childless woman only 11.4 percent more likely. In this case, reasoning goes back to the fact that women having no spouse but have children are usually the only breadwinner of the family, so they are forced to work even if they didn't attain higher education.

This empirical model has shown the real effects of education on female participation in the labor force. Other factors like marriage and presence of children also have major effects, and they may reduce education's effect. The major results of this empirical model were that secondary and higher education affect female labor force

participation positively. In particular, higher education has relatively higher impacts than secondary education. It has also been shown that being married decreases the effect of education on female labor force participation while the presence of children increases this effect.

CHAPTER X

CONCLUSION

In this paper, I have studied the status of female education and employment in the Arab world. The female labor participation has been increasing since 1980 till now. This trend was also accompanied by a significant improvement in female education, in addition to other socio-economic factors, like improvement in cultural and social status and working skills. The traditional view and the gender ideology of women's roles in the family and society have been changing. Women nowadays are harmonizing their responsibilities as workers, mothers, and housekeepers at the same time, and increasing their participation in national development.

Nonetheless, the Arab world's lag behind other regions of the world needs some action. Efforts should be done by governments in order to improve female education involving new effective policies and programs. Attention should be paid in order to incorporate women in education and employment as well as broader development planning through appropriate institutional arrangements, and result in guaranteed improvements. Specifically, women should be involved in all sectors of the economy and not concentrated in one or two sectors; in addition their participation in the political sphere should be encouraged and increased. Moreover, some political and labor laws should be reviewed to promote women in employment and participation in national development, eliminate any form of discrimination, and ensure the equality between males and females.

Further in this paper, I highlighted some major differences among the Arab world because it's somehow unfair to sum up all the countries and treat the whole region as an aggregate. I also studied the relationships between female labor force

participation and economic development on one hand, and between female participation and unemployment rates on the other, as a foreword to examine their direct or indirect effects on female participation in the labor market in the empirical studies.

I divided the empirical work into two sections. The first one dealt with macroeconomic data based on a panel of 16 Arab countries over the period 1980 till 2010. The study proves the hypothesis and finds that secondary and tertiary educational attainments have positive impacts on female labor force participation, both of which were significant. Besides, some additional factors were studied and their effects were as expected, but some were insignificant. The logarithm of GDP per capita had a negative effect, whereas its square had a positive effect verifying the U-shaped relationship. On the other hand, public spending on education and the proportion of women in the parliament both had positive impacts on female labor force participation.

However, many data was missing due to the lack of macroeconomic data in most Arab countries. Thus, another empirical study using census data from Jordan in 2004, retrieved from IPUMS International, was done. The explanatory variables included in this estimation model were in addition to secondary and higher educational attainments, age, the marital status of women, the presence of children and interaction terms. This study proved the hypothesis of positive effects that educational attainment has on female labor participation. On the other hand, the presence of children had an expected negative effect, and all effects were highly significant. Moreover, it was shown that the married status reduces the effect of education on female labor force participation, whereas having children increases this effect.

Yet, the lack of macroeconomic data was a true problem in this paper. Thus, some recommendations are to work on collecting the missing data for the Arab world,

and to Arab countries to report their data in order to be studied and examined. In this way, the study would be more reliable. Besides, it makes it easier for economists to point out the economic problems and work on solving them. Moreover, further and more recent surveys should be done in all Arab countries, and studies should be performed on all of them, case by case, in order to get a more reliable result since there are a lot of disparities among the Arab region. In this case, Jordan's census data was very useful in studying the real effect of education on female labor participation in addition to other factors, and all results were found to be significant.

APPENDIX I

DATA – DEFINITIONS AND SOURCES

Variable	Definition	Source
Female Labor Force Participation	The ratio of economically active women to the female population	WDI Eurostat-Labor Force Survey
Educational attainment rate	The ratio of women with a certain highest educational attainment level to the female population	Barro-Lee dataset (2010)
Female unemployment rate	The proportion of unemployed women in the female labor force	WDI Eurostat-Labor Force Survey
Logarithm of GDP per capita and its square		WDI
Public Expenditure on education	All non-repayable payments by General Government on education	WDI Eurostat-Labor Force Survey
Share of women in parliament	Proportion of seats in parliament held by women	Inter Parliamentary Union WDI

APPENDIX II

OBSERVATIONS - COUNTRIES AND YEARS

	2005		Kuwait	2005
Algeria	2010			1985
	1980			1990
	1985			2000
	1990		Morocco	2005
	1995			2005
	2000		Qatar	2010
Bahrain	2005			2000
	1990		Saudi Arabia	2005
	2005			1990
Egypt	2010		Syria	2000
	1980			1990
	1985			2000
	1990			2005
	1995		Tunisia	2010
	2000			2000
	2005		UAE	2005
Jordan	2010		Yemen	2000

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