Female Labor Force Participation in the Middle East and North Africa

by

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Abstract

Through quantitative and qualitative methods, this dissertation endeavors to explain why the rate of female labor force participation (FLFP) in the Middle East and North Africa (MENA) is the lowest in the world.

Using panel data models for fifty-four developing countries over thirty-five years, the first essay suggests that the most likely factor affecting the rate of FLFP negatively in MENA is the institution of patriarchy. Being part of MENA, which is characterized primarily by the institution of patriarchy, is associated with lower than average FLFP. Oil income appears to have a positive effect on FLFP for countries outside MENA but no effect for countries inside MENA. Moreover, Muslim countries outside MENA do not have lower than average FLFP, while Muslim countries in MENA do. Higher education does not significantly increase FLFP in MENA, while basic education increases FLFP moderately.

Using ten proxies for patriarchy, the second essay quantifies patriarchy in order to compare MENA countries with the rest of the world. Using principle component analysis (PCA), the study measures patriarchy for fifty-nine developing countries over thirty years. The technique creates three main components for patriarchy, namely; gender gap in education and demography, children's survival rate, and participation in the public spheres. The results show that MENA has had the highest level of patriarchy with regard to women's participation in the public spheres, education and demography compared with non MENA countries. The region's culture and religion seem to be associated with high levels of patriarchy in MENA. Patriarchy with regards to women's participation in the public spheres is strong and persistent throughout the world, while patriarchy with regards to education and demography is weaker and is decreasing moderately.

The third essay is a survey of literature on women's unpaid work as well as women's participation in the informal sector in MENA. The results point to a severe undercounting of women's work. Since paid employment outside the home is the domain of men, and women are expected to provide care and produce goods and services for their family at home, women do not participate in the formal labor force in large numbers. Because of the patriarchal culture, patriarchal family laws and labor laws, not only do many women from low income households have to choose to work in the informal sector for their survival, but many educated women prefer to work in the informal sector. Since women's unpaid work and their participation in the informal sector are not recorded in labor statistics, the MENA region appears to have a lower rate of FLFP than it does in reality.

Although the study points to patriarchy as the main reason behind the low rate of FLFP in MENA, patriarchy is often legitimized by Islamic ideology and enforced by many states in the region through family laws and labor laws. The rate of FLFP in MENA may appear to be low, but women make a considerable contribution to the wellbeing of their families through different forms of productive and reproductive activities.

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I would like to dedicate this thesis to hardworking women, whose daily sacrifices and contributions to the well being of their families and communities are so often overlooked.

Table of Contents

List of Tables

List of Figures

Chapter 1. Introduction

According to many scholars in the fields of Gender and Development (GAD); Women in Development (WID); and feminist economics, the position of women in the labor force is an indicator of women's status (Tiano 1987; Tinker 1990; Blumberg 1995). Social theorists have long argued that women's social, political and financial emancipation can be achieved by working outside the home (for example Engels 1986, originally written in 1884). It is argued that women's financial dependence on men is the main reason for their disadvantaged position in society. Women who earn wages have higher bargaining power in the household and therefore are more likely to have control over the decision-making process within their families and communities (V. M. Moghadam 2003). Working women are more likely to participate in collective actions, and have a greater chance of gaining representation in the political sphere (Ross 2008).

The international statistics on FLFP (the World Bank Development Indicators and the International Labor Organization's labor statistics) as well as many studies on FLFP show that MENA, as a region, has the lowest rate of FLFP in the world (UNDP 2009; The World Bank 2011; ILO 2012; OECD 2012). If women's social, political and financial emancipation and in turn women's well-being and status are mainly dependent on their participation in the labor market, it is therefore crucial to investigate the reasons behind the low rate of FLFP in MENA.

Studies focused on women and work in MENA point to the low rate of FLFP as puzzling (Etemad Moghadam 2009, the World Bank 2011). It is puzzling since according to economic literature, higher enrollment in different levels of schooling as well as a low fertility rates and a higher age of marriage for girls are associated with higher rates of FLFP. As will be discussed fully in the next chapters, in almost all countries in MENA, access to education for women, as

well as the gender gap in education, has improved significantly over the last three decades. Female enrolment in primary and secondary schooling has increased substantially and female enrolment in tertiary education is at its highest. Furthermore, in many MENA countries, the fertility rate is declining significantly and consistently. The recent increase in women's educational attainment was accompanied by an increase in their age of marriage as well. However, the effect of the above changes on FLFP has been limited. FLFP has increased in MENA over the past three decades; however, as will be shown, the region has the lowest average rate of FLFP in the world and the gender gap in labor force participation is not shrinking, as it has in other developing regions.

Several explanations have been put forward for the low rate of FLFP in MENA, yet few of the hypotheses have been tested. Many believe that the major factor preventing women from participating in the labor market in MENA is Islam (Sharabi 1988; Psacharpoulous and Tzannatos 1989; Inglehart and Norris 2003; World Bank 2004; H'madoun 2010). Islam and Islamic ideology[1] appear to be the dominant explanations for the low rate of FLFP in MENA. The other explanation is the dependency of most MENA countries on oil income. Scholars such as Ross (2008) believe that women in oil-producing countries do not participate in the labor market since their unearned income is high, thus they do not desire to replace leisure with work. Therefore, it is the high waged economy of the region, not Islam, that explains the above puzzle. Women are in fact educated, but do not have the incentive to work. Others refer to the combination of patriarchal culture and religion (Haghighat Sordellini 2010; Offenhauer 2005) or

[1] Ideology is usually defined as a system of thoughts and beliefs which includes normative criteria prescribing how to think and behave. In this context, Islamic ideology is a system of thoughts and beliefs which is mainly based on Quran's teachings and Sunnah (Islamic tradition).

the combination of oil income and patriarchal culture (Karshenas and Moghadam 2001), or cultural identity in terms of religion (Hayo and Tabias 2013), in order to explain the low rate of FLFP in MENA. Patriarchy seems to be one of the most likely explanations for the low rate of FLFP in MENA since it is argued that the region is one of the most patriarchal regions of the world (Caldwell 1982; Kandiyoti 1988; Moghadam 2003; Offenhauer 2005).[2]

None of the studies has explicitly tested the above hypothesis, trying to explain why FLFP in MENA has remained low over time despite demographic changes and economic development. Studies that have attempted to test these arguments empirically have incorporated very few MENA countries in their research. Furthermore, there is no study testing the above arguments over time, across all (or even most) MENA countries, comparing MENA with the rest of the world. The explanations for the low rate of FLFP in MENA are mostly untested hypotheses. Not only have the effects of culture and religion on the rate of FLFP not been investigated separately, the effects of higher levels of education and lower fertility rates on FLFP in MENA have not been specifically tested. There is a major gap in the literature in explaining why, despite women's high levels of educational attainment and low rates of fertility, they are not participating in the labor market as much as they do in other developing countries.

It is important to note that many scholars believe that the topic of women and work in MENA is multidisciplinary (Lobban 1998; Rostami Povey 2005; Haghighat-Sordellini 2010). Hence a multidisciplarity approach is needed in solving the puzzle of the low rate of FLFP in MENA. Contrary to the above studies, the present study uses quantitative as well as qualitative measures in explaining the above puzzle. In the course of three essays and with an interdisciplinary eye, the study not only determines the specific effects of different factors put

[2] By patriarchy in this study, we mean systematic and institutionalized gender inequality in favor of men.

forward in the literature on FLFP in MENA, but also it sheds light on factors making the rate of FLFP in MENA appear to be lower than it actually is.

The first essay is a dynamic panel date analysis, which first identifies the effect, and the extent of the effects, of the fertility rate and different levels of education on FLFP across 54 countries (including 15 MENA countries) over 35 years. It shows that although the effect of education on FLFP is ambiguous, basic education and lower fertiltiy rates have positive effects on FLFP. Second, considering that the literature points to patriarchy as the most imporatant characteristic of the region, the study tries to seperate the effects of oil income, Islam and the culture of patriachy on FLFP in MENA. The result points to a negative regional effect on FLFP in MENA. By seperating the effect of Islam and the culture of patriarchy, the first essay suggests that the MENA region is associated with low rates of FLFP, while the same does not seem to be necessarily true of all Muslim countries. Hence, Islam in isolation is not the primary reason behind the low rate of FLFP in MENA, while patriarchy seems to be the most probable explanation. Furthermore, oil income has positive effect on FLFP outside MENA, and has no effect on FLFP within MENA. While oil income can have a positive effect on FLFP, it seems that the negative effects of patriarchy in the region are so strong that they push MENA's FLFP rate below the world average.

The literature assumes that MENA has one of the highest levels of patriarchy and that is in fact one of the reasons why FLFP has remained consistently low in MENA. Yet there is no quantifiable measure for patriarchy. Hence by using ten variables as proxies for patriarchy, the second essay creates ten indices quantifying the multifaceted concept of patriachy in order to compare MENA countries with the rest of the world. Using Principle Component Analysis, the second essay measures patriarchy for 59 developing countries (including 18 MENA countries)

over 30 years. The technique compresses all indicators of patriarchy into three main components for patriarchy, namely gender gap in education and demography, gender gap in children's survival rate and gender gap in participation in public spheres (which includes the labor force). The study clearly shows that compared with other countries, MENA countries on average have higher levels of patriarchy with regards to women's access to the public spheres including the labor market.

While both essays point to the institution of patriarchy as the main explanation for the low rate of FLFP in MENA, it appears that patriarchy in fact makes the rates of FLFP in MENA appear to be even lower than they really are. Through an extensive literature review of ethnographic studies on women's participation in the informal sector and studies on women's unpaid work in MENA, the third essay puts forward a new and a more complete picture of women's participation in economic activities in MENA. The third essay argues that first, the patriarchal definition of 'work' has caused women's work not to appear as economic activity in labor statistics; second, because of the two major aspects of patriarchy (the ideal model of male breadwinner/female homemaker-caregiver, and the rigid separation between public spheres and the private sphere), women face barriers in accessing the formal labor market and must therefore choose to work as unpaid family workers or work in the informal sector. Since labor statistics most often do not include women's participation in the informal sector and do not consider women's unpaid production and reproduction work as 'work', the share of women's economic activity in MENA countries appears to be low. This is merely the result of undercounting women's work, not a sign of low rates of women's participation in economic activities.

Through a holistic approach, this thesis not only explains exactly why the rate of FLFP in MENA is the lowest in the world, it also corrects a main assumption about low rates of FLFP in

MENA. The low rate of FLFP in the formal sector does not mean that women are not economically active and are not contributing to the well-being of their families and the region as a whole. The study also clarifies the effect of Islam on women's economic status; that Islam is not the inherent reason for the low rate of FLFP. Patriarchal laws, however, are often legitimized by religion and enforced by patriarchal states.

Through quantitative and qualitative analysis in conjunction with an intensive literature review, this thesis will address the lack of understanding that exists with regard to the role of women in the economies of MENA countries.

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Chapter 2: Explaining the Low Rate of Female Labor Force Participation in the Middle East and North Africa

Abstract

Using dynamic panel data models, this paper tests the significance of the main hypotheses offered in various social science disciplines regarding the low rate of Female Labor Force Participation (FLFP) in the Middle East and North Africa (MENA). The study finds that basic education and a lower fertility rate are associated with higher FLFP while the effects of secondary and tertiary education on FLFP are ambiguous. Neither Islam nor oil income are directly associated with lower rates of FLFP. The finding suggests however, that FLFP is low in MENA countries mainly because of the persistence of patriarchal culture in the region.

2.1. Introduction

According to many scholars in the fields of Gender and Development (GAD); Women in Development (WID); and feminist economics, the position of women in the labor force is an indicator of women's status (Tiano 1987; Tinker 1990; Blumberg 1995). They argue that women's financial dependence on men is the main reason for their disadvantaged position. Women who earn wages have higher bargaining power in the household and therefore are more likely to have control over the decision-making process within their families and communities (V. M. Moghadam 2003).

Higher female labor force participation has important social and political consequences. For instance, as women earn income, the opportunity cost of having children rises and therefore, the fertility rate falls (Mincer 1963). Working women are more likely to participate in collective

actions, so they have a greater chance of gaining representation in the political sphere (Ross 2008).

There are many factors associated with higher rates of Female Labor Force Participation (FLFP). Many economists emphasize the great impact of women's education on FLFP. Education usually leads to employment, delays girls' marriages, and also increases the opportunity cost of having children, typically resulting in a lower fertility rate (Standing 1976). According to the World Bank Development Indicators, in many countries in the Middle East and North Africa (MENA), access to education for women, as well as the gender gap in education, has improved significantly in the last three decades. Female enrolment in primary and secondary schooling has increased substantially and female enrolment in tertiary education is at its highest (Figure 2.1).

Furthermore, according to the World Bank Development Indicators, in almost all MENA countries, the fertility rate is declining significantly and consistently (Figure 2.2).

However, the effect of the above changes on FLFP has been limited so that while the rate of FLFP has increased in many MENA countries over the past three decades (Table 2.1), the MENA region has the lowest rate of FLFP in the world (UNDP 2009; The World Bank 2011); ILO 2012; OECD 2012).

As Figure 2.3 shows, compared to other developing regions, not only is the gender gap in the labor force participation rate the widest in MENA, the rate of FLFP as a whole has not experienced any meaningful increase over the last two decades.

It seems that there are other factors at work that prevent women from participating in the labor market. Identifying factors that affect FLFP in MENA negatively is critical, since women's

political, social and economic empowerment in MENA is very much affected by their participation in the labor market.

2.2. Factors Affecting Female Labor Force Participation

Sobol (1963) classified factors affecting FLFP into three groups. The first factors are "enabling conditions", such as the number of children a woman has. The larger the number of children and the younger the children are, the less likely it is for a woman to participate in the labor force. The second group of factors is the "facilitating conditions" such as education, training, work experience and labor market conditions. The third group of factors affecting FLFP is the "precipitating conditions" which push women into the labor market. These include women's attitudes toward work or women's dissatisfaction with the income level of the household.

Education increases the probability of women participating in the labor force by improving employment opportunities, increasing the opportunity cost of not working, and weakening cultural restrictions on women working outside the home (Standing 1976, 296). Education also postpones the age of marriage and reduces both the period of childbearing and the number of children women want, thereby increasing the potential level of FLFP (Standing 1976; Widrati 1998).

The strong positive effect of education on FLFP has been confirmed by the studies of many scholars such as Sweet (1973), Blau, Behrman and Wolfe (1988) and Widarti (1998). Widarti (1998) believes that the relationship between the fertility rate, education and FLFP is complicated. For uneducated women who usually work in home-based production in the informal sector, working is not incompatible with mothering since they can use free or cheap

child care provided by family members while working not far from their children. However, for a more educated middle class woman who is usually aiming for jobs in the formal sector, the number of children and accessibility to affordable child care are extremely important. For a highly-educated women with higher income, who can easily afford a servant and day care, the number of children does not usually play as big a role as it does for middle class women. Cultural inhibitions on FLFP are also much weaker on highly-educated upper-class women. Therefore, she argues that in many developing countries, there is a j-shaped relationship between education and FLFP.

The relationship between education and FLFP runs both ways. Education provides women more choices in paid employment and higher education normally increases the chance of higher income and improved employment status in the future. However, as Behrman (1991) and Klasen and Lamanna (2009) argue, families invest in their children's education rationally. If the employment opportunities for girls are much fewer than those for boys, parents will support boys' schooling more than girls' schooling.

Educated women are expected to have a higher participation rate in the labor force. Psacharopoulos and Tzannatos (1989) argue that because education is assumed to be an investment, one must participate in paid work to recover the cost of education. Also, the forgone earnings of not working are much higher for an educated person, since education increases earning potential. They also indicate that "since female labor supply is more responsive to wage considerations (substitution effect) than to income, educated females may have a higher involvement in the labor market than less educated or uneducated women" (Psacharopoulos and Tzannatos 1989, 196).

However, the effects of education on FLFP can be complicated. Nam (1991) for example points out that "[a]lthough a general expansion of education tends to lower the overall level of labor force participation because it raises the average age of labor entry, education is hypothesized to positively affect FLFP in the long run" (Nam 1991, 643). This implies that the current level of school enrolment has a negative relationship with FLFP but the lag levels, representing human capital, should have a positive relationship.

There may, however, not be a clear and direct relationship between higher education and FLFP. Weises, Ramirez and Tracy (1976) argue that although successful working women are usually highly educated, many of the educated women may decide not to participate in the labor force. There are countries where many occupations that require higher levels of education are considered not culturally appropriate for women. Therefore, many highly educated women may pursue unpaid activities rather than working in the areas of their expertise. Similar results were observed by Katz-Gerro and Yaish (2003), indicating that the level of tertiary education does not necessarily lead to higher formal sector employment for women.

The analysis of FLFP becomes even more complex when we consider its relationship with education as well as fertility. Edwards (2002) points out that highly educated career women prefer not to have children in the early years of their careers, so the advancement and stability of their job are not interrupted. Drawing on Moen (1992), Edwards (2002) argues that school enrolment usually delays parenthood, since many women believe that one cannot hold the roles of mother and student at the same time. However, according to Bratti (2003), Ferrero and Iza (2004), the FLFP of highly educated women may not be negatively related to the fertility rate, since these women are usually working and can afford child care in the private sector. Even so,

Bratti (2003) states that women who are enrolled in tertiary schools, usually postpone marriage and having children, since they plan to have a career after graduation.

It has been established that FLFP and the fertility rate have a strong and negative relationship (see studies done by Cigno 1991; Bloom, Canning and Fink 2009). According to Mincer (1963), Becker (1965) and Willis (1973), a rise in female wages would have a positive effect on female labor supply and a negative effect on the demand for children, since the opportunity cost of having children is considerably higher for working women.

McNown and Rajbhandary (2003) agree that the relationship between the fertility rate and female employment is an inverse relationship; however, they believe that the effects run from fertility rate to female labor supply and not the other way around. Accordingly, many scholars believe that the relationship between FLFP and fertility rate should be treated as endogenous (Rosenzweig and Schults 1985; Browning 1992; Carrasco 2001).

Evidence shows that past levels of FLFP strongly affect its current levels. Gay and Wascher (1989) argue that female participation in the labor force is to a large extent due to persistence. They refer to the evidence found by Heckman and Willis (1977) and Chamberlain (1978) that women who once participate in the labor force are likely to continue their participation, indicating that participation in the labor force is path-dependant.

In addition to the above, there are other factors that strongly affect the level, pattern and trend of FLFP. According to Psacharopoulos & Tzannatos (1989), religion, the size and structure of the economy, sociopolitical and demographic characterestics of a society all affect FLFP while these same factors do not appear to have much effect on male participation in the labor force.

2.3. Specific Factors Affecting FLFP in MENA

Sociologists and political economists have identified other factors that affect FLFP negatively specifically in MENA, such as oil income, Islam and the culture of patriarchy. Oil has been the major source of revenue in many countries in this region and it has deeply affected the politics and economies of these countries for about a century (Owen 2008). In particular, the oil industry pays higher wages to its predominantly male labor force (V. M. Moghadam 2003). Historically, MENA countries were all part of the Islamic empire and share a similar past. Although there are some differences within and across countries, the similarities in language, ethnicity and religion are profound (Kamrava 2011). For example, Kamrava (2011, 1) indicates that in spite of differences, there are "compelling shared characteristics" which unify the region. An important similarity among MENA countries is that (with the exception of Israel) they are all Muslim. Although the extent of the influence of Islamic/Sharia law varies across the region, it does shape laws regarding family, work, ownership, inheritance and such. Even if a government is secular, many social norms, institutions and traditions are strongly affected by Islamic/Sharia law (Moghadam 2005; Offenhauer 2005; Haghighat-Sordellini 2010). Among various similarities, many scholars believe that a significant one among MENA countries is the existence of strong institutions of patriarchy (Moghadam 2003; Offenhauer 2005; Haghighat-Sordellini 2010). Patriarchy is defined as systematic and institutionalized gender inequalities in favor of men which adversely affect almost all aspects of women's lives. It is argued that patriarchal beliefs and norms are deeply rooted and extremely powerful throughout the region[3].

Moghadam (2002) describes MENA countries by what she calls a "patriarchal gender contract" in which the male is the breadwinner and the female the dependent homemaker. The

[3] The topic of patriarchy will be discussed in more details in the next two chapters.

patriarchal gender contract is integrated into law, particularly in the family laws, under which women are required to have permission of their fathers and husbands for education, employment, starting a business and travel. The patriarchal gender contract also indicates precisely what jobs are appropriate for women.

MENA countries are located in what Caldwell (1982) calls "the patriarchal belt", the Middle East, North Africa, South Asia and East Asia. Based on patriarchal belief, men must protect families' honor by controlling women's movement and limiting women's presence in any public sphere such as the labor market. "In exchange for subordinate status and unequal access to resources, the woman is entitled, according to the 'patriarchal bargain', to maintenance and protection" (Offenhauer 2005, 57-58).

Of course there are differences among different classes with regards to patriarchal rules. The nomadic family structure is considered to be the strongest form and urban middle class professional the least patriarchal form. As Offenhauer (2005) argues, even families with the least patriarchal structure do not have an egalitarian family structure. They are "instead, a more or less modernized version of a still inegalitarian household" (Offenhauer 2005, 58).

It is difficult to separate what is assumed to be Islamic and what is simply a part of tradition in these societies, leading many scholars to confuse religion with culture in MENA countries. Lobban (1998) argues that, within the Eastern framework "religion may simply be a correlative function of multiple forms of traditional patriarchy, irrespective of which faith is followed" (Lobban 1998, 97).

Some scholars indicate that Islam was born into a patriarchal setting and that the inequality of men and women was not originated by Islam in the MENA region. Tillion (1983)

argues that the source of women's oppression and subordination in Muslim countries should be traced back to the origin of patriarchy in these societies and not to Islam. Women were oppressed and subordinated in these countries long before they were Muslim. Male supremacy has been legitimized through religious beliefs. The MENA region has always (before and after Islam) had a strong kinship system, patrilineal descent tradition and patriarchal norms. The stronger the patriarchy in a society, the stronger the non-egalitarian religious beliefs have become.

It is commonly believed that the most important determinants of women's status in Islamic societies is the definition of women's role as wives and mothers based on both Islamic law and religious ideology. However, Moghadam (2003) argues that Islam does not explain the low status of women in the Middles East since it is no more patriarchal than other major religions such as Judaism and Hinduism. Rather, the low status of women and girls is the product of "kin-ordered patriarchal and agrarian structures" (V. M. Moghadam 2003, 5-6). Across Muslim countries, the Islamic legal codes are different. Some are more secular, such as Tunisia, and some are very conservative such as Iran. Women's legal and social status is different across Muslim countries because Islam is practiced and interpreted very differently in different Muslim countries and also over time.

Heyzer (1988) argues that it is not religion in isolation which affects FLFP, but it is "the interaction of religious beliefs with the different levels and structures of male supremacy" (Heyzer 1988, 14). Similarly, Haghighat-Sordellini (2010) indicates that in order to explain why women's participation rates in public spheres are low in MENA, we must pay particular attention to the culture of male supremacy across this region, with Islam simply becoming "another vehicle used to perpetuate male control" (Haghighat-Sordellini, Women in the Middle East and North Africa: Change and Continuity 2010, 39).

A recent study by Hayo and Tabis's (2013) explains the low rate of FLFP in MENA in terms of cultural characteristics of the region and not Islam in isolation. The authors argue that social identity (in terms of religion and culture) is critical for women's job market decisions. This study shows that although religion and traditional culture both appear to have negative effect on FLFP in MENA, traditional culture appears to be more important than women's religious identity.

Furthermore, the high wage economy of oil-producing countries is another potential explanation for the low rate of FLFP in MENA. The combination of high waged economy and the culture of patriarchy can be advanced to explain why households find women's low rate of participation in the labor market both affordable and acceptable (Karshenas and Moghadam 2001). Oil revenue increases family income, thereby increasing women's reservation wage. Women in oil-producing countries do not participate in the formal labor market in large numbers since their unearned income is high, so they do not desire to replace leisure with work unless the prevailing female wage is substantially higher (Ross 2008). Consequently, gender equality cannot be achieved in these countries since social and political empowerment of women is conditional on their participation in the formal labor market (Ross 2008). Since an economy based on oil export reduces FLFP, it reduces women's role in the political sphere as well "and hence allows patriarchal norms, laws, and institutions to endure" (Ross 2008, 14).

2.4. Methodology

As indicated above, researchers have sought to explain the low rate of FLFP in MENA by the institution of patriarchy, Islamic ideology and oil income (or any combination of the three). In this study, we will first test the basic hypothesis that emerged from the economic literature

review - that women's education and fertility rates affect FLFP in a path-dependent manner. To test this hypothesis, we will use a dynamic panel data regression model, covering 35 years (from 1975 to 2010) in 54 countries.

Secondly, we will try to investigate the effects of Islam, as well as regional effect (which is interpreted as being indicative of the effect of a strong, regionally pervasive, patriarchal culture) on FLFP. In order to do this, we will first differentiate among MENA and non-MENA countries to investigate any regional effect on FLFP. Next we will differentiate among Muslim and non-Muslim countries to test for any effect of Islam on FLFP. Then we will differentiate among three groups of countries: 1) Muslim MENA countries[4]; 2) Muslim countries outside MENA and 3) developing countries that are not Muslim and are not in MENA. This approach will allow us to test for the effect of region and religion both jointly and separately. If the regression results for the Muslim countries suggests statistically different, and lower (or negative) coefficients compared to the non-Muslim countries, then it can be argued that Islam has a negative effect on FLFP in Muslim countries (Islam effect). Similarly, if the regression results for MENA countries suggests statistically different, and lower (or negative) coefficients compared to the non-MENA countries, then it can be argued that being part of MENA is negatively associated with FLFP in MENA countries (region effect). If the coefficient for Muslim MENA countries were different (lower or negative) compared with non-MENA Muslim countries and non-Muslim countries outside MENA, then it can be argued that it is the regional characteristics of MENA that explain the low rate of FLFP in MENA not Islam.

[4] Since Israel is an advanced country, and the only non Muslim country in the MENA region, it is not considered in this study.

Thirdly, we examine the differences between oil-dependent and non-oil-dependent countries in general and the differences between oil-dependent and non-oil-dependent countries inside and outside MENA. Continuing with the same panel data analysis, first we test for potential differences between two groups of countries: Oil-dependent developing countries[5] (MENA & non-MENA) and non-oil-dependent developing countries (MENA & non-MENA). Then we test for potential difference between MENA oil dependent countries, non-MENA oil dependent countries and all the non-oil dependent countries. We also test for the differences between MENA oil dependent countries, MENA non-oil dependent countries and non-oil dependent countries outside MENA. If the regression results for the oil dependent countries suggests statistically different, and lower (or negative) coefficients compared to the non oil dependent countries, then it can be argued that oil has a negative effect on FLFP in oil-dependent countries. If there is no difference between the two groups of countries, it can be argued that having an economy based on oil income does not explain the low rate of FLFP in oil-dependent countries. If the regression results for oil dependent countries in MENA is statistically different and lower (or negative) compared with non MENA oil dependent countries and/or non oil dependent countries in MENA, it can be argued that oil has a negative effect on FLFP only in MENA. The results of the above regressions will indicate whether religion, region and/or oil have any identifiable effects on FLFP in MENA.

2.4.1. Data Limitations

Finding longitudinal data that is broken down by gender across countries is the most significant challenge to any study focused on women in the developing world. There is not enough data for

[5] Oil dependent countries in this study are defined as developing countries for which oil export income accounts for a sizable share of their GDP (20% or more). List of oil dependent countries in this study is in the appendix.

many countries and, when such data is available, it has often not been recorded annually. Many countries do not have data on many variables, and in some developing countries data is not gendered. Among MENA countries, the following countries had enough data for this research: Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Tunisia, Turkey and the United Arab Emirates.

The major sources of data in this study are the World Development Indicators and the World Bank Gender Statistics[6]. The data set focuses on 54 developing countries from 1975 to 2010. The data has been collected for all variables mentioned in the literature with the exception of girls' ages at first marriage which does not exist in time series form for most developing countries. Since there are many missing years for most of the variables, the study used five-year averages to reduce the effect of the missing years. Therefore our regression analysis covers seven 5-year periods starting from 1975 and ending in 2010.

This paper is focused mainly on women's work in the formal sector. As in many other developing countries, there is not much data available on women and work in the informal sector and this could mean persistent undercounting of women's work for all developing countries including MENA countries[7], a factor that will be addressed in the third essay.

[6] The sources for some of the variables prior to year 1980 are the World Bank CD-ROM (2001, 2002) and UNSD Statistical Database (1980).

[7] Informal employment includes "all remuneration work, both self-employment and wage-employmentthat is not recognized, regulated, or protected by existing legal or regulatory framework and non-remunerative work undertaken in an income-producing enterprise" (Khan and Khan 2009, 68).

2.5. Empirical Analysis

As mentioned above, from a theoretical perspective, all the variables in this study (dependent and explanatory) to a degree – are simultaneously determined. For example, not only do education (school enrolments and literacy) and fertility affect FLFP, but also FLFP in turn affects fertility and school enrolment[8]. Moreover, as stressed in the literature, FLFP is path dependent which means that there is a correlation between past and present values of the dependent variable – suggesting a dynamic panel data model specification[9].

The most commonly used technique to estimate dynamic panel data models with endogenous regressor is the Blundell- Bond System GMM technique (Blundell and Bond 1998; Bond 2002; Roodman 2006; Soto 2009). As such, all the regression models in this paper are estimated using one-step System GMM method. In order to mitigate potential heteroskedasticity and serial correlation, robust standard errors are computed.

The approach used in determining the final specification for the basic model is the 'general to specific' approach. The initial equation will include all variables that are suggested in the literature (and are available) and this general model will be reduced to the most parsimonious model suggested by information criterion.

[8] Female labor force participation rate (FLFP) is the percentage of female population ages 15 and older that participate in the labor force.

[9] It is worth mentioning that the static version of the model did not provide meaningful results. When the lag value of the FLFP was not controlled for, the results were misleading (all levels of schooling became insignificant).

2.5.1. The Basic Model

The Basic Model tests the hypothesis that higher levels of education and lower levels of fertility increase the rate of FLFP[10].

The model for country i at period t can be written as:

$$Y_{it} = \beta_0 + \beta_1 Y_{it-1} + \beta_2 Z_{it} + \beta_3 X_{it} + \beta_4 \Upsilon_t + e_{it} \qquad i=1,2,\ldots,N \qquad t=1,2,3,\ldots T \qquad (1)$$

Where Z_{it} are endogenous variables[11], X_{it} are exogenous variables[12], Υ_t is a set of time dummies[13] and e_{it} are random errors.

The results of the Basic Model[14] (Table 2.2) indicate that the past value of the dependant variable (FLFP) is a strong and significant determinant of its present value. A country with a one per cent higher FLFP in the previous period, compared with other countries, is expected to have a 0.92 per cent higher FLFP in the current period. Although the magnitudes is small (0.01), the lagged value of primary school enrolment is positively affecting FLFP (significant at the 5% level). By contrast, girls' enrolments in secondary school negatively (0.03) affects FLFP

[10] The literacy rate is highly correlated with the lag value of female school enrolment in the primary level (since both are proxies for the same thing – the number of women with at least basic education) therefore literacy rate was not included. Moreover, the lag values of FSES and FSET are highly correlated with their current values, therefore the lag values of FSES and FSET were not included.

[11] The endogenous variables are FLFP, FSES, FSET and FR. The lag values of these variables are used as instruments in System GMM.

[12] The exogenous variable is FSEPL. This variable and MDAGE (median age of female population in each country) are used as additional instruments.

[13] There are seven time dummies for seven periods (each period is five years).

[14] The Basic model is robust and passes AR (2) test for autocorrelation, and the Hansen J Statistics test of over identification.

(significant at the 10% level). However, female enrolment in tertiary school appears to have a positive effect (0.02) on FLFP (significant at the 10% level).

As the above literature review suggested, our results indicate that the relationship between education and FLFP is complex. The results suggest that education in general has positive effects on FLFP but the current enrolment in school (secondary) tends to lower the overall level of FLFP likely because it delays entry into the labor force more than tertiary education does. Moreover, women who do not intend to enter the labor force are more likely to attend secondary school, because of its positive impact on marriage prospects.

Furthermore, the result of the Basic model (regression [1] in Table 2.2) shows no significant relationship between FLFP and fertility. However, when the time dummies are not included in the regression (regression [2] in Table 2.2), the fertility rate affects FLFP (at the 5% level) negatively and significantly (-0.35). Since, in most countries, the fertility rate is falling quite monotonically over time, it is likely that the time dummies pick up that effect causing the relationship to disappear when they are included. We interpret this result as supporting the negative relationship between fertility and FLFP.

2.5.2. Region/Religion Models

Here we test the hypothesis that, (in addition to the variables above), Islam and/or regional characteristic[15] are affecting FLFP negatively. In order to compare country groups with each other we create country group dummies and add them to the Basic model. The new model is written as follows:

[15] According to the literature review above, patriarchy is the region-specific characteristic.

$$Y_{it} = \beta_0 + \beta_1 Y_{it-1} + \beta_2 Z_{it} + \beta_3 X_{it} + \beta_4 \Upsilon_t + \sum_1^N \gamma_i G_i + e_{it} \qquad i=1,2,\ldots,N \qquad t=1,2,3,\ldots T \qquad (2)$$

where γ_i are group specific-effects[16].

First, in order to investigate whether countries in the MENA region have lower FLFP compared with other developing countries, we create a country group dummy for MENA countries. The dummy variable is added to the Basic model (regression [3] in Table 2.2) and Non-MENA countries becomes as the reference group. The result indicated that MENA countries have, on average, significantly lower FLFP compared with non-MENA countries.

Moreover, In order to investigate the effect of Islam on FLFP, we create a country group dummy for Muslim countries. When that dummy is added to the Basic model (regression [4] in Table 2.2), the non-Muslim countries becomes the reference group. The result shows that being part of the group of Muslim countries has no particular relationship with FLFP.

Next, in order to separate the effect of Islam and regional characteristic on FLFP, we create three country group dummies. The first group of countries are Muslim countries in MENA (Muslim-MENA). The second group of countries are Muslim countries outside MENA (Muslim non-MENA) and the third group of countries are non-Muslim-Non-MENA developing countries (non-Muslim non-MENA). In the Region/Religion model (regression 5), Muslim non-MENA countries are considered as the reference group. The results of the model in Table 2.2 suggest (by implication) that Muslim non-MENA countries have above average FLFP compared with the other groups while Muslim MENA countries have, on average, a much lower FLFP rate (-5.44). Interestingly, non-Muslim non-MENA countries have lower FLFP (-3.14) than Muslim non-

[16] The specification for these models is similar as the Basic Model above.

MENA countries[17]. The regression results indicate that being Muslim and not being part of MENA is associated with higher than average FLFP while being part of MENA is associated with lower than average FLFP. In other words, religion itself cannot be the determinant factor for the low rate of FLFP in MENA, but being part of MENA countries is consistently associated with a lower FLFP rate. The above clearly points to a regional, rather than religion effect[18].

Similar to the Basic model, the past value of FLFP is a strong and significant determinant of its present value such that a 0.81 per cent of its lag value is transferred to its present value (in regression 5 for example). Moreover, lag values of primary education have positive and significant (0.02) effects on FLFP (at the 5% level). However secondary and tertiary school enrolments have no particular effect on FLFP in the Region/Religion models. It appears that the effect of education on FLFP is influenced by group differences, since when we account for group differences, the effect disappears. Similar to the Basic Model, when the time dummies are not included in the model, the fertility rate negatively and significantly affects FLFP.

2.5.3. Oil/Region Models

Next, we test the effect of oil income on FLFP. We first divide countries into two groups; oil dependent and not-oil dependent countries, and add a group dummy for oil dependence to the Basic model (regression 6). It should be noted that oil dependent countries are defined as countries for which oil export income accounts for at least 20 per cent of their GDP.

[17] The results are achieved indirectly however, because the Muslim non-MENA country group is the reference group in regression 5.

[18] Moreover, in the full sample regression of the model, The Significance Test indicates that 1) MENA Muslim countries and non-MENA Muslim countries are significantly different from each other, 2) MENA Muslim countries and non-Muslim countries are significantly different from each other, 3) non-MENA Muslim and non-Muslim countries are not significantly different from each other. This clearly points to a regional rather than religion effect.

Interestingly, the results suggest that oil dependent countries (inside and outside MENA) are associated with higher than average FLFP (1.72). All other relationships remain unchanged.

Next, in order to see how the regional effects interact with the oil income effect, we create three country groups (regression [7] in Table 2.2). The first group of countries are oil dependent countries in the MENA region (MENA-Oil dependent). The second group of countries are oil-dependent countries outside MENA (non-MENA-Oil dependent) and the third group of countries are not-oil dependent countries inside and outside MENA (not-Oil dependent). The country group for non oil dependent countries (not-Oil dependent) is considered as the reference group. The results in Table 2.2 suggest that oil income positively and significantly (2.56) affects FLFP outside MENA while it has no effect on FLFP in MENA.

Finally, we divide countries into three new groups: Oil dependent MENA countries (MENA Oil dependent), not-oil dependent MENA countries (MENA not-Oil dependent) and non-MENA countries (oil and not-oil dependent). In this version of the Oil Income model, non-MENA countries are the reference group (regression 8 in Table 2.2). The results suggest that MENA countries that are not oil dependent have significantly lower (-3.82) FLFP compared with other groups (at 5% level), while oil income for oil dependent MENA countries has no effect on their FLFP rate.

The above Oil regressions suggest that in fact oil income has a positive effect on FLFP. However, in MENA, the oil effect is not sufficient to counteract the negative regional effect in order to push the rate of FLFP above the global average (as it does outside MENA).

2.6. Conclusion

The goal of this study was to test different hypotheses offered in various social science disciplines regarding the low rate of FLFP in the MENA and to explain why this region has the lowest FLFP in the world. The paper first, examined the effects of education and fertility on FLFP in MENA and second, it investigated the effect of Islam, regional characteristics (patriarchy) and oil income on FLFP in MENA.

This study shows, as the non-quantitative literature suggests, that the relationship between education and FLFP is complex. While basic education has a positive effect on FLFP, the relationship between higher education (secondary and tertiary) and FLFP is ambiguous. The positive effect of tertiary school enrolment on FLFP and the negative effect of secondary school enrolment on FLFP are neither strong nor robust. This may be due to several contradictory factors affecting these relationships. Higher education (secondary and tertiary) delays entry into the labor force. However, higher education usually increases the incentive to work since the opportunity costs of doing anything other than work increases. The difference in measured effects of tertiary education and secondary education on FLFP might also be the result of a self selection process. Women who have a choice not to enter the labor force may be more likely to pursue education but not participate in the labor force. On the other hand, women who desire to work are more likely to seek tertiary education in order to have more desirable types of employment. These effects are contradictory but may or may not cancel out.

As the literature suggests, FLFP is path dependent since past values of FLFP are strong and significant determinants of its present value. However, while the fertility rate and FLFP have

a reverse relationship, it appears that fertility rate is falling monotonically over time in most countries somewhat independently of the rate of FLFP.

With regard to the factors affecting FLFP in MENA countries, the study shows that MENA countries have in fact, on average, significantly lower FLFP compared with other countries. Similar to Hayo and Tabis's (2013) findings, Islam is not specifically associated with low rates of FLFP. On the contrary, this study shows that being a Muslim country but not being part of MENA is associated with higher than average FLFP. Contrary to what was expected, being an oil dependent country has a positive effect on FLFP in general. Yet oil's positive effect on FLFP does not overcome the negative regional effects for MENA countries. In fact, it appears that the two effects (regional and oil income effects) cancel each other out. Hence, neither Islam nor oil income are associated with lower rates of FLFP; at least not directly.

In effect, the study clearly shows that being part of the MENA region is associated with a lower rate of FLFP. This is the most important contribution of the paper, since it clearly separates the regional effect on FLFP from the religion and oil income effects. No matter how the countries are grouped, those which are located in the MENA region have lower rates of FLFP. Since the literature suggests that the most distinguishing regional characteristic of MENA that can adversely affect women's participation in the public sphere is the deep rooted institution of patriarchy, it must be considered the most likely explanation for the low rate of FLFP in MENA countries. Yet this remains to be tested more directly and we proceed to do so in the next chapter.

2.7. Tables

Table 2.1. Female labor force participation rate (FLFP)

Countries	1975-1980	1981-1985	1986-1990	1991-1995	1996-2000	2001-2005	2006-2010
Bahrain	11.00	12.80	16.20	18.20	19.80	21.00	18.75
Egypt	29.00	27.80	27.00	25.60	24.60	24.00	23.75
Iran	19.00	19.00	20.40	23.00	27.20	28.20	29.50
Iraq	12.00	12.20	13.20	14.00	15.00	16.00	16.25
Jordan	14.00	14.60	15.40	18.00	20.00	21.20	22.50
Kuwait	13.00	16.60	23.60	24.50	23.40	24.60	24.25
Lebanon	19.00	20.00	21.20	22.00	22.80	23.80	25.00
Libya	11.00	12.00	13.60	16.60	20.60	22.60	22.75
Morocco	23.00	23.00	23.60	24.80	26.00	25.20	26.00
Oman	19.00	16.20	14.60	12.40	14.80	18.40	18.25
Qatar	10.00	12.00	13.20	14.60	15.00	16.00	13.50
Saudi Arabia	9.00	10.20	11.00	11.20	13.20	15.00	15.75
Tunisia	19.00	19.80	21.00	22.60	24.40	25.60	26.75
Turkey	27.00	27.00	29.60	28.60	28.20	27.00	26.00
UAE	5.00	6.80	9.20	10.80	12.00	13.40	14.25
MENA	21.65	21.63	22.02	23.03	24.43	25.01	25.76
World	38.13	38.38	39.13	39.50	39.60	39.74	39.98

Note: Female labor force participation rate is the percentage of female population ages 15 and older that participate in the labor force.
Source: Calculated from the World Bank Development Indicators.

Table 2.2. Regression results

	(1) Basic	(2) Basic	(3) Region	(4) Religion	(5) Region/Religion
Variables	FLFP	FLFP	FLFP	FLFP	FLFP
FLFPL	0.92***	0.92***	0.83***	0.92***	0.81***
	(0.02)	(0.02)	(0.04)	(0.02)	(0.07)
FR	-0.2	-0.33**	-0.23	-0.201	-0.24
	(0.17)	(0.14)	(0.21)	(0.17)	(0.31)
FSEPL	0.01**	0.01***	0.01*	0.01*	0.02**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
FSES	-0.03*	-0.03**	-0.02	-0.03	-0.02
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
FSET	0.02*	0.02*	0.01	0.02	0.02
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
MENA			-2.88**		
			(1.18)		
Muslim				-0.23	
				(0.74)	
MENA-Muslim					-5.44**
					(2.22)
non-MENA non-Muslim					-3.14*
					(1.57)
Constant	3.86**	5.05***	7.55**	4.18**	9.76**
	(1.47)	(1.34)	(3.06)	(2.03)	(4.55)
Observations	315	315	315	315	315
Number of countries	54	54	54	54	54
AR(2)	-2.02[0.04]	-1.82[0.07]	-2.12[0.03]	-2.01[0.04]	-2.09[0.04]
Hansen Test	38.70[0.39]	45.70[0.15]	42.31[0.22]	38.63[0.35]	36.08[0.42]
Reference group			non-MENA	non-Muslim	non-MENA, Muslim countries

Table 2.2. Regression results (continued)

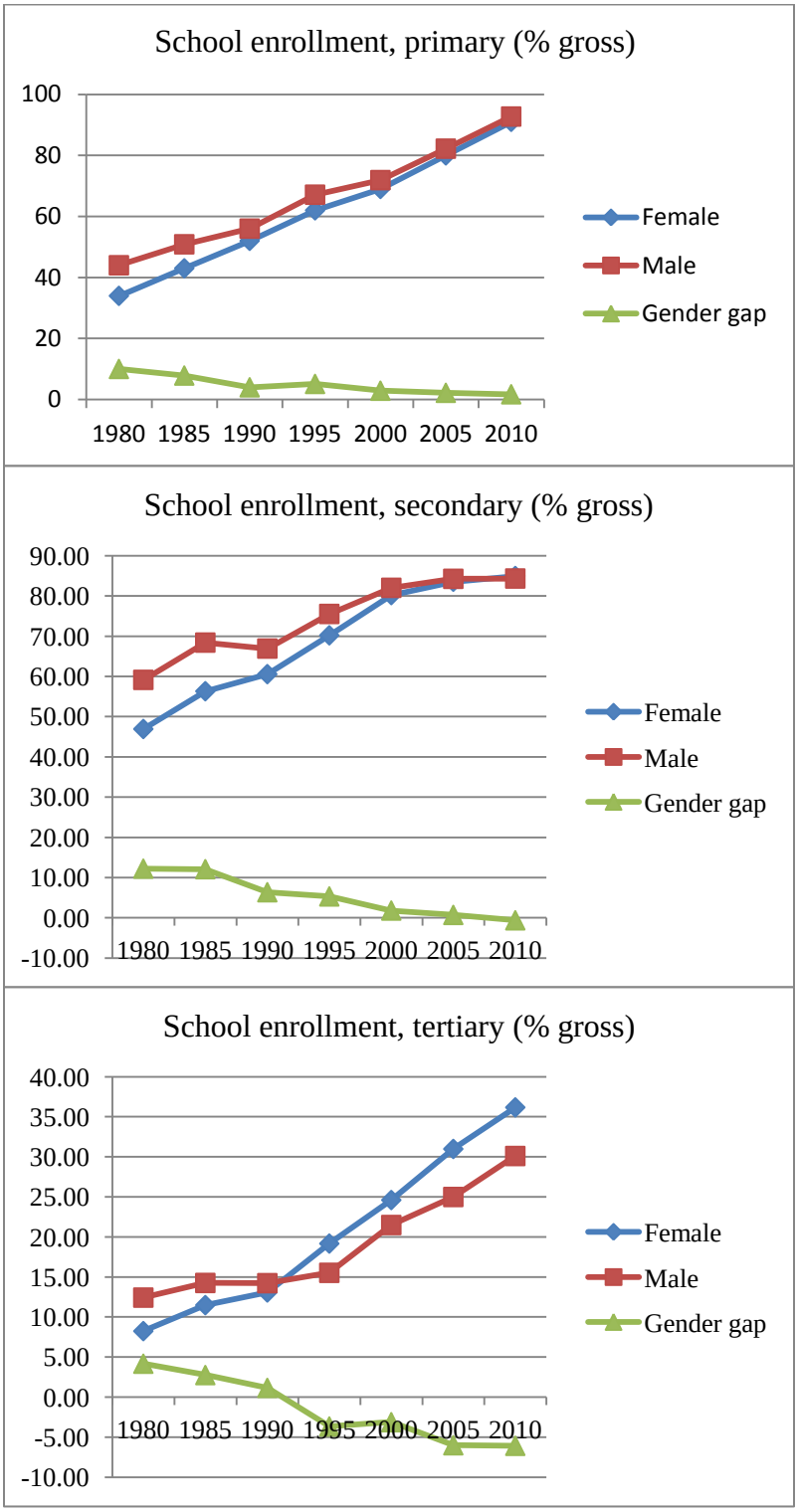
Variables	(6) Oil FLFP	(7) Oil/Region FLFP	(8) Oil/Region FLFP
FLFPL	0.94***	0.88***	0.86***
	(0.02)	(0.04)	(0.04)
FR	-0.34*	-0.26	-0.41*
	(0.19)	(0.20)	(0.23)
FSEPL	0.02**	0.01*	0.02**
	(0.01)	(0.01)	(0.01)
FSES	-0.04**	-0.03*	-0.03**
	(0.02)	(0.02)	(0.01)
FSET	0.03*	0.02	0.02
	(0.01)	(0.01)	(0.01)
Oil dependent	1.72**		
	(0.65)		
MENA Oil dependent		-0.61	-1.29
		(1.20)	(1.30)
Non-MENA Oil dependent		2.56***	
		(0.89)	
MENA not Oil dependent			-3.82**
			(1.75)
Constant	3.92***	5.76**	7.73***
	(1.38)	(2.18)	(2.82)
Observations	315	315	315
Number of countries	54	54	54
AR(2)	-1.84[0.06]	-1.95[0.05]	2.07[0.04]
Hansen Test	39.28[0.32]	34.58[0.49]	41.49[0.24]
Reference group	not Oil dependent	not Oil dependent	non-MENA

Note: All models include time dummies with the exception of the second model. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors are in parentheses. P-values for Hansen Test and AR(2)

Test are in brackets. Null hypothesis of Hansen Test is that instruments are valid. The null hypothesis for AR(2) test is that there is no serial correlation. Variables are: Female Labor Force Participation (FLFP), Lag of female labor force participation (FLFPL), Fertility rate (FR), Lag of female school enrolment in primary level (FSEPL), Female school enrolment in secondary level (FSES), Female school enrolment in tertiary level (FSET).

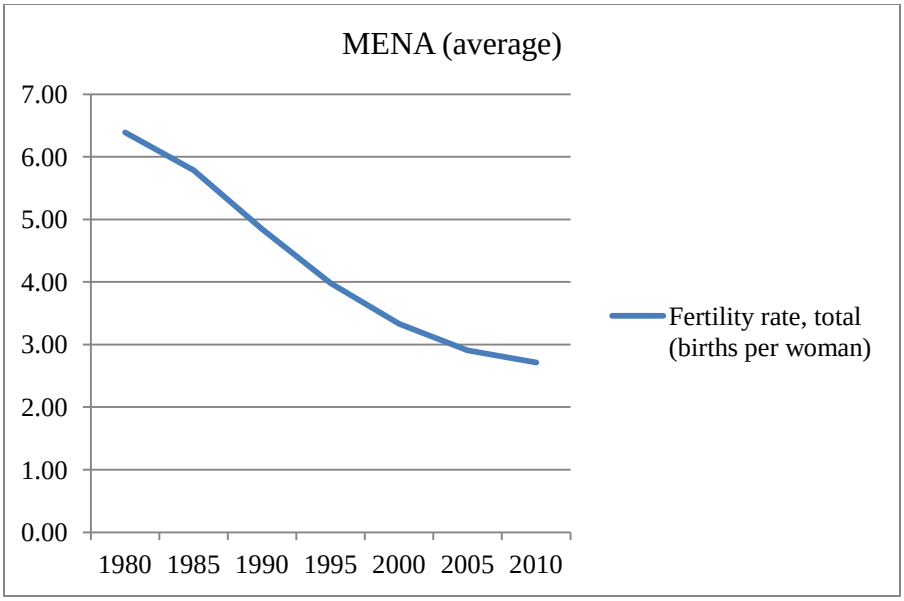
2.8. Figures

Figure 2.1. School enrolments in MENA



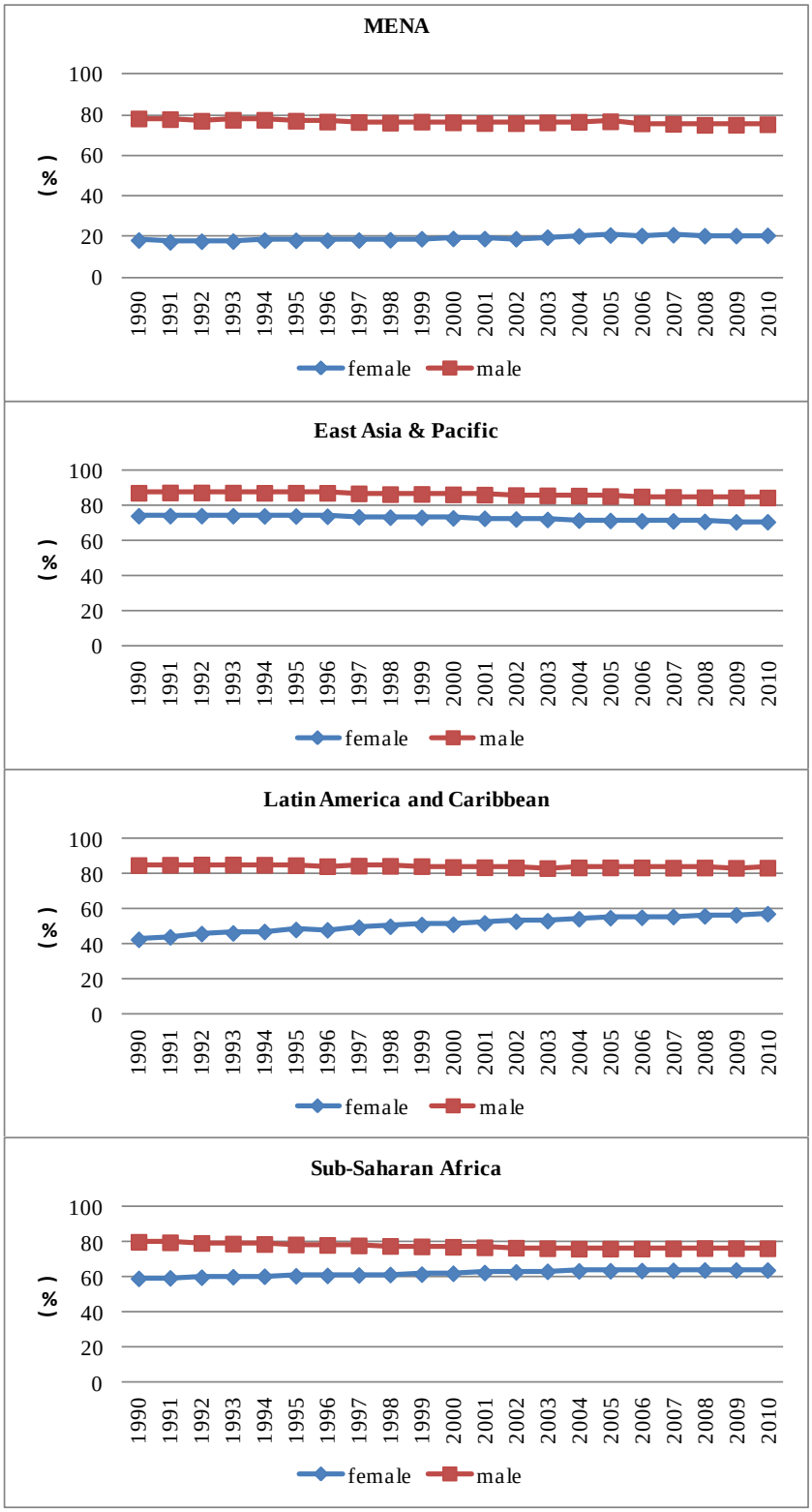
Source: Numbers calculated from the World Bank Development Indicators.

Figure 2.2. Fertility rate in MENA



Source: Numbers calculated from the World Bank Development Indicators.

Figure 2.3. Labor force participation as a percentage of population ages 15-65



Source: Numbers are calculated from the World Bank Development Indicators

2.9. Appendix: List of Countries

Countries		*Muslim Countries*	*MENA Countries*	*Oil Dependent*
Albania	Kuwait	Albania	Bahrain	Azerbaijan
Argentina	Lebanon	Azerbaijan	Egypt	Bahrain
Azerbaijan	Libya	Bahrain	Iran	Iran
Bahrain	Malaysia	Bangladesh	Iraq	Iraq
Bangladesh	Malawi	Chad	Jordan	Kuwait
Benin	Mali	Comoros	Kuwait	Kazakhstan
Bhutan	Mauritania	Djibouti	Lebanon	Libya
Botswana	Mexico	Egypt	Libya	Nigeria
Bulgaria	Morocco	Guinea	Morocco	Oman
Chad	Mozambique	Indonesia	Oman	Qatar
Chile	Nepal	Iran	Qatar	Saudi Arabia
Colombia	Nicaragua	Iraq	Saudi Arabia	U.A.E
Comoros	Niger	Jordan	Tunisia	Venezuela
Cuba	Nigeria	Kazakhstan	Turkey	
Djibouti	Oman	Kuwait	U.A.E.	
Egypt	Pakistan	Lebanon		
El Salvador	Panama	Libya		
Georgia	Philippines	Malaysia		
Ghana	Qatar	Mali		
Guinea	Romania	Mauritania		
Honduras	Saudi Arabia	Morocco		
India	Tunisia	Niger		
Indonesia	Turkey	Nigeria		
Iran	Uganda	Oman		
Iraq	U.A.E	Pakistan		
Jordan	Venezuela	Qatar		
Kazakhstan		Saudi Arabia		
Kenya		Tunisia		
		Turkey		
		U.A.E.		

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Chapter 3. Measuring Patriarchy: The Determinants of Patriarchy in the Middle East and North Africa

Abstract

This paper seeks to add to our understanding of patriarchy by suggesting a number of quantifiable measures which can be derived to ascertain the nature and degree of patriarchy within individual countries and within and between various country groups. These measures highlight how different aspects of patriarchy might have changed over an extended period of time in different countries and country groups. The paper quantifies the ten main characteristics of patriarchy and measures them for fifty-nine developing countries over the past thirty years. It uses Principal Component Analysis (PCA) to compress these indicators into three main measures of patriarchy, namely education and demography, children's survival rate and participation in public spheres. The paper finds that compared with countries outside MENA, on average, MENA countries have higher levels of patriarchy with regards to women's access to the public spheres. This appears to be related to Islamic ideology, oil income and the regional culture. MENA countries also, on average, have higher levels of patriarchy with regards to education and demography variables compared with non MENA countries. This appears to be associated with Islam and regional culture, yet the effects are much weaker. Although the speed of changes in different aspects of patriarchy is not uniform, patriarchy is declining globally, but very slowly.

3.1. Introduction

There is a long and continuing discussion on how patriarchy should be defined (Kandiyoti, 1988; Walby, 1989; Johnson, 1997; Patil, 2013). In this study, we refer to patriarchy as systematic and institutionalized gender inequality in favor of men. Gender inequality is manifested in almost all

aspects of life in patriarchal societies. Men are in the position of control, authority, leadership and power, while women are generally oppressed, subordinated, considered inferior and marginalized. One of the main characteristics of patriarchal society is that men in general have control over the means of production, while women are usually economically dependent upon men (Haghighat-Sordellini, 2010).

In patriarchal families, men are assumed to be breadwinners whereas women are obligated to raise children and provide care for all family members (Moghadam, 2013). Moreover, in patriarchal societies, there is a distinct division between private and public spheres. Public spheres, which include economic, politics, military and ideology[19], are mainly the domain of men (Mann, 1986).

Patriarchy has existed throughout history in different forms and in varying degrees in Europe and Asia (Moghadam, 2012). Yet, the Middle East and North Africa (MENA) is usually characterized as a region with deep rooted patriarchal beliefs (Moghadam, 2007), that have persisted throughout centuries and have not changed significantly during modernization and industrialization (Haghighat-Sordellini, 2010). It is generally believed that MENA countries have had and still have the highest levels of patriarchy in the world.

Although much has been written on patriarchy, particularly in MENA, there has not yet been a study that measures patriarchy. Not only it has been difficult to properly compare

[19] According to Marx and Engels, "the class which has the means of material production at its disposal, has control at the same time over the means of mental production" (Brooker 1999). Hence the system of ideas of the ruling class becomes the ideology of a given society. The function of ideology is therefore to ensure the continuous dominance of the ruling class. In the context of patriarchal society, not only the market economy but also ideology become the domain of men, since both are associated with control and power over women.

countries and regions according to their level of patriarchy, it has been difficult to investigate changes in patriarchy over time. The empirical literature on patriarchy and gender stratification does not cover enough years and countries to allow meaningful comparisons over time and across countries/regions.

By using multiple proxies for patriarchy, this paper aims to quantify the complicated concept of patriarchy so that we can compare the level of patriarchy across countries/regions and over time. By quantifying patriarchy this paper seeks to clarify whether or not MENA countries have the highest levels of patriarchy compared with other developing countries, and determine whether there have been any changes in patriarchy over the last three decades[20].

3.2. Literature Review

Patriarchy is believed to be one of the main characteristics of the MENA region (Ghanim, 2009; Moghadam, 2003). According to Lobban (1998), MENA countries are not homogeneous, but when it comes to women "it is apparent that many women of the Middle East region are suffering multiple hardships in health, work, political empowerment and social status" (2).

MENA countries are located in what John Caldwell (1982) calls 'the patriarchal belt', North Africa, the Middle East, South Asia, and some parts of East Asia[21]. The area is

[20] Although there are two other indices measuring women's status by the United Nations, Gender Empowerment Measure (GEM) and Gender-related Development Index (GDI), these indices cannot answer the above questions. First, GEM and GDI are not available for many countries in the developing world. Second, GEM and GDI are only available for a few years. Similarly, Global Gender Gap Index created by the World Economic Forum does not allow for extended overtime comparison.

[21] It is difficult to identify exactly which countries belong to the patriarchal belt. It usually covers North Africa, Muslim Middle East (including Turkey) and South Asia. Some include Central Asia in the belt (such as Litrell and Bertsch, 2013) and some include China as well (such as Haj, 1992).

characterized by strict sexual division of labor, low status of women, high fertility rates, girls' low age at first marriage, high maternal and infant mortality rates, son preference, higher rates of female illiteracy, lower levels of female educational enrolments, low female labor force participation and the lack of women's political participation (Moghadam, 2003; Moghadam, 2012; Litrell and Bertsch, 2013). In all MENA countries patriarchy is "(a)live as an idealized concept and to varying degrees as social reality" (Offenhauer, 2005: 57). Although the borders of the patriarchal belt are not clear, "women moving from country to country in the patriarchal belt would likely feel at home even as they cross-political boundaries" (Litrell and Bertsch, 2013: 314).

Kandiyoti (1988, 1992) indicates that 'classic patriarchy', which is persistent in this region, is an authoritarian exercise of power over women by male kin. Classic patriarchy is based on blood ties and kinship systems in agrarian settings. Across the patriarchal belt, women's life options are extremely limited and as Moghadam (2003) states "women are socialized to sacrifice their health, survival chances, and life options" (123). Women are expected to value their roles mainly and primarily as mothers and wives (Litrell and Bertsch, 2013). The wife's main obligations are to care for her children and obey her husband. The husband is the breadwinner and he "is entitled to exercise his authority by restraining his wife's movements and preventing her from showing herself in public" (Moghadam, 2012: 589). Since women are entitled to protection and maintenance by their male kin in exchange for their unequal access to resources and low status, Kandiyoti (1988) calls this the 'patriarchal bargain'.

Since women are limited to the private sphere, their interactions with the state and society are often determined through their male kin. Thus "[a] woman's position as a dependent of her

male guardian is used to justify her second-class citizenship" (Moghadam and Roudi-Fahimi, 2005:2). Furthermore, in patriarchal society men have the monopoly over the means of violence (Moghadam, 2003).

Many cross cultural studies on violence against women have argued that societies with strong patriarchal institutions are more likely to exhibit high levels of domestic violence (Bovarnick 2007; Arthur and Clark 2009; Erturk 2009). Bovarnick (2007) argues that when gender roles are conceptualized according to patriarchal social structures, many forms of violence against women become naturalized. In these societies, gender violence therefore is "fundamentally linked with power, reinforcing and reproducing subordinate gender dynamics" (Bovarnick 2007: 66-67). According to Erturk (2009), in patriarchal societies, what distinguishes violence against women from other forms of violence is "the systematic nature in which it occurs to sustain unequal patriarchal power relations" (61).

Family honor is directly linked to female virtue in the patriarchal belt (Litrell and Bertsch, 2013), therefore there are restrictive codes of behavior for women (such as veiling) and strict sex segregation. It is men's responsibility to guard the family's honor by rigid control of female members. Since family and kinship group are the building blocks of social relations, not an individual, a female member of the group who violates the honor code, shames the entire group. It is in this context that "violence against women in the name of honor is the result of gender power differentials within such a hierarchical structure" (Erkturk 2009: 65)[22].

[22] It is important to point out as Weldon (2002) does, that women who have never been assaulted have to alter their behavior and be vigilant (in public and private spheres) in order to minimize any risk of violence against them.

Patriarchal societies are also patrilineal where property and title are usually inherited through male lineage. "The patrilineage totally appropriates both women's labor and progeny and renders their work and contribution to production invisible" (Kandiyoti, 1988: 279). Hence, by downgrading the value of women's work, women are kept submissive (Caldwell, 1978).

The majority of agrarian societies are strongly patriarchal (Blumberg, 2004). Most of today's societies (including many MENA countries) are either agrarian or spring from agrarian origins in which women have the lowest point of status in human history (Blumberg, 1984). Even if a society is an industrialized society, its recent past has been agrarian, and the past always lingers in the present (Blumberg, 1984). Many Middle Eastern societies developed from nomadic and tribal cultures in which women are subordinated to men (Litrell and Bertsch 2013).

Many scholars argue that men's source of authority and power comes mainly from their control over the means of production and surplus (Chafetz, 1984; Bloomberg, 1978) or, as Kandiyoti (1988) states, "male authority has a material base" (281). According to Caldwell (1978), it is because of familial modes of production in the Patriarchal Belt that the male kin have decision-making power[23]. Women (older women in particular) may have some power in the private space, however, "they lack authority (that is, power sanctioned by society)" (Sadiqi and Ennaji, 2011: 3). The power that women can have in the private sphere is acquired through seniority and by bearing sons (Haj, 1992).

In patriarchal societies girls marry young (Kandiyoti, 1988). Early marriage for girls is an essential part of patriarchal society because it "promotes consent and compliance and allows for

[23] Cross cultural studies such as Sandy (1981), Levinson (1989), and Weldon (2002) show that the phenomenon of violence against women is largely a result of women's economic and social dependence on men.

the further socialization of girls into their unequal role, a necessary preparation for their unequal entitlement" (Offenhauer, 2005: 57). Furthermore, "marrying young girls is important because it legitimately extends the length of time that they can bear children" (Haghighat-Sordellini, 2010: 34). In patriarchal societies, the age difference between brides and grooms is large since young women usually marry older men (Caldwell, 1978; Haghighat-Sordellini, 2010).

Since girls are usually married out into another family, daughters are less important than sons (Caldwell, 1978). In Middle Eastern families, boys are usually associated with power, status, and money. "Middle Eastern culture's preference for males forces women into an unfavorable and disadvantaged beginning the day they are born. Discriminatory cultural practices, consequently, degrade and devalue the unpreferred sex" (Ghanim, 2009: 69).

In patriarchal societies women are expected to have more children (Caldwell, 1978). Not only is the reproductive role considered the most important role of a woman, but also women's social status is defined mainly by motherhood. Since they are not generally involved in paid work, their entire adult life is mainly spent on bearing and caring for their children. In patriarchal societies, women usually outlive their husbands since men generally marry women who are much younger than themselves. Both parents usually rely on their sons for financial support during old age and hence women themselves also prefer to have more children (Haghighat-Sordellini, 2010).

Caldwell (1978) argues that in patriarchal societies familial modes of production and market economy can coexist for a long time alongside each other. A patriarchal way of decision making has been practiced in rural and urban areas. As societies move away from familial modes of production towards capitalist modes of production, fertility rates gradually decline (Caldwell,

1978). Yet, "long after capitalist production is general in a society, household services continue to be produced by a precapitalist, familial mode of production" (Caldwel,l 1978: 572).

Since almost all countries in the MENA region are Muslim, it is assumed that patriarchy originates in Islam. However, patriarchal practices and beliefs are not inherently Islamic. Women were oppressed and subordinated long before they were Muslim (Tillion, 1983). Some scholars date the origins of patriarchy much earlier than birth of Islam in the Arabian Peninsula (Gimbutas, 1982; Griffith, 2001). Lerner (1986) believes that the period of the 'establishment of patriarchy' occurred in the Ancient Near East, however, it was "a process developing over a period of nearly 2500 years, from app. 3100 to 600 B.C." (8). Therefore, Islam was born into a patriarchal setting and it is not fundamentally different than other religions, which have roots in the Middle East (Ghanim, 2009). However, Islam and Islamic laws have simply become "another vehicle used to perpetuate male control" (Haghighat-Sordellini, 2010: 39). According to Islamic doctrine women and men are defined as equal before God, however, "they are seen as having different physical, mental, and emotional qualities; different responsibilities in the family and society; and different rights and prerogatives" (Clark, Ramsbey and Adler, 1991: 52).

The rigid separation between public spheres (domain of men) and the private sphere is based on the Islamic ideology that not only is women's primary role and responsibility to raise children and care for their family members, but also women's sexuality is considered as potentially dangerous to men and society at large (Mernissi, 1987; Clark, Ramsbey and Adler, 1991).

Historically, Shari'a/Muslim laws have been integrated into civil, family, and labor laws, which in turn have legitimized male supremacy in this region. Family laws in particular have

been the main instrument for discrimination against women (Moghadam, 2012). Sadiqi and Ennaji (2011) state "[t]he region's family laws codify discrimination against women and girls, placing them in a subordinate position to men within the family — a position that is then replicated in the economy and society" (7). Therefore, Islamic/Sharia law reinforces and legitimizes women's inferiority, submissiveness and subordination.

It is worth mentioning that across Muslim countries, the Islamic legal codes are different. Some are more modern and secular, such as Turkey, and some are very conservative such as Iran (Shia Muslim) and Saudi Arabia (Sunni Muslim). Moghadam (2003) argues that "the status of women in Muslim societies is neither uniform nor unchanging nor unique" (6). This is because Islam is practiced and interpreted very differently in different Muslim countries and also over time.

Sharabi (1988) has used the phrase 'neopatriarchal states' in order to explain the most significant feature of the states in MENA countries. Since there is an intimate relationship between religion and power in this region, there is a close relationship between family and state as well. As Moghadam (2003) points out, "in the neopatriarchal state, unlike liberal or social democratic societies, religion is bound to power and state authority" (11). In MENA countries therefore, patriarchal families and neopatriachal states reproduce and strengthen each other. Some features of patriarchal families play an important role in providing welfare. Characterizing women as caregivers frees patriarchal states from the responsibility of providing many services to their citizens (Moghadam, 2003).

Sharabi (1988) believes that neopatriarchy is the outcome of modernity encountering classic patriarchy. Modernism and industrialization have changed the exterior of patriarchal

society, while the interior structure is firmly based on patriarchal values and kinship social relations. Through the implementation of patriarchal laws, states have preserved or exacerbated unequal gender relations and have imposed more restrictions on women.

Contrary to what is expected, rapid economic development and demographic changes have not improved women's status drastically. Haghighat-Sordellini (2010) states "women in the MENA region, from pre-Islamic times through the spread of Islam and continuing through the periods of oil wealth accumulation and global industrialization, continue to find power concentrated in the male domain (patriarchy)" (39).

The patriarchal states in MENA discourage women from participating in the labor force. "From a political standpoint, it makes sense to ensure that men are not facing competition from women for jobs especially where there is a scarcity of work" (Haghighat-Sordellini, 2010: 91). This is strongly supported by the religious leaders since it is in line with their beliefs that a woman's place is at home. Therefore, the combination of major sources of power — economic, political and religious — have created a systematic discrimination against women's participation in the labor force in MENA (Haghighat-Sordellini, 2010).

Male domination in politics, religion and economics has resulted in male domination in law, ideology and force/violence in the region. Ghanim (2009) argues that measuring changes in the participation of women in the public spheres is of the essence because measuring women's progress in the Middle East and North Africa is very much dependent on their involvements in public spheres.

It is important to note that the powerlessness of women comes mainly from their inability to make choices within the patriarchal system. For example, access to resources is essential for women, yet, as Kabeer (1999) argues, one must be able to choose what to do with those resources. If, for example, women are educated but still face major limitations in participating in policy making or economic activities, their status would not improve much.

Nevertheless, it should be noted that the region's growing wealth and its high natural resource rents have led to massive investments in health and education in these countries in recent years. According to The World Bank Development Indicators, UNDP and Arab Human Development Reports, the gender gap in education is narrowing in MENA, and maternal mortality and fertility rates are declining steadily (Moghadam, 2013).

To some degree, general economic growth can undermine patriarchal order by improving women's education and health, and consequently by lowering the fertility rate. As indicated by Moghadam (1992), some aspects of patriarchal order seem to have been weakening by state expansion (by aiming to provide universal education and health care for example), globalization, oil wealth and economic development in the region. And as Kandiyoti (1984) argues "[t]he material bases of classic patriarchy crumble under the impact of new market forces, capital penetration in rural areas (Kandiyoti, 1984), or processes of chronic immiseration" (281). Therefore, we should expect that at least some aspects of patriarchy to have been weakened in recent years.

3.3. Methodology

As mentioned above, we define patriarchy as the systematic subordination of women to men. As Alexander and Welzel (2011) state, "[t]his subordination has structural and cultural facets. The structural facet is evident in organizational patterns that enforce female subordination. The cultural facet is manifest in values that legitimize female subordination" (41). Our approach in this study is based on structural theories of gender stratification (following scholars such as Chafetz, 1984 and Blumberg, 1984). However, we also consider the effects of culture which often legitimize, promote and reinforce patriarchy. "[S]tructural variables arise from recurrent individual behavior" (Chafetz, 1984: 23) and most human behavior is motivated and/or justified by attitudes and beliefs (Chafetz, 1984).

History and geography are both essential in studying patriarchy. According to Lynn (1998), we should be aware of contextual influence of geography since all human activities "occur at sites embedded in situations" (283). Along the same line, Wolch and Emel (1998) argue that we need "to understand social practices and evolution, not only through time but over space and within the context of particular places" (xiv). It is also imperative, to study patriarchy and its evolution in the context of time. Blumberg (1984) insists that any study on gender stratification must have a historical lens, since without it we may fall into a trap of generalizing that the recent past means always. Chafetz (1984) also insists on the importance of macro level cross-cultural studies over time in understanding sex stratification. Therefore, our aim in quantifying patriarchy is to include as many countries as possible for as many years as data is available.

In order to quantify patriarchy, this study uses a number of proxies which can be found in international databases produced for example, by the World Bank and the United Nations. Since this study aims to compare the level and rate of change in patriarchy across regions and over time, it uses variables as proxies for patriarchy that have data available for at least three decades for as many countries as data is available. The study considers fifty-nine developing countries (MENA and non-MENA countries) from different regions of the developing world. These are the countries with most available data in the last three decades.[24] Using multiple proxies for patriarchy, we aim to construct a patriarchy index (or indices) for each country for three decades[25]. Then we compare patriarchy indices across countries and regions and over time[26].

As with most studies on women in developing countries, this study faces the challenge of finding gendered data going back far enough to allow for a meaningful comparison over time. Many variables that can be considered as great proxies for patriarchy (such as the ratio of women compared to men in managerial or ministerial positions, or the number of reported sexual harassments) are not available for most developing countries. In particular, they are not available for the majority of MENA countries[27]. The study therefore considers ten variables that are

[24] See Appendix 1.

[25] The collected data is available for thirty-two years (from 1980 to 2011, including both years). In order to include all the data available, the periods are divided as follows: First Period: 1980-1990, Second period: 1991-2000, Third period: 2001-2011.

[26] It should be noted that in any society, men and women may be differentiated by class, race, ethnicity, and any other social stratification variables. However, we assume all other forms of social stratification constant and focus only on gender inequality.

[27] Although there is a severe lack of data on gender violence in MENA, it is important to mention Hudson and Brinton's study (2007) on ranking of countries' compliance to CEDAW (Convention to Eliminate All forms of Discriminations Against Women). They categorize most countries in the patriarchal belt, particularly Middle Eastern countries, as belonging to one of the following two groups of countries: a) There is virtually no enforcement of laws consonant with CEDAW, or such laws do not even exist, b) Laws are for the most part consonant with CEDAW, with little effective enforcement; improving the situation of women appears to be a low priority for the government.

available for all the above countries in the last three decades. Since there are some missing data for some of the variables in some of the countries, we use averages for each country in each decade.

3.3.1. Selecting Proxies for Patriarchy

Following the literature review above, and also considering the data limitations, we choose the following proxies for patriarchy.[28]

Fertility Rate:

According to the literature discussed above, a high fertility rate is a characteristic of patriarchal societies. Therefore, an index for the fertility rate is constructed using the lowest and the highest fertility rates in the world recorded in the World Bank Gender Indicators. The index is zero for the country with the lowest fertility rate and 100 for the country with the highest.

Maternal Mortality:

Maternal mortality can also be a proxy for patriarchy since it is indicative of effective levels of care and resources that women receive in childbirth. A study by Lawoyin et al. (2007) indicates that men's attitude is one of the most important factors affecting the rate of maternal mortality. According to Shiffman (2000), lack of political and social will is the main reason behind high rates of maternal mortality in many countries. He argues that women's access to proper health

[28] There are strong relationships between patriarchy and tribalism**Invalid source specified.**. However there are not enough data on tribalism. Jacobson and Deckard **Invalid source specified.** have created an index for tribalism for the year 2009, which interestingly is heavily dependent on gender inequality. Due to lack of data, it is not possible to extend this analysis to periods and countries covered in this study. Please see Appendix 2 for the details of how each index is constructed.

care facilities is as important as education and income in reducing maternal mortality. Therefore, it can be argued that in societies where women are undervalued, their health might be neglected especially when they are most vulnerable. Hence, an index for maternal mortality is constructed using the lowest and highest rates of maternal mortality recorded in the world in the World Bank Gender Indicators. The index is zero for the country with the lowest maternal mortality rate and 100 for the country with the highest.

Gender Gap in Education (Literacy, Primary and Secondary Education)[29]*:*

As discussed above, gender disparity in education can be indicative of general gender inequality. In patriarchal societies, women and girls are often disadvantaged in literacy and schooling compared to boys. In many parts of the world, girls are deprived of formal education. Therefore, in this study, the gender gaps at different levels of education (literacy, primary and secondary schooling) are also considered as proxies for patriarchy.

Sex Ratio (Infants and Children Survival Rates):

One of the characteristics of patriarchal societies is an adverse sex ratio (Moghadam, 1992). In societies with pro-male biases, families value boys more than girls. Boys' health and nutrition may therefore be more important than girls' health and nutrition (Miller, 1981; Basu, 1989) which may result in a skewed sex ratio (Chafetz, 1984). Often times, when resources are scarce, girls suffer from poor diet and hygiene as well as lack of access to medication and physicians. Therefore, the ratio of girls surviving to age four and also girls surviving to age nine, compared to boys' survival rates, are considered as proxies for patriarchy.

[29] There are not enough data to be used for gender gap in tertiary level school enrolment for many of the countries in this study.

Gender Age Gap in Marriage:

As mentioned above, girls often marry young to men older than themselves in patriarchal societies. Therefore, the ratio of boys' mean age at first marriage compared to girls' mean age at first marriage is also considered as a proxy for patriarchy.

Gender Gap in Labor Force Participation[30]*:*

For women, the first step toward high status is work and the next step is control over the means of production (Blumberg, 1984). Economic is a crucial source of power and lack of it is the main source of social inequality; and for women, economic power is the most important and the most achievable form of power (Blumberg, 1984). To Blumberg (1984), all other sources of power (such as force, politics and ideology) are weaker than economic power[31]. Economic power means greater decision making influence and for women, relative economic power "is the most important predictor of their overall relative equality in a wide variety of 'life options'" (Blumberg, 1984: 74). The lower is women's relative economic power, "the more likely they are to be oppressed physically, politically, and ideologically" (Blumberg, 1984: 75). Therefore, we use the gender gap in the labor force participation rate as a proxy for patriarchy. However, we acknowledge that: 1) labor force participation does not capture the meaning of 'work' fully since it does not include unpaid work and work in the informal sector; and 2) participating in the

[30] According to the World Bank Development Indicators, the labor force participation rate is the ratio of the labor force (employed and unemployed but actively seeking work) to the working-age population. It does not include economic activity in the informal sector or unpaid work (farming and otherwise). It is representing (in general) wage earners in the formal sector.

[31] Sanday's **Invalid source specified.** large-scale cross-cultural ethnographic research on female power found no example of political power in the absence of autonomous economic power.

formal labor force does not necessarily mean control over the means of production and surplus (as argued by Blumberg, 1984).

It should be noted that according to the World Bank Gender and Development Indicators, women in MENA have the lowest levels of labor force participation in the world. The sluggish improvement of FLFP in MENA has been blamed mainly on the high level of patriarchy in this region (Haghoghat-Sordellini, 2010). According to Moghadam (2013), patriarchal culture puts constraints on women's mobility and employment, and patriarchal laws put women at a disadvantage in economic activities. Moghadam (2013) argues that the low rate of FLFP in MENA can be directly attributed to the patriarchal gender contract.

Gender Gap in Political Power:

As discussed in the literature above, politics is generally the domain of men in patriarchal societies. Politics is not only the most 'public' amongst other public spheres, but also political activities involve leadership and decision making which are all the domain of men. Considering data limitations, we consider the proportion of seats held by women in national parliaments as a proxy for the level of patriarchy.

Since the above variables (namely *fertility rate, maternal mortality rate, infants and children survival rates, literacy rate and rates of school enrollment*) are correlated with income, we first remove the income effect by using the deviation from the predicted value instead of the

actual level[32]. Controlling for the effect of income on these variables prevents us from confusing poverty with patriarchy.

All the above proxies are normalized in such a way that '0' indicates gender equality, '100' represents the maximum level of patriarchy, and '-100' stands for maximum matriarchy. Therefore, all indices can range from '-100' to '+100' (with the exception of indices for maternal mortality and the fertility rate which can take a value between 0 and 100).

3.3.2. Principal Component Analysis (PCA)

Having derived these various indicators of patriarchy, the question arises as to how one aggregates them into one variable for comparisons across countries and over time? What weight should be assigned to each variable? More specifically, how does one reduce a complex, multifaceted phenomenon such as patriarchy to one number for a country? One of the most often method used for constructing indices from a set of variables is Principal Component Analysis or PCA (Vyas and Kumaranayake, 2006). This multivariate statistical technique allows us to compress the data by reducing the number of dimensions without significant loss of information (Jolliffe, 2002). PCA enables us to derive a small number of summary measures called Principal Components from a set of indicators, where each Principal Component is a weighted average of the underlying indicators. This technique highlights the underlying structure of data, and weights are chosen so as to maximize the explained proportion of the variance in the original set of variables. It is, therefore, "a way of identifying patterns in data, and expressing the data in such a way as to highlight their similarities and differences" (Smith, 2002: 12) without obscuring much

[32] The above variables are regressed against GDP per capita (PPP International $ 2005). The sources for GDP values are the World Bank data bank and the World Bank 2012 CD-ROM.

information[33]. Moreover, PCA is a variable reduction procedure that is usually used when "the variables correlate with one another, possibly because they are measuring the same construct" (Hatcher, 1994: 2)[34]. Therefore, in the following section, we apply the PCA technique to our set of indicators in order to create the patriarchy index and also to identify different aspects (dimensions) of patriarchy.

Step 1: Initial Extraction of the Components:

Using the above ten indices in panel data format (fifty-nine countries, three time periods), we apply the PCA technique. The results are shown in Table 3.1.

Step 2: Determining the Number of Meaningful Components:

We are interested in the number of principle components that account for a significant amount of variances in our data set, because those principle components reflect a large proportion of the information contained in the original data set. One of the most commonly used criteria to solve for the number of relevant components is the eigenvalue one criterion (Hatcher, 1994). According to this criterion, we must choose any Principal Component with a corresponding eigenvalue greater than one. This is because only those components account for meaningful amounts of variance (Hatcher, 1994). As can be seen in Table 3.1, the eigenvalue of the Principal Components 1, 2 and 3 are greater than one. Those components are therefore accounting for a

[33] In another word, PCA is a technique for extracting 'those few orthogonal linear combinations of the variables that capture the common information most successfully' from a set of variables (Filmer and Lant, 2001: 116). In mathematical terms, 'from an initial set of *n* correlated variables, PCA creates uncorrelated indices or components where each component is a linear weighted combination of the initial variables' (Vyas and Kumaranayake, 2006: 460).

[34] Although variables might correlate with one another, the reported Principal Components will be uncorrelated with each other (Jolliffe, 2002).

significant amount of the variance (information contained in the original data set) and must be retained. As Table 3.1 shows, Principal Components 1, 2 and 3 are cumulatively explaining 75 per cent of the total variances, so the other Principal Components account for only a very small amount of variance and can be safely disregarded[35]. Therefore, from here on we consider only Components 1, 2 and 3 in our study.

Step 3: Determine the Nature of each Principal Component

Table 3.2 provides the loadings for each Principal Component. Loadings are the correlation coefficients between variables and the components. In order to obtain simple, reliable and interpretable results, rotation of the component's axes is recommended (Yaremko, Harrison and Lynn, 1986; Abdi, 2003; Brown, 2009). It is argued that this procedure makes the pattern of loading clearer and simplifies the components' structure and therefore makes the interpretation more reliable (Abdi, 2003; Brown, 2009)[36]. Table 3.3 provides the rotated loadings for each component. Here we are interested in variables (indices) with high loadings (with an absolute value bigger than 0.30).

We are also interested in finding the underlying construct of our data (ten proxies). Looking at the first Principal Component, we can see that the fertility rate, maternal mortality, mean age at first marriage, literacy rate, school enrollment in primary education and school enrolment in secondary education all have higher loadings (above 0.35). Also, the first principle component alone accounts for 45 per cent of the total variations. Looking at the second principle

[35] Scree Test also indicates that only the first three components must be retained.

[36] Since none of the correlations in the correlation matrix exceeds the Tabachnick and Fiddell **Invalid source specified.** threshold of 0.32, we perform an orthogonal rotation.

component, we can see that the indices for the gender gap in surviving to age four and the gender gap in surviving to age nine have higher coefficient value (0.73 and 0.64). Also, the labor force index and the index for the proportion of seats held in parliament have heavy loadings for the third principle component (0.70 and 0.62). In total these three Principal Components are explaining 75 per cent of the total variation; that is, 75 per cent of the information contained in the original data set[37].

Looking at the coefficients for each Principal Component, we can say that the first Principal Component mainly measures education and demography, the second Principal Component largely measures children's survival rate and the third Principal Component primarily measures participation in public spheres. Therefore, we have discovered the underpinning nature of each Principal Component, since variables that load on a given component share conceptual meaning. Moreover, variables that load on different components are measuring different constructs. Interestingly all ten proxies for patriarchy are among the variables that load on the first three Principal Components, therefore all the proxies must be included in our analysis. So far we can conclude that patriarchy is a three dimensional phenomenon, because each of the principal components measures a different dimension of patriarchy. Therefore we will have three patriarchy indices for each country in each period, where each of the three indices is measuring a different aspect of patriarchy.

Step 4: Calculating the Value of Principal Components (Score):

[37] The Kaiser-Meyer-Olkin (KMO) test, which is a measure for sampling adequacy, indicates that the overall KMO value for our variables is 0.78, which according to (Kaiser, 1974) is acceptable. The closer the overall KMO to 1 (and the farther from 0) the better.

Using the results of Table 3.3, we then calculate the value of each Principal Component in each period for every country[38]. Each country in each period has three Principal Components for patriarchy where each component measures a different dimension of patriarchy. Since the first Principal Component measures the level of patriarchy with regard to education and demography variables, we call it Pat-Edu&Dem. The second Principal Component explains patriarchy from the perspectives of children's survival rate (ages zero to nine) and therefore it is called Pat-Surviv. Finally the third Principal Component measures the level of patriarchy with regards to participation rates in the public sphere and it is named Pat-PublicSph. Table 3.4 provides the results (patriarchy indices) for each country in every period[39].

3.4. Results

Table 3.4 indicates that patriarchy is much more pronounced with respect to education and demography and public spheres. The scores however, are much smaller with respect to the gender gap in survival rates. While Pat-Edu&Dem and Pat-PublicSph are never zero or negative, Pat-Survive is close to zero in most cases and in some cases the index is even negative.

Table 3.4 indicates that with regards to Pat-Edu&Dem and Pat-PublicSph, all fifty-nine countries have some level of patriarchy. However, Pat-Edu&Dem in most countries has been decreasing over the last three decades. Table 3.4 also shows that Pat-PublicSph has been

[38] $PC1 = Index\_FR_{ij} * 0.38 + Index\_MMR_{ij} * 0.42 + Index\_SEP_{ij} * 0.41 + Index\_SES_{ij} * 0.42 + Index\_LIT_{ij} * 0.43 + Index\_MAGE_{ij} * 0.37$
$PC2 = Index\ Index\_pop0\text{-}4_{ij} * 0.73 + Index\_pop5\text{-}9_{ij} * 0.64$
$PC3 = Index\_LFP_{ij} * 0.70 + Index\_Parlim_{ij} * 0.62$

[39] The results have been normalized (standardized) so that the indices can take a value from -100 to +100, where -100 stands for maximum matriarchy, 0 stands for gender equality and +100 stands for maximum patriarchy.

decreasing in many countries (such as in Argentina, Cuba, Bangladesh, Malaysia and Kazakhstan), while it has been increasing in other countries (such as in Mali, Botswana and Egypt). For many countries, the second period (1990s) is the most patriarchal period with regard to Pat-PublicSph. Some countries have experienced drastic declines in their patriarchy indices (such as Nepal and Mozambique) while others have experienced moderate changes. Many MENA countries, such as Oman, Iran and Lebanon, have experienced significant decline in Pat-Edu&Dem from 1980s to 2000s.

The changes in the world averages (for the fifty-nine developing countries in our study) appear to be mostly with regard to Pat-Edu&Dem. The world average for this aspect of patriarchy has drastically dropped in the last three decades (by about 50 per cent). However, the world in general has not moved much toward gender equality with respect to Pat-PublicSphere (the index has been reduced by only 13 per cent in the last three decades).

Over the past thirty years, the Pat-Survive has not been as high as other dimensions of patriarchy in general, and there have not been drastic changes in any direction either. China however, has experienced a tilted sex ratio in favor of males as a result of the one-child policy. According to Table 3.4, with regard to Pat-Survive, China is the most patriarchal country in this study[40].

In order to investigate whether MENA countries on average have had the highest levels of patriarchy in the world, and also in order to inspect the effect of Islam and oil income on patriarchy, countries are grouped in different categories and their patriarchy indices (averages) are compared with one another and over time. Based on the findings in Table 3.4, we have

[40] However, when the income effect is not removed from the data, almost all countries are patriarchal with regards to Pat-Survive, and the world average is between 2 to 3 percent patriarchy.

grouped countries in Table 3.5, which illustrates the averages of patriarchy in different country groups, and the changes in patriarchy over the last three decades.

It should be mentioned again that these findings are based on only fifty-nine developing countries. There are other countries across the developing world that are not included in this study due to lack of available data to be used as proxies for patriarchy in the last three decades.

MENA vs. Non-MENA Countries:

Table 3.5 clearly shows that MENA countries have higher levels of patriarchy compared with non-MENA countries with regards to Pat-PublicSph and the gap between the two groups is not shrinking. The level of Patriarchy in MENA countries however, is very similar to the level of patriarchy in Non-MENA countries with regards to Pat-Edu&Dem. The two country groups are reducing this dimension of patriarchy almost at the same rate.

Countries Inside and Outside the Patriarchal Belt:

As mentioned above, since there are some differences of opinion on precisely which countries should be included in the patriarchal belt, we categorize countries in the belt in two different ways. The first grouping does not include China and the Post-Soviet states in the belt; the second grouping does. As Table 3.5 shows, either way, the patriarchal belt clearly exists with regard to Pat-PublicSphere. However, when countries with a Communist background are included in the belt, the gap is smaller. With regards to Pat-Edu&Dem, when the patriarchal belt includes China and Post-Soviet states, it becomes less patriarchal than countries outside the belt.

MENA Oil-Dependent vs. MENA Non-Oil-Dependent Countries[41]*:*

The MENA region can be assumed to be different from other regions because many MENA countries are oil producers. Ross (2008) believes that the higher levels of patriarchy in MENA countries are due to the dependency of these countries on oil income. According to Karshenas and Moghadam (2001) the patriarchal family structure has persisted in oil producing countries since high wages "have made the absence of women from market activities and paid employment affordable" (63). Table 3.5 shows that oil-dependent MENA countries have a higher level of Pat-PublicSphere in every period. They also have higher levels of Pat-Edu&Dem (although the gap here is not as large as it is with regards to Pat-PublicSphere).

Countries with Dependency on Oil Income vs. Other Countries:

In order to further investigate the effect of oil on patriarchy, Table 3.5 differentiates all oil dependent countries (MENA and non-MENA) from the non-oil-dependent countries in our study(MENA and non-MENA). Similar to above, oil-dependent countries have higher Pat-PublicSphere, and the gap is not shrinking. Yet, oil dependent countries have similar levels of Pat-Edu&Dem as non-oil dependent countries. There is not much difference with regard to Pat-Survive between oil dependent and non-oil dependent countries.

Muslim Countries Compared with Non-Muslim Countries:

As Table 3.5 shows, Muslim countries in every period have higher Pat-PublicSphere and higher Pat-Edu&Dem. While the gap has shrunk overtime with regard to Pat-Edu&Dem, it has

[41] Oil-dependent countries are defined as countries for which oil expert income accounts for at least 20 per cent of their GDP.

increased with regard to Pat-Public-Sphere. There is not much difference with regard to Pat-Survive between Muslim and Non-Muslim countries.

MENA-Muslim Compared with Non-MENA Muslim and Non-MENA, Non-Muslim Countries:

In order to investigate the regional effect in combination with Islam effect, we group countries as MENA (all Muslim [42]), non-MENA Muslim and non-MENA non-Muslim. As Table 3.5 indicates, Pat-Edu&Dem is the highest in Muslim Non-MENA countries in every period. MENA Muslim countries have actually lower Pat-Edu&Dem compared with non-MENA Muslim countries. There is not much difference among country groups with regard to Pat-Survive. However, Muslim MENA countries have the highest levels of Pat-Public-Sph in every period compared with the other two country groups.

Middle East vs. North Africa:

It can be beneficial to separate the countries of MENA by continent to see if they are homogeneous. We find that Pat-PublicSph and Pat-Edu&Dem are higher in the Middle East compared with North Africa in every period and the gap is not shrinking.

Muslim African vs. Non-Muslim African Countries:

To further investigate the effect of Islam, we separate African countries into two groups of Muslim and Non-Muslim. As above, Muslim countries have higher level of patriarchy with regards to Pat-PublicSph and the gap is not shrinking.

[42] With the exception of Israel, all MENA countries are Muslim. Israel is not included in this study since it is an advanced country.

In short, Muslim countries (inside and outside MENA), oil-producing countries (inside and outside MENA) and countries in the patriarchal belt, have higher levels of patriarchy with regards to Pat-PublicSph. It is therefore not surprising that MENA countries have the highest level of Pat-PublicSph, since not only are they Muslim and located in the patriarchal belt, but also a majority of them are oil-dependent countries. With regards to Pat-Edu&Dem, the gap between country groups is not as large as it is for the Pat-PublicSph. However, Middle Eastern countries, MENA oil dependent countries and Muslim countries in general have higher levels of patriarchy with regards to Pat-Edu&Dem.

With regards to Pat-PublicSph, patriarchy is high and persistent in Muslim countries (MENA and non-MENA), and countries in the patriarchal belt. However, this dimension of patriarchy has been mildly decreasing over time in oil-producing countries. In Muslim countries, MENA oil-producing countries and in the patriarchal belt, Pat-Edu&Dem is moderately decreasing.

Although it is mainly greater than zero, Pat-Survive appears to be close to gender equality across borders and over time.

It is important to note that when the income effect is not removed from the data, MENA countries (in comparison with non-MENA countries), MENA oil dependent countries (in comparison with MENA Not-oil dependent countries), and MENA Muslim countries (in comparison with Non-MENA Muslim and Non-Muslim countries), are less patriarchal with respect to Pat-Edu&Dem. This implies that higher income and economic development can have a positive effect on reducing patriarchy with regards to Pat-Edu&Dem in these countries.

It would be beneficial to address the MENA question here again by relating the findings of this study with the previous chapter. The results in the previous chapter point to a regional characteristic of MENA (patriarchy) as the most likely explanation for the low rate of FLFP in the region. Out of the three dimensions of patriarchy discussed in this study, Pat-PublicSph is the most important determinant for FLFP, and MENA has the highest score in that regard. In order to investigate whether patriarchy is statistically different in MENA Muslim and non-MENA Muslim countries, and also if patriarchy is statistically different in Muslim and non-Muslim countries, we use T-Tests Statistics comparing three country groups (MENA Muslim, non-MENA Muslim and non-Muslim countries). The results are shown in Table 3.6. They clearly show that with regards to Pat-PublicSph, the three country groups are significantly different from each other. MENA (Muslim) countries have the highest mean, and non-MENA Muslim countries and non-Muslim countries rank second and third respectively. It appears that in MENA, both region and religion are at play, while in non-MENA Muslim countries only religion affects Pat-PublicSph. Table 3.6 however, indicates that unlike Pat-PublicSph, other dimensions of patriarchy are not significantly different across these country groups.

Not only is the mean for Pat-PublicSph in MENA Muslim countries stronger than non-MENA Muslim countries, the T-Test strongly rejects the null hypothesis that Pat-PublicSph is the same in all Muslim countries. Even though we account for the fact that Muslim countries have higher Pat-PublicSph than non-Muslim countries, MENA Muslim countries have higher scores and they are significantly different from other Muslim countries. This clearly points to a regional effect. Moreover, since the gap between the two Muslim country groups is consistently large, our finding points to a large regional effect. Thus, this paper specifically indicates that public sphere related patriarchy is uniquely large in MENA.

3.5. Conclusion

By constructing patriarchal indices for fifty-nine countries over the last three decades, this study indicates very clearly that MENA countries, on average, have had and still have the highest level of patriarchy with regards to women's access to public spheres compared with countries outside MENA. In line with the literature, our findings show that oil income and Islam appear to be associated with high levels of patriarchy in this regard. Moreover, MENA countries are more patriarchal with regards to education and demography variables compared with non MENA countries. However the level of patriarchy in MENA countries with regards to education and demography variables is much smaller than the level of patriarchy with regards to women's access to public spheres. Being a Muslim country and being among MENA oil dependent countries appear to be associated with higher levels of patriarchy with regard to education and demography variables.

Contrary to what was expected, compared with other dimension of patriarchy, there are no severe gender inequalities in sex ratios. With some exceptions, it appears that, for the most part, boys and girls, from birth to age nine, have almost the same chance of survival across countries and over the years (assuming the natural sex ratio of 104 to 100 in favor of girls).

The argument in the literature that economic development has a positive effect on gender equality seems to be accurate since in many developing countries patriarchy is decreasing. The effect of income is particularly noticeable when comparing country groups with regards to the education and demography index. Muslim MENA countries and MENA oil dependent countries appear to be less patriarchal when the income effect is not removed from the analysis. However,

even when the effect of income is removed, patriarchy is falling throughout the world, although very slowly.

There are other factors that might have caused structural as well as cultural changes. The changes we see in the patriarchal index with regards to education and demography variables may also be the result of the fact that gender equality became a major issue on the global agenda during the late twentieth century (Inglehart and Norris, 2003). The UN Decade for Women promoted the integration of women into development, the Vienna World Conference in 1993 proclaimed that women's rights are human rights, the Cairo International Conference on Population and Development in 1994 emphasised women's empowerment and health issues, the Beijing Fourth World Conference on Women in 1995 promoted human rights and fundamental freedoms for all women (Inglehart and Norris, 2003). Also, the United Nations Millennium Goals, which were established to achieve gender equality and improve maternal health by the year 2015, could have encouraged policy makers throughout the developing world (including MENA countries) to change their policies and move towards a more egalitarian society.

However, the changes appear to have no major effect on women's involvement in public spheres. The world in general, and MENA countries in particular, remain deeply patriarchal particularly with regards to women's involvement in public spheres. This clearly points to the strong effects of culture that rigidly separates the private sphere from public spheres, and the culture that specifically assigns men to take control of decision-making processes. As Inglehart and Norris (2003) argue, "culture matters, and indeed it matters a lot" (8). While economic growth and legal-institutional reforms are vital in promoting gender equality, cultural changes are essential in order to move towards egalitarian society (Inglehart and Norris, 2003).

As the literature suggest, not only has Islam legitimized patriarchy, patriarchal states have used Islam and Sharia law to further enforce gender inequality in MENA countries, particularly with regards to women's presence in public spheres. As Chafetz (1984) states, "social structures do not persist over long periods of time on the basis of force alone. A substantial degree of support, i.e., legitimacy, is required for a system of inequality to persist" (119). As the literature suggests, patriarchal views have become part of Islamic ideology. This makes moving toward gender equality in these societies more difficult, since moving away from patriarchal views means moving away from their Islamic identity.

Nevertheless, culture is changing. "Glacial shifts are taking place that move systematically away from traditional values and toward more egalitarian sex roles. This shift is intimately related to the process of societal modernization and to generational replacement" (Inglehart and Norris, 2003: 10). It appears that improvement in one dimension of patriarchy, that is, education, can have positive effects on other dimensions of patriarchy, by slowly changing the attitudes of men and women towards a more gender equal society.

It is worth mentioning that although education is important in achieving higher status for women, recent studies show that tertiary education does not have a significant effect on women's participation in public spheres in MENA countries (Litrell and Bertsch, 2013). Though women have enrolled in tertiary schools in large numbers in almost all MENA countries, particularly in the last decade, their participation in the labor market has remained low (Litrell and Bertsch, 2013). Factors positively affecting women's participation in public spheres (particularly in the labor market) are mainly girls' higher education, lower fertility rate and higher age of marriage for girls. In addition to higher female enrolment in tertiary school in MENA, the fertility rate is

declining steadily and the age of marriage is increasing. Yet, in MENA, labor force participation does not increase significantly and women's capabilities are not being utilized. This implies that although women of the MENA are capable of participating in the public sphere and contributing to the economy, politics and the improvement of their society, they are being systematically discriminated against doing so.

Now we relate our findings in this chapter to our answer regarding the low rate of FLFP in MENA in the previous chapter. Considering that the measurement of patriarchy stands on its own merit, this study shows that MENA has higher levels of patriarchy (compared with non-MENA countries) regarding public spheres, education and demography. Even though the patriarchal index for public sphere includes the gender gap in the labor force, we can still claim that FLFP in MENA is low because of the persistence of patriarchy. This study shows that patriarchy is exceptionally high in MENA even without considering the public sphere aspects of patriarchy, because non labor force components of patriarchy are still very high in MENA. Thus this paper confirms the presumption in the last chapter that the reason behind the low rate of FLFP in MENA is patriarchy. Furthermore, since we did not find low FLFP in non-MENA Muslim countries, religion probably adversely affects women's wages and choices of occupation and less so the participation, per se. In MENA countries, however, because of the acuteness of patriarchy, participation itself is undermined.

3.6. Tables

Table 3.1. Principal Components

Components	Eigenvalue	Difference	Proportion	Cumulative
Comp1	4.54	2.73	0.45	0.45
Comp2	1.81	0.67	0.18	0.64
Comp3	1.15	0.49	0.11	0.75
Comp4	0.65	0.10	0.07	0.82
Comp5	0.55	0.16	0.06	0.87
Comp6	0.39	0.11	0.04	0.91
Comp7	0.28	0.01	0.03	0.94
Comp8	0.27	0.06	0.03	0.97
Comp9	0.21	0.07	0.02	0.99
Comp10	0.14	.	0.01	1.00

Table 3.2. Principal Components (Eigenvectors)

Variables	Component 1	Component 2	Component 3	Unexplained
Index_FR	0.41	0.05	-0.09	0.24
Index_MMR	0.40	-0.07	0.17	0.22
Index_SEP	0.39	0.14	0.09	0.27
Index_SES	0.39	0.14	0.12	0.27
Index_LIT	0.41	0.14	0.11	0.21
Index_MAGE	0.36	-0.07	0.16	0.37
Index_Pop0-4	-0.19	0.36	0.63	0.15
Index_Pop4-9	-0.16	0.58	0.31	0.16
Index_LFP	-0.03	0.55	-0.43	0.23
Index_Parlim	0.12	0.40	-0.47	0.39

Note:
Index_LFP: Index for gender gap in labor force participation; Index_FR: Index for fertility rate; Index_MMR: Index for maternal mortality rate; Index_SEP: Index for gender gap in school enrolment in primary level; Index_SES: Index for gender gap in school enrolment in secondary level; Index_Pop0-4: Index for gender gap in survival rate from birth to age 4; Index_Pop5-9: Index for gender gap in survival rate from age 5 to 9; Index_LIT: Index for gender gap in literacy; Index_Parlim: Index for gender gap in proportion of seats held in national parliaments; Index_MAGE: Index for gender gap in age of marriage.

Table 3.3. Rotated Principal Components

Variables	Component 1	Component 2	Component 3	Unexplained
Index_FR	0.38	-0.14	0.11	0.24
Index_MMR	0.42	-0.03	-0.14	0.22
Index_SEP	0.41	0.05	0.06	0.27
Index_SES	0.42	0.07	0.04	0.27
Index_LIT	0.44	0.06	0.04	0.21
Index_MAGE	0.37	-0.03	-0.14	0.37
Index_Pop0-4	0.01	0.73	-0.15	0.15
Index_Pop4-9	0.00	0.64	0.22	0.16
Index_LFP	-0.05	0.06	0.70	0.23
Index_Parlim	0.07	-0.11	0.62	0.39

Note:
Index_LFP: Index for gender gap in labor force participation; Index_FR: Index for fertility rate; Index_MMR: Index for maternal mortality rate; Index_SEP: Index for gender gap in school enrolment in primary level; Index_SES: Index for gender gap in school enrolment in secondary level; Index_Pop0-4: Index for gender gap in survival rate from birth to age 4; Index_Pop5-9: Index for gender gap in survival rate from age 5 to 9; Index_LIT: Index for gender gap in literacy; Index_Parlim: Index for gender gap in proportion of seats held in national parliaments; Index_MAGE: Index for gender gap in age of marriage.

Table 3.4. Patriarchy Indices

	Pat-Edu&Dem			Pat-Survive			Pat-PublicSph		
Countries	*Period 1*	*Period 2*	*Period 3*	*Period 1*	*Period 2*	*Period 3*	*Period 1*	*Period 2*	*Period 3*
Albania	17.34	9.18	8.27	2.48	1.67	1.90	58.39	56.30	44.96
Algeria	43.04	19.20	14.79	0.17	0.41	0.45	82.38	94.02	91.43
Argentina	12.02	11.56	10.82	-0.18	-0.21	-0.17	74.03	39.72	24.53
Azerbaijan	11.29	9.17	11.13	0.70	0.86	3.46	45.96	43.60	36.90
Bahrain	22.33	17.88	21.00	0.61	1.00	-2.67	89.69	87.58	74.61
Bangladesh	66.93	31.50	13.35	-0.09	0.16	0.34	60.82	55.21	44.30
Benin	81.79	67.81	54.53	-3.23	-2.42	-2.11	52.21	52.69	45.80
Bhutan	52.01	26.09	18.45	-0.67	-0.95	-0.47	58.57	57.05	52.64
Botswana	15.52	15.64	14.46	-1.73	-1.34	-1.27	31.46	37.69	47.26
Bulgaria	10.11	6.80	8.95	1.18	0.77	1.06	33.90	42.68	33.93
Chad	97.66	90.13	77.84	-2.11	-1.77	-1.77	58.30	54.31	43.67
Chile	9.89	8.69	10.45	-0.28	-0.07	-0.01	72.48	61.40	53.43
China	16.29	8.93	8.22	1.91	4.86	6.44	23.58	34.99	35.58
Colombia	12.51	11.28	9.99	0.06	0.11	0.16	52.12	59.60	49.35
Comoros	44.23	39.04	32.55	-1.04	-0.71	-0.51	59.58	78.52	72.56
Cuba	5.84	6.09	7.06	0.66	0.81	0.96	58.62	42.05	20.33
Djibouti	50.14	42.72	27.88	-1.32	-1.24	-1.15	62.52	73.59	56.08
Egypt	33.60	24.08	19.04	-0.12	0.08	0.26	76.96	80.65	81.32
El Salvador	16.35	10.65	11.15	-0.21	0.12	0.22	73.01	56.76	42.89
Georgia	15.03	5.88	7.77	-0.24	0.69	2.56	47.77	47.44	48.31
Ghana	49.85	35.09	25.56	0.18	0.52	0.55	39.85	44.03	45.40
Guinea	97.41	82.88	53.65	-0.01	-0.02	0.02	48.96	48.39	37.62
Honduras	21.38	17.46	13.69	-0.44	-0.24	-0.23	73.82	64.54	50.79
India	48.35	35.80	25.50	1.98	2.46	2.53	70.57	67.83	66.08
Indonesia	28.05	17.66	13.23	-0.52	-0.25	-0.14	54.58	57.07	46.97
Iran	37.50	19.00	12.27	1.19	0.40	0.69	74.32	91.60	85.55
Iraq	44.37	35.64	27.96	1.51	1.04	1.09	89.98	84.35	63.92
Jordan	28.91	16.67	15.76	1.63	1.07	0.88	90.91	94.95	80.26
Kazakhstan	13.67	7.48	12.93	-0.72	0.50	0.53	47.26	43.42	33.78
Kenya	44.54	29.77	26.47	-1.49	-1.43	-1.42	46.07	51.19	45.35
Kuwait	27.11	29.77	27.55	4.78	4.04	3.30	89.32	80.94	73.10
Lebanon	24.16	17.35	9.92	0.19	0.26	0.18	78.79	81.73	77.92
Libya	48.27	21.70	18.76	0.80	0.66	0.78	88.15	79.86	69.58
Malaysia	68.96	54.96	33.17	-1.83	-1.54	-1.37	38.99	41.47	28.32

Malawi	20.93	14.37	13.76	0.57	0.94	1.10	64.21	59.46	57.82
Mali	77.81	48.40	55.40	0.28	-0.05	0.01	50.10	52.36	57.09
Mauritania	65.84	41.76	34.00	-0.11	-0.17	-0.17	52.08	80.94	57.68
Mexico	16.11	15.65	12.91	-0.17	0.02	0.06	60.52	56.62	42.20
Morocco	47.63	29.48	21.86	0.02	0.16	0.29	69.44	77.98	60.70
Mozambique	68.50	56.62	38.86	-1.06	-2.18	-1.96	46.66	13.85	6.22
Nepal	76.96	40.35	21.42	1.44	0.96	0.93	57.46	47.67	18.31
Nigeria	98.89	61.27	67.60	0.81	0.44	0.54	47.60	77.63	59.64
Niger	63.98	56.22	45.60	-0.08	0.04	0.18	60.19	63.30	53.21
Oman	63.71	26.00	20.42	-1.29	3.70	0.58	100.00	92.17	86.57
Pakistan	76.47	45.96	35.56	0.44	0.25	0.25	55.74	91.32	65.27
Panama	13.07	12.88	12.93	0.21	0.13	0.23	64.14	60.04	58.20
Philippines	18.90	13.41	9.18	0.47	0.47	0.52	32.65	54.96	41.31
Qatar	50.13	40.23	41.52	0.65	2.35	0.48	99.37	91.80	92.31
Romania	12.30	7.36	7.85	0.40	0.44	0.77	46.83	49.05	45.30
Saudi Arabia	48.19	32.82	20.33	-1.71	0.67	0.99	90.16	95.29	92.68
Syria	45.92	21.40	15.45	-0.02	0.31	0.71	77.35	74.85	76.69
Tunisia	32.59	16.17	13.79	0.31	-0.07	0.01	74.53	70.80	51.64
Turkey	26.97	20.59	15.70	-0.55	-0.23	0.01	68.78	72.00	63.47
Turkmenistan	22.05	13.15	11.96	-1.05	-0.66	-0.53	50.49	35.92	45.98
UAE	63.37	42.66	34.17	1.47	1.84	1.80	96.01	96.62	75.76
Uruguay	11.90	7.09	8.24	0.49	0.36	0.36	69.43	49.49	46.00
Uzbekistan	19.54	10.33	10.37	-0.84	-0.30	-0.24	48.55	55.20	40.13
Venezuela	10.52	12.31	12.26	0.26	0.28	0.31	69.85	58.15	46.83
Yemen	81.99	74.55	43.86	-0.54	0.09	0.08	43.62	82.50	72.15
World	***39.84***	***27.87***	***22.53***	***0.07***	***0.34***	***0.38***	***62.71***	***63.51***	***54.54***

Note:
The patriarchy indices are generated in such a way that '0' stands for gender equality, '100' stands for maximum patriarchy, and '-100' stands for maximum matriarchy. Period 1: 1980-90; Period 2: 1991-00; Period 3: 2001-11. Pat-Edu&Dem stands for patriarchy index with regard to education and demography variables; Pat-Survive stands for patriarchy index with regard to gender gap in survival rates of children up to age 9, and Pat-PublicSph stands for patriarchy index with regard to women's participation in public spheres.

Table 3.5. Patriarchy Indices for Group Countries

Group Countries	Pat-Edu&Dem			Pat-Survive			Pat-PublicSph		
	Period 1	*Period 2*	*Period 3*	*Period 1*	*Period 2*	*Period 3*	*Period 1*	*Period 2*	*Period 3*
World	39.84	27.87	22.53	0.07	0.34	0.38	62.71	63.51	54.54
MENA	42.77	28.07	21.90	0.51	0.99	0.55	82.21	84.98	76.09
Non-MENA	40.42	28.61	23.64	-0.10	0.06	0.32	54.07	55.46	46.21
Gap	*2.34*	*-0.54*	*-1.75*	*0.61*	*0.92*	*0.23*	*28.14*	*29.52*	*29.88*
The Patriarchal Belt (first grouping)	47.41	29.78	22.11	0.53	0.90	0.59	77.52	80.38	70.27
Outside the Patriarchal Belt	35.01	26.66	22.80	-0.22	-0.02	0.25	53.24	52.73	44.48
Gap	*12.41*	*3.12*	*-0.69*	*0.75*	*0.91*	*0.34*	*24.27*	*27.65*	*25.79*
The Patriarchal Belt (second grouping)	40.98	25.51	19.68	0.41	0.92	0.89	70.57	72.74	64.03
Outside the Patriarchal Belt	38.74	30.16	25.28	-0.26	-0.22	-0.11	55.10	54.59	45.36
Gap	*2.23*	*-4.65*	*-5.59*	*0.67*	*1.14*	*1.00*	*15.47*	*18.14*	*18.67*
MENA Oil	47.30	29.67	24.20	0.84	1.68	1.13	89.96	89.63	81.21
MENA Non-Oil	38.23	26.46	19.60	0.17	0.30	-0.03	74.45	80.34	70.97
Gap	*9.07*	*3.20*	*4.60*	*0.67*	*1.38*	*1.16*	*15.51*	*9.29*	*10.24*
Oil	39.11	26.43	22.91	0.60	1.27	0.85	80.19	78.76	69.73
Non-Oil	40.07	28.32	22.41	-0.09	0.05	0.23	57.27	58.77	49.81
Gap	*-0.97*	*-1.89*	*0.50*	*0.69*	*1.22*	*0.62*	*22.92*	*20.00*	*19.92*
Muslim	44.86	29.70	24.12	0.26	0.58	0.46	69.29	73.90	64.44
non-Muslim	33.47	25.56	20.51	-0.17	0.03	0.27	54.35	50.33	41.97
Gap	*11.39*	*4.14*	*3.60*	*0.44*	*0.55*	*0.19*	*14.94*	*23.57*	*22.47*
MENA	42.77	28.07	21.90	0.51	0.99	0.55	82.21	84.98	76.09

(Muslim)									
Non-MENA Muslim	47.37	31.66	26.78	-0.03	0.10	0.36	53.79	60.60	50.45
Non-MENA-Non-Muslim	33.47	25.56	20.51	-0.17	0.03	0.27	54.35	50.33	41.97
Middle East	43.43	30.35	23.53	0.61	1.27	0.63	83.71	86.64	78.08
North Africa	41.02	22.13	17.65	0.23	0.25	0.36	78.29	80.66	70.93
Gap	*2.41*	*8.22*	*5.88*	*0.37*	*1.02*	*0.27*	*5.42*	*5.98*	*7.14*
African Muslim	61.43	43.07	36.43	-0.19	-0.19	-0.10	64.22	72.42	61.58
African non-Muslim	56.16	45.16	34.09	-1.32	-1.19	-1.06	45.06	43.46	38.79
Gap	*5.26*	*-2.09*	*2.34*	*1.13*	*1.00*	*0.95*	*19.16*	*28.96*	*22.79*

Note: The patriarchy indices are generated in such a way that '0' stands for gender equality, '100' stands for maximum patriarchy, and '-100' stands for maximum matriarchy. Period 1: 1980-90; Period 2: 1991-00; Period 3: 2001-11. Pat-Edu&Dem stands for patriarchy index with regard to education and demography variables; Pat-Survive stands for patriarchy index with regard to gender gap in survival rates of children up to age 9, and Pat-PublicSph stands for patriarchy index with regard to women's participation in public spheres. The first group of countries in the patriarchal belt excludes China and post Soviet countries while the second group of countries in the patriarchal belt does not. Gaps represent the differences between group countries.

Table 3.6. T-Test Results

Ho: Country groups are not significantly different from each other					
	mean	**Country groups comparison**	**t Stat**	**P(T<=t)**	
Pat-PublicSphere					
MENA	76.09	MENA Muslim Vs. non-MENA Muslim	6.43	0.00	Ho is rejected
non-MENA Muslim	50.45	non-MENA Muslim Vs. non-Muslim	2.16	0.02	Ho is rejected
non-Muslim	41.97	non-Muslim Vs MENA Muslim	-9.09	0.00	Ho is rejected
		non-Muslim Vs non-MENA Muslim	-2.16	0.02	Ho is rejected
Pat-Edu&Dem					
MENA	21.90	MENA Muslim Vs. non-MENA Muslim	0.89	0.19	Ho is not rejected
non-MENA Muslim	26.78	non-MENA Muslim Vs. non-Muslim	1.04	0.15	Ho is not rejected
non-Muslim	20.51	non-Muslim Vs MENA Muslim	-0.34	0.37	Ho is not rejected
		non-Muslim Vs non-MENA Muslim	-1.04	0.15	Ho is not rejected
Pat-Survive					
MENA	0.55	MENA Muslim Vs. non-MENA Muslim	0.48	0.32	Ho is not rejected
non-MENA Muslim	0.36	non-MENA Muslim Vs. non-Muslim	0.20	0.42	Ho is not rejected
non-Muslim	0.27	non-Muslim Vs MENA Muslim	0.65	0.26	Ho is not rejected
		non-Muslim Vs non-MENA Muslim	-0.20	0.42	Ho is not rejected

Note: MENA countries in this study are all Muslim. The above tests are for the third period's patriarchy indices. However, the test results for the first and second periods are the same, indicating that the above country groups are significantly different from each other only with respect to women's participation in the public spheres.

3.7. Appendices

Appendix 1

Countries		*Muslim Countries*	*Patriarchal Belt 1*	*Patriarchal Belt 2*	*Oil-Producing Countries*
Albania	Malaysia	Albania	Algeria	Algeria	Algeria
Algeria	Malawi	Algeria	Bahrain	Azerbaijan	Azerbaijan
Argentina	Mali	Azerbaijan	Bangladesh	Bahrain	Bahrain
Azerbaijan	Mauritania	Bahrain	Bhutan	Bangladesh	Iran
Bahrain	Mexico	Bangladesh	Egypt	Bhutan	Iraq
Bangladesh	Morocco	Comoros	India	China	Kazakhstan
Benin	Mozambique	Djibouti	Iran	Egypt	Kuwait
Bhutan	Nepal	Egypt	Iraq	Georgia	Libya
Botswana	Nigeria	Guinea	Jordan	India	Nigeria
Bulgaria	Niger	Indonesia	Kuwait	Iran	Oman
Chad	Oman	Iran	Lebanon	Iraq	Qatar
Chile	Pakistan	Iraq	Libya	Jordan	Saudi Arabia
China	Panama	Jordan	Morocco	Kazakhstan	U.A.E.
Colombia	Philippines	Kazakhstan	Nepal	Kuwait	Venezuela
Comoros	Qatar	Kuwait	Oman	Lebanon	
Cuba	Romania	Lebanon	Pakistan	Libya	
Djibouti	Saudi Arabia	Libya	Qatar	Morocco	
Egypt	Syria	Mali	Saudi Arabia	Nepal	
El Salvador	Tunisia	Malaysia	Syria	Oman	
Georgia	Turkey	Mauritania	Tunisia	Pakistan	
Ghana	Turkmenistan	Morocco	Turkey	Qatar	
Guinea	U.A.E.	Niger	U.A.E.	Saudi Arabia	
Honduras	Uruguay	Oman	Yemen	Syria	
India	Uzbekistan	Pakistan		Tunisia	
Indonesia	Venezuela	Qatar		Turkey	

Iran	Yemen	Saudi Arabia	Turkmenistan
Iraq		Syria	U.A.E.
Jordan		Tunisia	Uzbekistan
Kazakhstan		Turkey	Yemen
Kenya		Turkmenistan	
Kuwait		Uzbekistan	
Lebanon		U.A.E.	
Libya		Yemen	

Note: Patriarchal Belt 2 includes post-Soviet countries and China. Oil-producing countries in this study are defined as developing countries for which oil export income accounts for a sizable share of their GDP (20 per cent or more).

Appendix 2

Indices as proxies for patriarchy have been constructed as follows:

The index for the fertility rate: $\text{Index\_FR}_{ij} = [(\text{FR}_{ij} - \text{FR}_{Min}) / \text{FR}_{Max} - \text{FR}_{Min})]*100$ where i stands for country and j stands for period, Index_FR is the index for fertility rate, FR_{Max} equals 9.23 which corresponds to Yemen and FR_{Min} equals 1.26 which corresponds to Bulgaria. The source for the numbers is the World Bank Gender Indicators.

The index for maternal mortality: $\text{Index\_MMR}_{ij} = [(\text{MMR}_{ij} - \text{MMR}_{Min}) / \text{MMR}_{Max} - \text{MMR}_{Min})]*100$ where i stands for country and j stands for period, Index_MMR is the index for mortality rate, MMR_{Max} equals 1900 (in 100,000 live births) which corresponds to Liberia and MMR_{Min} equals 2 (in 100,000 live births) which has happened in many countries. The source for the numbers is the World Bank Gender Indicators.

The index for literacy rate: Index_LIT_{ij} = [(percentage of literate males ages fifteen and up – percentage of literate female ages fifteen and up) / (percentage of literate males ages fifteen and up + percentage of literate female ages fifteen and up)]*100.

The index for school enrollment at the primary level: Index_SEP_{ij} = [(percentage of male students enrolled in primary school – percentage of female students enrolled in primary school) / (percentage of male students enrolled in primary school + percentage of female students enrolled in primary school)]*100.

The index for school enrollment at the secondary level: Index_SES_{ij} = [(percentage of male students enrolled in secondary school – percentage of female students enrolled in secondary

school) / (percentage of male students enrolled in secondary school + percentage of female students enrolled in secondary school)]*100. The sources for the numbers are the World Bank Development Indicators data bank and the World Bank 2001, 2002 CD-ROMs.

The index for children surviving from birth to age four: Index_pop0-4_{ij} = [(population of zero to four-year-old boys – population of zero to four-year-old girls) / (population of zero to four-year-old boys + population of zero to four-year-old girls)] – [(104-100) / (104+100)]*100.

The index for children surviving from age five to age nine: Index_pop5-9_{ij} = [(population of five- to nine-year-old boys – population of five- to nine-year-old girls) / (population of five- to nine-year-old boys + population of five- to nine-year-old girls)] – [(104-100) / (104+100)]*100. The natural sex ratios (from birth to age 4 and from age 5 to age 9) are considered 104 to 100 in favor of boys. This is based on the calculated sex ratio for all the countries in this study (with the exception of China and India which are outliers) over the three periods considered in this study. Interestingly both age groups have the average sex ratio of 104 to 100. Also, the average sex ratio of 104 to 100 does not change over time. Hence, in calculating the sex ratio indexes, any deviation from the above ratio (104 to 100 in favor of boys) is considered either patriarchy or matriarchy. The source for the population numbers is the World Bank data bank.

The index for age of marriage: Index_MAGE_{ij} = [(male mean age at first marriage –female mean age at first marriage)/ (male mean age at first marriage + female mean age at first marriage)] *100. The sources for the numbers are the World Bank data bank and UN World Women Reports for 1995, 2000 and 2010.

The index for labor force participation: Index_LFP_{ij} = [(male labor force as a percentage of total labor force – female labor force as a percentage of total labor force) / (male labor force as a percentage of total labor force + female labor force as a percentage of total labor force)]*100. The sources for the numbers are the World Bank Development data bank and the World Bank 2001, 2002 CD-ROMs.

The index for proportion of seats held in national parliament: Index_Parlim_{ij} = [(proportion of seats held by men – proportion of seats held by women) / (proportion of seats held by men + proportion of seats held by women)]* 100. The sources for the numbers are the World Bank data bank and UN World Women Report 1995, 2000 and 2010.

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Chapter 4. Invisible Work of the Invisible Half: Women and 'Work' in the Middle East and North Africa

Abstract

In this paper, I argue that although the Middle East and North Africa (MENA) has the lowest female labor force participation (FLFP) in the world, women in fact contribute substantially to the economic wellbeing of their families and the region as a whole. An in-depth survey of literature in different fields of the social sciences on women's participation in the informal sector and unpaid work in MENA reveals that women in fact participate in a variety of economic activities such as unpaid family work, self employment and entrepreneurship. I argue that although working in the informal sector pays significantly less and has no job protection compared to the formal sector, many women have to choose working in the informal sector (or work without pay) because they live in deep-rooted patriarchal societies. Two important aspects of patriarchy in MENA play major roles in this regard: first, the rigid separation between public spheres (which are the domain of men) and the private sphere; second, the ideal model of male breadwinner/female homemaker-caregiver. Based on a thorough investigation of the existing literature on women and work in MENA, I conclude that patriarchal beliefs and practices tend to devalue the contribution of women to the economic wellbeing of their families which consequently makes women's work invisible from labor statistics. I also argue that in MENA, patriarchy no longer holds up its end of the bargain: protecting women financially in return for their submissiveness and separation from public spheres.

4.1. Introduction

According to official labor statistics, the Middle East and North Africa (MENA) has the lowest rate of FLFP in the world (UNDP 2009; World Bank 2011; ILO 2012; OECD 2012), which

implies that the women of MENA are not participating in economic activities in large numbers. Although in other regions of the developing world FLFP is increasing, MENA countries appear to be insulated from this global trend (Ikkaracan 2012). Even studies conducted four decades ago had indicated that MENA countries had lower FLFP rates than other developing regions, even when compared to other Muslim countries (Youssef 1971). Economic development does not appear to have had much effect on FLFP in MENA (Youssef 1971).

The above statement should be qualified, however, since in the social science literature, it is well established that women's productive activities are not accurately measured in labor force statistics (Donahoe 1999; Langsten and Salem 2008). When discussing women's economic activities in MENA in particular, researchers systematically argue that a large portion of 'women's work' in this region is: *"invisible"* (Ferchiou 1998; Esim 2000; Rostami Povey 2005; Langsten and Salem 2008), "*unaccounted"* (Etemad Moghadam 2009), "*overlooked"* (Donahoe 1999; Moghadam 2003; Bahramitash and Kazemipour 2011), "*unnoticed"* (Butler 1998), "*not considered"* (Etemad Moghadam 2009), "*unmeasured"* (Etemad Moghadam 2009), "*underreported"* (Moghadam 2003; Langsten and Salem 2008), "*undercounted"* (Butler 1998; Moghadam 2003; Etemad Moghadam 2009; Etemad Moghadam 2011), "*underestimated"* (Moghadam 2003; Butler 1998; Etemad Moghadam 2009), "*unacknowledged"* (Singerman 1998), "*unrecognized"* (Jennings 1998; (Butler 1998;Alaedini and Razavi 2005; Etemad Moghadam 2011), "*not recorded"* (Larsen 1998), "*hidden"* (Etemad Moghadam 2011), "*ignored"* (Rostami Povey 2005); Ferchiou 1998), and "*disguised"* (Cinar 1994). The underestimation of women's economic activities appears to be more severe in the case of MENA.

The main objective of this paper is to make visible the hidden work of women and to recognize women's unmeasured contributions to the wellbeing of their family. In doing so, the paper will provide explanations as to why women's work in MENA is unaccounted for and invisible.

It is vital that four key points be made clear. First, this paper does not argue that women in MENA are not participating in the formal labor force. It merely refers to statistics which indicate women in MENA are not participating in the labor force in numbers comparable with other developing regions. Second, countries in this region are not homogeneous. Some have higher than rates of participation than the regional average and some have lower. However, according to the literature, the region's average is lower than all other developing regions and it is not increasing as it is in other regions. Third, the women of MENA are not at all homogeneous. They differ in class, household income, education and even faith. Yet it appears that they experience similar challenges regarding occupation and employment. Fourth, due to the lack of studies on women and work in this region, this paper does not limit itself to the latest studies only. In the case of some countries, studies only exist for the 1990s, however, since they provide vital information on women and work in MENA, they are as important as the recent studies.

It should be noted that the literature often does not make clear the distinction between unpaid work producing goods and unpaid work producing services. The goods produced by women are usually either sold in the informal market or consumed in the family. The unpaid work producing goods is, in theory, covered by the International Labor Organization's concepts of 'own account workers' or 'contributing family workers'. Thus, the unpaid work producing goods is in principal accepted to be included in the definition of gross national product and is

accepted to be an economic activity as 'informal' work. However, labor force surveys usually do not capture this type of work adequately, because in popular imagination it is not considered work. The second type of unpaid work (producing services) which is mainly consumed within the family is not in principal included in gross national product and it is often not defined as production or work by statisticians. As will be discussed, literature does not make the distinction clear between the two types of unpaid work, mainly because women often perform these tasks simultaneously, making the differentiation difficult. In MENA, both types of unpaid work performed by women (producing goods and services for sale or use within family) are not usually considered as economic activity.

The topic of women and work in MENA is severely understudied. This has been mainly blamed on the social norms and culture of the region as well as the lack of suitable data on women and work in MENA (Lobban 1998; Moghadam 2003; Alaedini and Razavi 2005; World Bank 2011). Researchers have stressed that the topic is complex and multidisciplinary (Lobban 1998); Rostami Povey 2005). However, in recent years more attention has been paid to the ways women contribute to the economic wellbeing of their families in the region. Some scholars, mainly anthropologists and sociologists, have paid particular attention to the different forms of economic activities carried out by women in MENA countries and the shortcomings of labor statistics for the MENA region. In this study, I employ research that is focused on MENA as a whole, as well as research that is country-specific. The majority of the country specific studies are focused on Egypt, Turkey and Iran, however, they provide an in-depth look at women's economic contributions in the region in general.

Building on an extensive literature review, we argue that large portions of women's work in MENA are in fact hidden and unrecognized, because many of these activities are carried out in

the informal sector of the economy as opposed to the formal sector. Furthermore, many income generating activities (and cost reducing activities) are carried out by women in their homes as part of their daily responsibilities and are therefore not considered economic activity by official statistics. We argue that the major reason why the women of MENA have to work in the informal sector or have to work as unpaid workers, which hides their participation from labor statistics, is the deep rooted institution of patriarchy in the region. Patriarchal beliefs, practices, laws and regulations in MENA limit women to the private sphere and define them mainly as caregivers and homemakers. Hence, in order to improve the lives of their families, women must work in the informal sector. They need to be creative in finding ways to earn income while observing all the limitations imposed on them by their society's patriarchal ideology, patriarchal laws and patriarchal governments.

4.1.1 Lack of Data and Studies on Women and Work

It has long been a challenge for scholars to study women and work in countries located in this region. This is partly due to the lack of reliable data on women and work in the region (Lobban 1998; Bahramitash and Kazemipour 2011) and partly due to cultural restrictions (Alaedini and Razavi 2005; World Bank 2011). Hence the topic of women and work in this region has not been investigated as much as it has been in other developing regions. For instance, Bahramitash (2013) indicates "[a] challenge for analyzing data for MENA countries is that gender analysis is relatively new or, in some contexts, completely overlooked all together" (57). Furthermore, in some MENA countries it is prohibited by law to conduct comprehensive studies on women. For example, it is prohibited in Iran to investigate gender-based wage differences (Alaedini and Razavi 2005).

4.1.2. Lack of Studies on the Informal Sector

It has been argued that the informal sector, and in particular the urban informal sector, has been understudied (Moghadam 2002; Etemad Moghadam 2009) or simply overlooked by researchers in this region (Cinar 1994). Bahramitash and Kazemipour (2011) argue that "[o]fficial data tend to overlook the informal sector, particularly street venders and home-based enterprise. … The informal sector… remains far less researched than the formal sector. The lack of data is a problem throughout the world, and it is particularly a problem in the Middle East and North Africa" (226). While the informal sector constitutes about 65 percent of Iran's GDP and it is a large sector of the economy, "there has been little research on it, and what has been written has not paid attention to the role of women" (Bahramitash and Kazemipour 2011, 227).

4.2. What Is Work?

Since the resolution adapted by the International Labor Organization in 1982, work has been defined as activities that produce goods and services that contribute to national wealth and economic growth (Langsten and Salem 2008). Although it includes all production for the market or for own consumption, the ILO consistently excludes unpaid domestic work (Langsten and Salem 2008). A more inclusive definition of work is necessary in order to "reveal women's hidden economic activities" and to "recognize the extent of their contributions to family wellbeing" (Donahoe 1999). Since statistics are based on a limited definition of work, they imply, for example, that the women of Egypt are at leisure (Donahoe 1999). The women of Egypt, however work like women work anywhere else, yet women's work in these countries is "grossly underestimated by the dominant conceptualization and measurement of work" (Donahoe 1999, 544). Measures such as labor force participation or economic activity are not an appropriate measure of women's work and are not a proper measure of women's economic

contribution. As Beneria (1982) and Waring (1988) argue, because domestic work have use value rather than exchange value, they are almost always ignored as economic activity.

> Much of what women perform in the urban informal sector or household is not recognized as contribution to the national income or development but is rather perceived to be a private service to the family. Women's agriculture work also has tended to be underreported in national accounts. This nonrecongnition lies not only with statisticians and policymakers but also with ordinary men and women (Moghadam 2003, 44-45).

Because women often work from their homes, sell their product to their community, and do so while performing their housework, their economic contributions are not recognized as work. In general women themselves do not categorize themselves as workers. When asked, women identify themselves as home-makers and mothers not workers (such as Walters (1998) study of women working in the informal sector in Yemen).

Many women are not only involved in cash income generating activities, "the majority of women contribute to the family economy in a cash-conserving manner by providing goods and services that otherwise would have to be purchased on the market, a substantial proportion of women directly increase their family's cash income" (Donahoe 1999, 555). The unpaid work of women in the forms of subsistence production, unpaid work in family farms and businesses, caring for children, elderly and sick members of families, food preparation, cooking and cleaning, contribute tremendously to the well being of families (Larson 1998). According to Larson (1998), such activities are a vital part of the informal economy and should be monitored and measured. It should also be noted that "[e]xchange (surplus) production is typically more highly valued everywhere than subsistence production" because it creates network, prestige and power (Chafetz 1984, 13). Recognizing the value of subsistence production is important since

women often are associated with subsistence production and men with exchange production. Chafetz (1984) indicates also that "[i]f one sex does work that the other could readily do, usually because of low skill-level involved, then regardless of the inherent importance of the task(s) for the group, little value tends to be attached to the work" (Chafetz 1984, 13). Since the production work that women do in the home or in the farm can be done by men, women are replaceable workers and their work has little value (Chafetz 1984).

In considering what constitutes work, it is often the sex of the laborer not the activity itself. For instance, according to Larson's study (1998) in rural areas of Egypt, male tailors are considered full time workers, while women tailoring for their families, relatives and neighbors are not. Similarly, according to Ferchiou (1998), although women are intensely involved in the process of commercial production in rural areas of Tunisia, their work is not considered productive work. Ferchiou (1998) argues that in the process of production, it is the sex of the worker that defines the work as productive. If it is done by women, it is simply part of women's domestic work.

> [W]hen women take the place of men on the farm, their work is depreciated and considered transitory…When men are present on the farm, women become family helpers or are simply considered inactive. Once assimilated into the domestic tasks for which they are 'naturally' responsible, their work again becomes 'invisible' (Ferchiou 1998, 193).

4.3. Informal Sector/Informal Economy/Informal Labor

The informal economy includes "all income-earning activities that are not regulated by the state in social environments" (Portes and Haller 2005, 404). Put another way, the informal economy refers to "'unregulated' and 'unorganized' economic activities that take place outside the

framework of corporate public and private sector establishments" (Etemad Moghadam 2011). According to Khan and Khan (2009), informal employment includes "all remuneration work, both self-employment and wage-employment, that is not recognized, regulated, or protected by existing legal or regulatory framework and non-remunerative work undertaken in an income-producing enterprise" (68). Most informal workers including both self-employed and wage-workers are "deprived of secure work, workers' benefits, social protection, and representation or voice" (Khan and Khan 2009, 68). Informal laborers participate in economic activities but are not accounted for in official statistics as laborers (Etemad Moghadam 2009). Furthermore, unpaid productive activities such as subsistence production, family farm work, unpaid domestic work, as well as self-employment, seasonal work and any other form of informal income generating activities such as running small scale workshops and micro-entrepreneurship are all defined as work in the informal sector (Rostami Povey 2005).

The underlying assumption about the the informal economy in general is that workers in the informal sector are unable to enter the formal economy, that they have less formal education relative to workers in the formal sector and are generally unskilled. Therefore, labor productivity and income are much lower in the informal sector compared with the formal sector (Todaro and Smith 2012). Workers in the informal sector lack access to financial capital, job security, old age pensions or decent working conditions (Todaro and Smith 2012). According to Todaro and Smith (2012) "[m]any workers entering this sector are recent migrants from rural areas unable to find employment in the formal sector. Their motivation is often to obtain sufficient income for survival, relying on their own indigenous resources to create work" (Todaro and Smith 2012, 329).

4.4. Informal Sector in MENA

Working conditions in the informal sector are often very poor with little variation from country to country across MENA. For example, referring to the informal sector in Egypt, Moghadam (1998) describes it as a sector with "the absence of social insurance, long work weeks of fifty hours or more, the absence of minimal sanitary and safety regulations and the frequent use of child labor" (105). Women in the informal sector face constraints such as "restricted access to factor and product market, and lack of social security, retirement or employment insurance" (Esim 2000, 142)

In the informal sector in Iran, male and female workers often work in private firms, are paid below the national minimum wage and do not receive paid holidays and sickness benefits because they are not registered workers (Rostami Povey 2005). According to Rostami Povey (2005), many of these small private firms prefer employing women, because women can be hired and fired easily. For many women with children, working under such conditions is the only way to earn income. Women with children are particularly at the mercy of these employers because they often have to arrive late, leave early or miss work due to the severe shortage of affordable day cares and nursery schools (Rostami Povey 2005).

In general, home-based employment and self-employment appear to provide better working conditions while wage laborers, especially street venders, are among the worst paid (Bahramitash and Kazemipour 2011).

4.4.1. What Women Do in the Informal Sector in MENA?

In general, most economically active women in developing countries work in the informal sector (Esim 2000; Khan and Khan 2009). The informal employment however, is highly heterogeneous in rural as well as urban areas.

4.4.1.1. Rural informal sector

In rural areas, women are active in agricultural and nonagricultural production. For example, half of rural women in Iran work in different forms of family based production (Alaedini and Razavi 2005). Rural women provide significant cash income for their families as farmers, producers of handicrafts as well as wage laborers, yet "their work is largely unaccounted and invisible" (Etemad Moghadam 2009, 86). More than 90 percent of female workers in Iran's textile sector in rural areas are carpet weavers who are mostly unpaid family workers (Karimi 2011). Most often the products of women's labor in rural areas are sold by the men of the family in the market and women are unrewarded for their work. Although women's unpaid work has always contributed to the household, local and national economy, women's work in rural areas of Iran are unacknowledged and ignored by statistics (Rostami Povey 2005). In Iran many production activities are performed within the home, such as traditional carpet and kilim weaving and food processing. There are also sub-contracted and piecemealed home-working activities in clothing, packaging, assembly, and light manufacturing (Etemad Moghadam 2009), however, these activities are often ignored by official surveys, since they are not performed in factories or workshops.

Similarly in Egypt, most women in rural areas are engaged in income-producing activities, however their productive work is considered "as part of their household duties" (Larson 1998, 150). Rural women work on the family farm or work in their family business.

They also raise poultry and livestock and process dairy products for sale. Often they engage in the local market to sell their product. They make crafts and sew clothes for their families and their relatives and neighbours (Larson 1998). According to Larson (1998), participation in the informal economy is particularly important for rural women in Egypt because not only are the majority of them uneducated or unskilled, but also because most of them have no access to capital. Furthermore, "[a]cceptance of careers for women, particularly in rural areas, is not yet part of the local culture, nor are there many opportunities" (Larson 1998, 159).

According to Ferchiou's study (1998) in rural Tunisia, women are intensely involved in different forms of production. However, women are considered only as family helpers, because women live under the roof of the head of the household who is the owner of the house, the farm and the business. Women work for the head of the household at no charge and they are not considered as farmers no matter how many hours they spend farming. Women's work simply is not considered as productive work. Similarly, in rural areas of Turkey, women are mainly concentrated in agriculture and unpaid works (Kumbetoglu, User and Akpinar 2010), and also, more than one-third of unpaid family workers in rural agriculture in Turkey are women (Ikkaracan 2012).

A large body of micro-case studies on rural women in Iran (for the years between 1966 to 1996) point at "rural female labor force participation rates of about 40% to 50% of total active labor in combined agriculture and animal husbandry, processing and preservation activities and handicraft" which is in sharp contrast to the same period's census data of about 10% of total active labor in agriculture (Etemad Moghadam 2009, 85). Micro studies suggest that on average women work for production for 9.4 hours per day in rural areas in Iran which a large share of it is unpaid family labor (Etemad Moghadam 2009). Although Iran has the largest informal

economy in the region, there is little information on Iran's informal sector and there is even less information on women in the informal sector in Iran (Bahramitash 2013).

4.4.1.2. Urban informal sector

"[T]here is a dearth of literature on the urban informal sector in general and the position of women in particular" (Bahramitash 2013, 64). This is mainly because of the sexual segregation in the region and also because most of the work done by women takes place at home (Bahramitash 2013). Hence the urban informal sector has been neglected by researchers and data collecting agencies. According to Bahramitash's study (2013), the share of self employed women in the informal sector among employed women is increasing in Iran particularly in the last decade. Similarly, according to Etemad Moghadam (2011), there exists a large, diverse and growing informal economy in Iran which consists of about 47 percent of the total labor force. Based on her research, there is a substantial presence of women in the informal economy (Etemad Moghadam 2009).

It is well established in the literature that the informal sector "functions as a survival mechanism that articulates and serves the economic interests of poor and low-income merchants and consumers" (Lobban 1998, 4). MENA countries are no exception. Many researchers (such as Hopkins 1991 and Larson 1998 in the case of Egypt, Cinar (1994) in the case of Turkey, and (Bahramitash 2013) in the case of Iran) indicated that women enter into the informal sector for their family's survival or simply to escape poverty. It is much less a choice than a necessity.

There is, however, a major difference between women's work in the informal sector in MENA and other developing countries. Some scholars (such as Etemad Moghadam 2011) argue that the underlying assumption that women work in the informal sector because they are unable to work in the formal sector does not apply to many women in urban areas in MENA. There

exists a large number of white-collar informal female workers in Iran (Etemad Moghadam 2009) and a large number of women from high income households in the informal sector in Egypt (Elgeziri 2010). Therefore, "in addition to the urban poor, there exists a large section of educated middle and upper-class women who are a part of the informal economy, produce perfectly legitimate goods and services, and are unaccounted in official statistics" (Etemad Moghadam 2009, 84). According to Bahramitash (2013) many women in Iran prefer working as micro-entrepreneurs from their homes. Most of these women are from middle to high income households and choose to work from home in order to stay away from sexual harassment in public and avoid wearing hejab (Bahramitash 2013).

4.5. Why are Women's Economic Contributions Hidden from Statistics?

1. There are cultural biases on what counts as work (Donahoe 1999) and since the word 'work' is socially loaded, many tasks that women perform are often not consistent with normative views of what work is (Langsten and Salem 2008). Work is often predefined as "work for wage" which culturally is considered as what men do. As discussed above, what census and labor force surveys actually capture as economic activity often do not include most of what women do, such as self-employment work, seasonal work or unpaid family labor. The same work that women do inside the household without remuneration requires wages outside the household (Alaedini and Razavi 2005). Since surveys and censuses are limited to work for wage, salary or profit, what women do falls outside of this definition (Donahoe 1999). This makes the labor force surveys "ineffective in capturing home-based and subsistence production, part-time work, and other casual and intermittent activities" (Langsten and Salem 2008, 285).

2. The informality of employment "has always been a challenge for statistical measures" (ILO 2012, 1). Unpaid family labor and many part-time works are often excluded from consideration

(Langsten and Salem 2008). “Because many of the productive activities undertaken by women are unpaid, domestic in location, or informal in nature, they are inadequately captured by standard survey questions on work or labor force participation” (Donahoe 1999, 568). Hence, statistical evidence tells an incomplete story of women and work (Olmsted 2005). For instance, in her study of carpet-weavers in Iran, Karimi (2011) indicates that carpet weaving is mainly unpaid and primarily women’s work. She argues that women’s work is not considered as women’s economic contribution to the household, even when it is the primary or secondary source of income. Women are assumed to be housewives since they weave carpet alongside their domestic chores, while men are assumed to be traders because it is men who sell the carpets in the market or to other male traders. Carpet weaving women in Iran are mainly working women who are generally from poor families, who have worked as carpet weavers since a young age into their old age almost every day, and who most often are not recognized as workers (Karimi 2011). Karimi (2011) describes these women as invisible to statistics. Cinar (1994) also argues that there is much disguised employment among women in Turkey, particularly among those who work at home. “[T]here are no estimates of the number of women who take work in their homes, for this is part of disguised employment and the shadow economy. Most of this type of employment is hidden in official statistics.” (Cinar 1994, 369). Moghadam (2003) argues that women’s work (unpaid work and work in the informal sector) is systematically marginalized and women’s labor is notoriously undercounted particularly in rural areas where women are generally reported as homemakers.

3. As many scholars argue (Waring 1988; Donahoe 1999; Alaedini and Razavi 2005), the line between housework and primary production is blurred. Women have multiple roles and work in parallel as care-givers, producers and homemakers. This makes the measurement of their

productive role very difficult (Alaedini and Razavi 2005). Langsten and Salem (2008) state that since women's work is often closely integrated with their household duties, "[w]omen's productive activities are hidden behind their normative economically inactive role as housewife and mother" (286). Often women themselves do not report their productive work as economic activity or do not report themselves as workers, since they often work from home or close to home while performing domestic chores. Many women are classified as inactive in surveys since the key words in survey questions do not include what women do (Donahoe 1999). Often women's contributions are entirely dismissed, not based on the nature of the work, but because what women do is simply assumed domestic in nature.

4. The other problem in capturing women's work through statistics is the attitude of men towards women's work along with the sexual segregation present in the region, which makes it difficult for male researchers to study and conduct research on women. Data collectors are almost always male and they most often speak with the male heads of the households. The male heads of the household not only see women's work as their responsibility (and not work) and their contributions negligible, they feel ashamed revealing that women in fact contribute financially to the household's income. Not reporting women's work also has the advantage of hiding profit and income for tax evasion purposes (Butler 1998). Men in this region often deny women's contributions to the household's economic wellbeing, "and male anthropologists have often repeated such statements of ideology as if they were a fact of life" (Jennings 1998, 45). Etemad Moghadam (2009) indicates that in rural areas of Iran, men in general report their wives as home-makers regardless of women's economic contributions. On the other hand, referring to the women's unpaid work and women's participation in the informal sector, Jennings (1998) states women's work has remained hidden "since much of female life in Islamic societies has been

inaccessible to male anthropologists, they have inaccurately repeated the ideology that Muslim women are solely dependent upon their male relatives or husbands" (48). Lobban (1998) and Berry-Chikhaoui (1998) stress the necessity of having female researchers involved in collecting data on women's participation in economic activates in this region. Lobban (1998) argues that the data and the information on women and work particularly in the informal sector are not easily accessible to men, since female producers are generally out of sight.

4.6. Why Women Have to Choose to Work in the Informal Sector?

What is striking when reviewing the literature on women and work in MENA is the reference of all researchers to the institution of patriarchy. In MENA, patriarchy affects almost all aspects of women's lives and their choices. Two main features of patriarchy which affect women and work in MENA in significant ways are: 1) the ideal model of male breadwinner/female homemaker-care giver, 2) the rigid separation between public spheres and the private sphere.

4.6.1. The ideal model of male breadwinner/female homemaker-caregiver

This feature of patriarchy is not unique to MENA, however, since MENA is one of the most patriarchal regions of the world (as discussed in the last chapter), women are more restricted from income earning activities. "[A] major barrier to women's success in the formal sector is the breadwinner model: Men are the breadwinners in families and women's main responsibility is to stay home and raise children" (Bahramitash 2013, 61). This ideology which is closely related to Islamic ideology on sexual division of labor is supported by state laws in many countries in MENA such as Iran and Egypt (Bahramitash 2013). For instance, after the Islamic Revolution in Iran, many jobs were declared unsuitable for women and "the appropriateness of women's place within the family was advocated" (Alaedini and Razavi 2005, 59). The state's policy is that men

should be given priority over women in securing jobs since men are the heads of households not women (Alaedini and Razavi 2005).

According to Kandiyoti (1988), labor market segmentation created and supported by patriarchal beliefs and practices have restricted women from paid work. This is devastating particularly for poor families and female-headed households because they have to accept very low and uncertain wages (Kandiyoti 1988), which are most often available only in the informal sector. For example in Iran, since men are considered the breadwinners, they have a monopoly over the majority of occupations (Alaedini and Razavi 2005). During economic recessions, "both private and public sector employers are much more likely to hire men than women-leaving only those occupations to women that either are dealing exclusively with women, or considered to be feminine occupations such as nursing or teaching, or that offer very low wages" (Alaedini and Razavi 2005, 63). The refusal to recognize women as breadwinners in countries such as Iran put women at a disadvantaged position in the labor market (Rostami Povey 2005). In Iran, women's benefits are calculated as a single person regardless of marital status, thus receiving less than a married person's allowances and subsidies (Rostami Povey 2005). Generally, women with children do not receive child benefits and married women do not receive the married person's allowance (Rostami Povey 2005). According to Rostami Povey's (2005), "exclusion from the category of breadwinner and from benefits and subsidies left women's earnings at half to three-quarters of that of their husbands". According to Moghadam (2005), in the MENA region, women are "locked into a patriarchal family structure based on the traditional division of labor" and often "have no access to income, not to mention social benefits"; when they look for a job, they cannot find it "joining the ranks of unemployed"; those who find a job "struggle in various types of service jobs, with low wages and no benefits" mostly in the informal sector (140).

It is argued that characterizing women as care-givers frees states from the responsibility of providing many services to their citizens (Moghadam 2003), which is why the model is heavily supported by the state. “Women and men are bombarded by popular messages in the regional media that stress traditional gender roles, where it is emphasized that women’s primary roles are housewife and mother. Her employment is portrayed as unimportant to her and her family” (Haghighat-Sordellini, Women in the Middle East and North Africa: Change and Continuity 2010, 89). Similar to other countries in the region, state policy in Turkey is that mothers are the primary caregivers and children should be raised by their mothers and the state has no responsibility or legal obligation to offer childcare to working mothers (Ikkaracan 2012). According to Rostami Povey (2005) and (Poya 1999), the severe shortage of affordable state funded nursery schools is a major constraint on women’s supply of work in Iran, which is the result of the state’s ideology of female domesticity. Even if women work for pay they must provide care for their children, the old and the sick within their family (and sometimes within the extended family) (Rostami Povey 2005). Hence defining women as care-givers and mothers not only discourages women from taking part in the formal labor market, but also limits their mobility.

4.6.2. The rigid separation between public spheres and the private sphere

Another major aspect of patriarchy in MENA affecting women’s life options is spatial gender segregation. Contrary to most other regions of the world, there is a rigid separation between private and public spheres which allocates space/sphere to each sex (Sadiqi and Ennaji 2011). Public spheres which include economic, politics, military, the legal system and even ideology are the domain of men while the appropriate space for women is the private sphere. The public sphere refers mainly to production for exchange, and societal decision making while the private

sphere refers to reproduction, consumption and passivity. The separation between spaces goes hand in hand with the male breadwinner and female homemaker model. Since it limits women to the private sphere, it reinforces the domesticity of women. As argued by Sadiqi and Ennaji (2011), not only is the nature of patriarchy in MENA deeply spatial, but also the private space is associated with powerless people (women and children) and is subordinated to the public space which includes the labor market (Sadiqi and Ennaji 2011). This makes patriarchy in MENA countries different from patriarchy in most other countries (such as Latin American, Sub-Sahara African or East Asian countries).

Mernissi (1987) describes this feature of patriarchy in MENA in the context of Islamic ideology and argues that in Muslim societies the interaction of unrelated men and women is simply illicit since "there are no accepted patterns for interactions between unrelated men and women. Such interactions violate the spatial rules that are the pillars of the Muslim sexual order" (Mernissi 1987, 137). She also argues that the boundaries between public and private spaces are in place in recognition of men's power hierarchy over women. In other words, the spatial division is the division between those who have authority and power and those who do not (Mernissi 1987). "Any transgression of the boundaries is a danger to the social order because it is an attack on the acknowledged allocation of power" (Mernissi 1987, 137). Therefore, women in public spaces are simply trespassers (Mernissi 1987). The wearing of the veil or hijab by women in public places is the indication that she is passing through the domain of men. Since she has no right to be there, she must be invisible (Mernissi 1987). Women in the modern labor market are not only trespassing in the men's world, "but are also competing with their former masters, men, for the scarce available jobs" (Mernissi 1987, 146-147). Women who seek employment in the formal labor market create anxiety and aggravate tension because they are "demanding a role

traditionally reserved for men" (Mernissi 1987, 147). Women who dare to be active in public domain, generally feel safer and freer when they are covered by the hijab. Mernissi (1987) also indicates that in MENA, a women's honor and prestige, and in turn her family's honor are related to her spatial immobility and her passive role as a consumer (Mernissi 1987).

The formal employment sector in MENA countries are traditionally the domain of men since only men are made responsible to support their families (Syed 2008). In these societies, women "cannot have an economic dimension, cannot earn a salary outside their home; that is the privilege and the monopoly of the masculinity" (Syed 2008). That is why "Middle Eastern women are absent systematically from occupational and industrial sectors of employment which involve public activity and presuppose contact with males" (Youssef 1971, 427). Youssef (1974) believed that since women in Islamic societies are on most occasions prohibited from interacting with unrelated men, women cannot participate in the formal sector of employment in large numbers. Similarly, Syed (2008) argues that the institution of gender segregation in patriarchal societies which limits women to the private sphere "is a principle factor influencing female participation in formal organizations" (143). Furthermore, women's participation in the labor market is a major challenge in societies "where stepping out of the four walls and entering the male order of work may reduce a women to an object of ridicule" (Syed 2008, ,148). Hence, as Syed (2008) states "[t]he discourse of equal opportunity and endeavor to examine women's work inside or outside the family, in the formal or informal sector, or in paid or unpaid employment will be of little consequence unless local customs and sexual segregation are taken into consideration" (143).

In their study of MENA countries, some scholars such as Fernea (1988) and Lobban (1998) refer to "aggressive behavior by males in the public domain" against women. Mernissi

(1987) argues that "[w]omen in male spaces are considered both provocative and offensive" (143). According to the prevailing ideology of the region, it is women who are actually "committing an act of aggression" against men, (144). Many women prefer working in the public sector of the formal labor market rather than private sector of the formal labor market since they feel safer in larger work places (Rostami Povey 2005) and because of higher degrees of restricion on sexual harrasment in the public sector. If there is not enough demand for them in the public sector, women prefer to work from home in the informal sector. Hence, it should not be surprising that women choose to work at home, even when there are opportunities for higher paying jobs in the private sector of the formal sector. For example, Cinar's (1994) study on women and work in the informal sector in Turkey and Bahramitash's (2013) study of women in the informal sector in Iran showed that women preferred working in their homes or in small-scale family workshops where they are safe and free from male harassment. Hence, even if the immobility resulted in the women receiving much lower wages, they preferred to work from the safety of their homes. In this paper, we describe the presence of women in the public sphere (such as participating in the formal labor market) in MENA as transgression, since transgression involves crossing lines. Borrowing from Cresswell (1996), Philo (1998) argues that the transgression can be interpreted as "both the metaphorical crossing of social boundaries (norms, conventions, and expectations) and the more concrete actions, and happenings that are not in the worldly location expected of them" (Philo 1998, 52). Hence, since women who are active in the public sphere are transgressing, they deserve to be harassed by men, the rightful masters of the public domain (as argued by Mernissi 1987). That is why, culturally, sexual harassment against women is often considered the natural and logical reaction to the wrong that has been committed by women who have crossed the line. Although it is argued by scholars that the practice of

veiling is a means of enforcing male control over women in public spaces, it is an instrument of female protection from men in public places as well (Ahmed 1992; Lobban 1998). For example, Donahoe (1999) indicates that in order to be freer and safer in the public sphere, the women of Egypt have recently adapted the Islamic dress code (hijab) so they can continue to be active in the public sphere. With the sign of submissiveness on their head, women are not seen as transgressors and hence are being tolerated in the public sphere.

It should be mentioned that there exist two types of gender segregation in MENA countries. One is the labor market gender segregation where women often are employed in low-paying, low-ranking jobs; the other is the social sexual/gender segregation, where women and nonrelated men cannot be at the same place together such as in workplace. Bahramitash and Kazemipour (2011) refer to this as double segregation. Similar to many developing countries, in MENA, men are overrepresented in high-paid occupations with benefits and protection, while women are overrepresented in low-paid, temporary jobs which offer much less or no benefits (Bahramitash 2013). While the gender segregation persists, occupational segregation seems to be rising in the region, a trend that is almost unique to MENA countries (Olmsted 2005). Though both types of sexual segregation are to the disadvantage of women, Bahramitash and Kazemipour (2011) argue that the social sexual segregation may benefit some women typically in the informal sector. Women can be "engaged in activities, production, and services of goods that are exclusively female. In some ways this exclusiveness may benefit them, as they are free from male competition and sexual harassment" (Bahramitash and Kazemipour 2011, 228). Yet, in general, the double segregation has made women's economic opportunities even more limited (Bahramitash 2013).

4.6.3. Permission to work

According to Sharia/Islamic law women need to have the permission of their male kin in order to work. Although this may not be required by law in all MENA countries, it is culturally required in almost all MENA countries. As indicated by the World Bank (2011) in MENA "various laws explicitly or implicitly require the permission of the husband or the male kin for women to be hired, work, and stay employed" (14). Family laws in Iran for example, require women to obtain the permission of their husbands for employment, starting a business and travel (Alaedini and Razavi 2005). Women and girls in general need the permission of their male kin for many activities outside the private sphere, like enrolling in school. This is in line not only with the state regulation but also with Islamic ideology (Rostami Povey 2005). However, in many cases "men do give permission, mainly because women's earning are essential for the family's survival" (Rostami Povey 2005, 13).

Ikkaracan (2012) refers to several public opinion surveys in Turkey and indicates that a significant number of women who wanted to work for pay reported that their male kin "did not permit them to work at a paid job" (23). The underlying reasons for the majority of these women being denied paid work were the inappropriateness of paid work for women and women's main responsibility as caregivers (Ikkaracan 2012). Referring to the institutions of patriarchy, Mernissi (1987) argues that since the prevalent ideology is that a women's place is at home and law confirms this ideology, and also since women's access to public resources is subject to the authorization of male kin, "women are reminded whenever they get jobs that it is a privilege and not a right" (Mernissi 1987, 152).

It is true that "[t]he extent to which women are restricted in their movement in the 'public domain' clearly affects their life opportunities in the larger world" (Blumberg, A General Theory

of Gender Stratification 1984, 73), however, according to Rostami Povey (2005), class and religious observance may alter the level of restriction. Women from very poor households appear to have less difficulty obtaining the permission to work since their income is desperately needed. Also, highly educated and skilled women from upper class and high income households appear to have less restriction to work for pay outside their home.

4.6.4. Discrimination in the formal sector

Though women's expericences are vastly different across the region from country to country and between different classes and with different levels of education, it seems that in general they are being discriminated against working in the formal sector. Discriminatory policies and ideology affect the demand as well as the supply of female labor in the formal sector.

According to Blumberg (1984) "the characteristics of the female labor supply are less important than the nature of the demand for labor by those who have the power to command it" (52). Also, "labor demand is much more determinative than the attributes and aspirations of the labor supply in accounting for contemporary labor force participation" (Blumberg, A General Theory of Gender Stratification 1984, 54). When there is a reserve army of women (particularly women with less skill) who are willing to work (or need to work), women as workers become easily substitutable and dispensable (Blumberg, A General Theory of Gender Stratification 1984).

According to Poya's study (1999) in Iran, the state's ideology that defines a women's place as in the home and the labor laws and regulations which have been inspired by Islamic gender ideology have reduced the demand for female labor substantially. Similarly Ikkaracan's study (2012) in Turkey shows that "the lack of a demand-side challenge to the male-breadwinner

family resulted in the institutionalization of the gender labor division and roles as binding constraints on women's labor supply" (Ikkaracan 2012, 1).

Economic needs motivate women to start to work for pay (Olmsted 2005). High unemployment rates among men, rising poverty and economic depression play significant roles in the increase in the supply of female workers. The state's policies however, reduce both the demand for women's labor and its supply (Rostami Povey 2005). For instance, the shortage of nursery schools (especially affordable state funded nurseries) is a major constraint on women's supply of work which is in turn the result of the state's ideology of female domesticity (Rostami Povey 2005). Moreover, the employers' negative perceptions and attitudes towards working women have had negative effects not only on the demand for female labor but also on the supply of female workers in the formal sector (Alaedini and Razavi 2005). According to Rostami Povey (2005), although economic pressure forces women to enter the labor force, it is the pressure of ideology that controls the supply of their labor (12). The end result is that women simply face barriers in offering their labor and finding work.

It has been argued that in MENA countries, women's higher educational achievements have not been translated into higher levels of participation or employment in the formal sector (Alaedini and Razavi 2005). In countries such as Iran, an educated woman is "not likely to land a job outside a predetermined range of occupations" (Alaedini and Razavi 2005, 62). Not only is the unemployment rate for women higher than for men, but the rate of unemployment for educated women is often higher than that of women who are not highly educated (Alaedini and Razavi 2005).

As indicated, state ideology is reflected in labor laws which are typically to the disadvantage of female workers in the formal labor market. Olmsted (2005) argues that in MENA

> [W]omen's direct access to pension schemes is limited, since women's participation in paid employment remains low. … Pension schemes, to the degree they do exist, reinforce existing gender norms by defining women's benefits through their male relatives. …The lack of universal coverage and the structure of existing programs provide further evidence that policymakers continue to assume the existence of a functioning informal, family-based safety net…and that women do not require (not have the right to) a state-sponsored economic support system in old age, precisely because they will always be able to rely on male relatives (Olmsted 2005, 129-130).

Therefore, many women may start working for pay "because of economic need, particularly in cases where men are unable or unwilling to continue providing economic support" (Olmsted 2005, 131). Consequently, high unemployment rates among men (and women), may force women to participate in the informal sector in order to escape poverty. The discriminatory ideology and in turn discriminatory laws are the reasons why many women are at a disadvantaged position in the labor market (Alaedini and Razavi 2005). Not only do women have to settle for lower wages compared to men, they also need to have higher qualifications than men (Alaedini and Razavi 2005). Professional women "have to juggle work and family responsibilities" and often have to choose occupations that allow them to dedicate more time to family responsibilities (Alaedini and Razavi 2005, 64). In fact, studies show that "close to half of working women are employed in family-type businesses where they are not paid" (Alaedini and Razavi 2005, 64). According to Alaedini and Razavi (2005) although there are structural

obstacles for employment in the Iranian economy for both men and women, "due to the prevailing social climate, women have faced more difficult circumstances than men" (70). Similarly, women in Egypt have difficulty finding jobs especially in the public sector "partly because of cultural ideas about what work is suitable for women and partly because of overt discrimination" (Donahoe 1999).

4.6.5. Migration

Gunduz-Hosgor and Smith (2008) believe that migration from rural areas to big cities puts uneducated women in a diffcicult position since they lose their limited economic independence (which they had when working on the family farm for example) and become fulltime housewives. For these women low paid work in the urban informal economy is a way to contribute to their families' income and gain some economic independence. According to Gunduz-Hosgor and Smith (2008), migration is often the result of the globalization process. Migrant women from rural areas suffer most since they have lost their chance of schooling and aquiring skills needed for higher paying employment.The informal sector employment offers these women a way to escape economic hardship. Gunduz-Hosgor and Smith (2008) argue that because of religion and patriarchal ideologies in MENA countries, globalization does not have as strong an impact on women's employment in MENA as it has in other regions of the world. While globalization has caused massive migration from rural areas to urban areas, engaging in home-based work appears to be a solution for poor migrant women in Turkish cities (Gunduz-Hosgor and Smith 2008).

Furthermore, male migration has been offered as one of the explanations why women participate in the informal sector. "The general and persistent economic crisis of Middle Eastern societies has witnessed a massive male emigration to nations offering higher wages. The absence

of husbands and brothers working abroad has positioned or required women to excercise greater domestic and local autonomy" which has lead to their higher participaiton in the informal sector (Lobban 1998, 12).

4.6.6. Combining production and reproduction in the informal sector

Between the household work and income generating work, there is a variety of other work that is performed almost entirely by women (Donahoe 1999). These in-between activities include primary or subsistence production and many income generating activities in the informal sector, such as selling and marketing the surplus products from farming (Donahoe 1999). Not only women's work is continuous, women often work simultaneously in multiple production and reproduction activities.

For instance, in Donahoe's study (1999), about 83 percent of Egyptian women combine housework activities with other work such as subsistence production, income generating activities in the informal sector or nonfamilial employment. Interestingly, for the same period the official statistics indicate that only 14% of women in Egypt are economically active (Donahoe 1999). In the case of Turkey, Cinar (1994) and Gunduz-Hosgor and Smith (2008) indicate that women combine caring for children, subsistence production and work for pay in the informal sector, particularly while farming or working from home. It has been argued that

> [I]n situations where women are tied to their reproductive work and in the absence of formal employment opportunities, the informal sector, especially home-based work, provides flexibility and compatibility for women. The choice to work at home often is made for the flexibility of work hours and working arrangements as well as its proximity allowing women to combine paid work, domestic chores, and care work (Bahramitash 2013, 53).

On the other hand, some scholars do not have the above positive view. They would argue that "women are conditioned by prevailing gender norms to assume this triple workload" (Bahramitash 2013, 54). Women who work in the informal sector from their home (or close to home) have to carry out household activities, child care and paid work since they are immobile due to gender norms. "It is not really a choice but an imposition dictated by powerful existing patriarchal norms" (Bahramitash 2013, 54).

4.7. Double Burden/Double Day

Non-market work is economically important for the wellbeing of families, yet even when women work in the labor market, they continue to perform a disproportionate share of non-market work (Folbre 1994). This is more acute in MENA where women are defined mainly and primarily as housewives and mothers. Even when women participate in paid employment, they do not experience a similar decrease in their unpaid work load (Olmsted 2005). Hence women are not inclined to work in the labor market since it will drastically increase their working hours.

For example, according to Ikkaracan's survey in Turkey (2012), many women stated that having housework and childcare responsibilities are the main reasons they do not engage in the labor market. According to Alaedini and Razavi (2005) and Bahramitash (2013), many married women in Iran have the double role of working inside and outside of their homes. More than half of the women in Bahramitash's (2013) study stated that working for pay has not reduced their work load at home. In her study, almost half of the working women relied on their female relatives and female family members for help with their domestic responsibilities. Women who cannot afford hiring help and those who do not have access to unpaid family help, have to fulfill all their domestic responsibilities in addition to work for pay. However, it should be mentioned that class is very relevant here. Many women of the middle to upper class seem to have

'resolved' the problem of the double burden (as Olmsted 2005 describes it), by hiring women from the lower class households to take over their domestic responsibilities, while they are working for pay.

4.8. Poverty, Female Headed Households and the Informal Sector

Chen (2001) belives that there is a strong relationship between being a woman, working in the informal sector and high rates of poverty (Bahramitash 2013). Many women may start working for pay "because of economic need, particularly in cases where men are unable or unwilling to continue providing economic support" (Olmsted 2005, 131). According to Bahramitash and Kazemipour's study (2011), 23 percent of women who chose to work in the informal sector in Iran are female headed households.

The informal workers are at the highest risk for poverty and the informal economy is often "a vital lifeline for low income families to survive" (Bahramitash 2013, 46). Among the poor, those at the highest risk are unpaid family workers, seasonal or daily workers, and self-employed workers (Bahramitash 2013). Hopkins' (1991) study also indicates that the informal sector functions as a survival strategy package for many women. Most village women in Larson's study (1998) work outside their home "because they are forced by poverty, divorce, widowhood, or the absence or illness of a husband" (Larsen 1998, 156)

According to ILO (2012), the share of women in vulnerable employment[43] exceeds the corresponding share for men. Women are far more likely than men to be in vulnerable

[43] ILO (2014) defines vulnerable employment as the sum of the employment status groups of 'own account workers' and 'contributing family workers'. These workers "have a lower likelihood of having formal work arrangements, and are therefore more likely to lack elements associated with decent employment, such as adequate social security and a voice at work" (37). Vulnerable employment is often characterized by inadequate earnings, low productivity and difficult conditions of work that undermine workers' fundamental rights.

employment in North Africa (55 percent versus 32 percent) and in the Middle East (42 percent versus 27 percent) (ILO 2012).

It is often argued that widowed and single mothers are the most disadvantaged, since women are defined primarily as homemakers, and if they are employed, labor laws assume their income as supplementary (Bahramitash 2013). Female headed households are amongst the poorest households. Data on Iran shows that the number of female headed households is on the rise while the number of male headed households is falling (Bahramitash 2013). It also shows that most of these women are among the very low income category of workers. These women are most often in the categories of seasonal, temporary, domestic and piecework laborers (Bahramitash 2013). Interestingly, female breadwinners in Iran are not more employed than women who have male breadwinners (Bahramitash 2013). Female headed households in rural areas are among the poorest families and most often they have to rely on non-government charities in order to survive. Furthermore, many low income female headed households do not report themselves as such, since it will reveal to the outsiders that their kin do not provide for them as they traditionally should (Bahramitash 2011). Similarly, female headed households with drug addict husbands do not report themselves as such, so as to not embarrass their families (Bahramitash 2011). According to Bahramitash and Kazemipour (2011), street venders who have the worst working conditions and earned the least income were mostly female heads of households.

It is important to note that "[a]ccording to Shari'a law, Muslim women in need of assistance have to be looked after by umma" or the Muslim community (Bahramitash 2011, 193). "[B]ehind Shari'a law's prescription to provide for low-income female-headed households

is a patriarchal model that defines a family as composed of male breadwinner and female homemaker. In the absence of the male breadwinner, the woman becomes the responsibility of the entire Muslim community" (Bahramitash 2011, 193). However, this tradition has left many widowed and divorced women in the guardianship of men who do not pursue the interest of these women and their children but their own (Bahramitash 2011). Even though Iran's constitution, which is based on Shari'a law, stipulates that widowed women and orphans must receive pension from the state, the state support does not effectively reach all widows and orphans (Bahramitash 2011) because it is arbitrary and inefficient.

4.9. Patriarchal Bargain/Contract

In a patriarchal society, women are entitled to protection and maintenance by their male kin in exchange for their unequal access to resources and lower status (Haghighat-Sordellini, Women in the Middle East and North Africa: Change and Continuity 2010). This is rooted in the rigid division of labor within the household in patriarchal societies. Men are responsible for the financial support of their wives and children, while "the wife's main obligations are to maintain a home, care for her children, and obey her husband" (Moghadam 2003, 126). The husband is "entitled to exercise his marital authority by restraining his wife's movement and preventing her from showing herself in public" (Moghadam 2003, 126). Moghadam (1998) has referred to this arrangement as the 'patriarchal gender contract'. Similarly Kandiyoti (1988) has described it as a 'bargain with patriarchy' which is financial protection "in exchange for submissiveness and propriety" (Kandiyoti 1988, 283).

It is important to note that "[t]he patriarchal contract is realized within the family and codified by the state" (Moghadam 2003, 126-127). Moghadam (2003) and Olmsted (2005) argue that women in patriarchal societies have to rely on the patriarchal family unit for their primary

economic support. That is why states in patriarchal societies do not see themselves as obligated to improve women's welfare, at least not directly (Olmsted 2005). While states may improve some aspects of women's lives, they limit women's economic choices (Olmsted 2005). Thus, It is well understood in MENA countries that certain economic rights are for men only, and the economic needs of women, children and the elderly are to be addressed by the male within the family and not by women nor by the state (Olmsted 2005). That patriarchal bargain has been enhanced through the legal and political framework in many countries in MENA such as Turkey (Ikkaracan 2012).

4.10. Class, Education and Marital Status in the Informal Sector

Women from different classes enter into the informal sector for different reasons. Sociologists relate the informal economy to the processes of class formation and social stratification (Lobban 1998). They argue that in MENA, the lower and upper class women appear to be more involved in economic activities, while the middle class women are more secluded. The lower class female has to work in order to survive, while the upper class woman participates in the labor market since she has wider economic choices and often greater social mobility (Lobban 1998). Yet, similar to other parts of the developing world, women with less education are overrepresented in the informal sector (Bahramitash and Kazemipour 2011). Rostami Povey (2005) argues that the workers in the informal sector are part of the working class and they are "dependent upon the sale of their labor power for survival" (4). According to Bahramitash (2013) since unemployment rates among educated women are high, both educated and low-skilled women consider entering into the informal sector.

Recent studies (such as Etemad Moghadam 2011 and Bahramitash and Kazemipour 2011) suggest that there is a large informal sector in Iran which is made up of educated middle to

upper class women who do not fit the typical profile of women in the informal sector (Bahramitash 2013). This "contrasts somewhat with much of the literature on gender and the informal sector, which focuses largely on uneducated women" (Bahramitash 2013, 66). The upper and the middle class women can afford paid help, so they often hire women from lower income households to fulfill their domestic chores (Bahramitash 2013) and women from the low income household have to rely on their mothers and daughters for their domestic duties while working (Bahramitash and Kazemipour 2011). It should be noted however, that according to Etemad Moghadam's study (2011), about half of these women (middle to upper class educated women, who are white-collar workers in the informal sector), declare themselves as homemakers in surveys. Many of these women refer to social, cultural and economic factors and others refer to tax evasion as reasons for misrepresenting themselves as homemakers (Etemad Moghadam 2011).

According to Bahramitash's study (2013), most of the women working in the informal sector are married. This contradicts the assumption that married women in patriarchal societies are being financially supported by their husbands. Also in her study, Bahramitash finds that about 60 percent of older women (51 years old and over) are working in the informal sector. Again, this contradicts the assumption that women are dependent on male breadwinners and are less likely to work for pay (Bahramitash 2013) especially in old age. According to Bahramitash and Kazemipour's study (2011), most women working in the informal sector in Iran are married, widowed or divorced (the widowed women have the highest presence compared with the other groups). Moreover, about 23 percent of women are female heads of households. According to Rostami Povey's study (2005), even in the informal sector, younger women face major obstacles

caused by patriarchal beliefs. Women who worked as street venders are mostly over the age of forty and many have secondary education (Bahramitash and Kazemipour 2011).

It should be mentioned that culturally for a woman "it is a sign of status not to have to work outside the home" unless it is a prestigious job (Larson 1998, 156). Women from very high and high income households actually choose to be housewives unless they can work in high status occupations in the formal sector (Bahramitash and Kazemipour 2011). Both groups (those who work and those who are housewives) however, often have "some kind of daily domestic help" from women from lower income families (Bahramitash and Kazemipour 2011). Women in high income households who are not highly educated and do not participate in the labor market in any shape or form have in fact become merely consumers. They often have daily help for their domestic work and are fully dependent on their fathers and husbands for their financial needs. For these women, not working is a sign of prestige.

4.11. Social Safety Net

Olmsted (2005) argues that in MENA countries, family continues to provide many of the services that are usually provided by the state elsewhere in the world, since the formal safety nets in these countries are to provide support to families, not to provide women with alternatives to the patriarchal contract.

Esim's study (2000) of women in Turkey and Bahramitash and Kazemipour's study (2011) in Iran show that there is a strong solidarity among female entrepreneurs working in the informal sector. Women often have to rely on their own resources and help from their families and relatives for credit and clients (Bahramitash and Kazemipour 2011). Women use their network and connections and help those who are struggling with similar challenges such as child care and market discrimination. These women show cooperative rather than the competitive

market behavior (Esim 2000). The majority of female micro–entrepreneurs start their business with their own savings and/or borrowing from family and friends. Extended family, friends and relatives make up the social safety net for these women. In order to sell their product female entrepreneurs have to "utilize creative marketing mechanisms" because most often they do not have access to the mainstream market (Esim 2000, 147).

Social networks, community ties, and extended family networks help women with their income generating activities and micro-entrepreneurship. These networks have not only enabled women to work in the informal sector, but also the networking has empowered them and has enhanced their role in society (Bahramitash 2013). As argued by Singerman (1998) "[b]y using networks, women can partially transcend socially constructed barriers to their mobility" (274).

Rostami Povey (2005) provides a detailed study of women's NGOs in Iran which provide opportunities for some women with charity and paid work. She states that although large numbers of women contribute to the economy through their work in NGOs, their work is not reported in statistics. Many women from within the poorer communities in Iran are engaged in charity work collecting money for those in need (Rostami Povey 2005).

Bahramitash (2011) emphasizes the importance of informal organizations and family networks, particularly in low income communities, in helping female headed households. "There is indeed a great deal of solidarity among women, many of whom raise emergency and other types of funds for members of their extended family, kin, and neighborhood. The importance of social safety remains vital and undocumented" (Bahramitash 2011, 221-222). The social safety nets operate mainly "by women for women" and "this solidarity cuts across classes" (Bahramitash 2011, 222).

4.12. Conclusion

When reviewing literature on women and work in MENA, one comes to the same conclusion as Lobban (1998) who stated "[w]ithout question, women are vastly underrepresented in formal statistical surveys, and the endless labor that they perform is diminished by a patriarchal and gender-based division of labor that has placed unusual burdens upon working women" (38). When assuming what women do is their responsibility not their contribution, not only we devalue women's work, but we make their contribution to the household's welfare and the economy invisible. The above literature review indicates that the gender ideology of the region has made women's work invisible by undercounting and undervaluing their work. The same ideology has caused women to prefer participating in the informal sector rather than in the formal sector with higher pay and benefits. Non-market work is non-monetized work which is not accounted for in official data. The non-market work which is a large portion of what women do is one of the invisible contributions of women. Labor statistics in societies where women in general and their work in particular are devalued tend to be more biased and should be considered with caution. The low rate of FLFP in MENA does not mean that women in MENA are at leisure. As indicated by Lobban (1998) and Ferchiou (1998), accounting for women's labor is not only an empirical problem but also it is an ideological issue. It is the ideology of the region and in turn the laws that do not recognize women's rights to the fruits of their labor. Without considering women's unpaid work and women's participation in the informal sector, our view of women and work in MENA is distorted and misguided. Labor statistics in MENA tell an incomplete story by ignoring countless hours of women's work.

Although in MENA women are not completely isolated within the private sphere, women are integrated into the labor force very differently from men. In order to understand women's

choices in the labor market in MENA, we must pay particular attention to patriarchal gender relations which greatly influence women's options. Patriarchal institutions are in fact obstacles for women's access to financial resources and employment. Many women need to work for pay due to high unemployment rates or economic stagnation. Yet many women want to work for pay because they are educated and seek to be more empowered, or simply want to have more control over their lives. However, paid employment outside the home is still the domain of men, and women are expected to provide care and produce goods and services for their family at home. Consequently, since women face cultural and legal barriers for entering into the formal labor market and work in their desired field, they 'settle' for the informal sector. Women 'choose' to participate in the informal sector, in spite of the lower pay and lack of any kind of protection and insurance, considering their alternatives. The alternatives include living in poverty or a lifetime of financial submissiveness. Thus, working in the informal sector appears to be the answer to many women in order to bypass most of the social, cultural and legal barriers put in place by patriarchal traditions and states. Often the decision to work from home is less of a choice than a necessity. Many are simply not allowed to work outside their homes. Even when women have to work out of necessity in poor households, they are bound to patriarchal rules, which limit their working opportunities even further. Since the movement of women outside the home is often restricted, women have limited opportunities even in the informal sector. As indicated by Bahramitash (2013) most women do not prefer but are rather forced to work from their homes. "It is not really a choice but an imposition dictated by powerful existing patriarchal norms" (Bahramitash 2013, 54). Therefore in MENA, women's participation in the formal and the informal sector is not only affected by variables such as education and economic development, but also by culture, family law and labor laws which in many cases are based on patriarchal

ideology[44]. As argued by Gunduz-Hosgor and Smith (2008) "forces of economic modernization are working in a cultural environment that does not support female participation in the public domain" (115). Hence, women's participation in the informal sector should be viewed as a cultural response to cultural restrictions on women (Butler 1998).

Contrary to most developing regions, in MENA, the informal sector is not limited to poor and unskilled workers as it is generally assumed. There are many highly skilled and educated women from middle to upper class households working in this sector. As the literature shows, there is a considerable and growing informal white-collar sector in this region whose work is overlooked and unmeasured. Yet again, patriarchal ideology has been put forward as an important contributor to the growth and expansion of informal white-collar female workers in countries such as Iran.

It appears that working in the informal sector and working as an unpaid family worker might be advantageous since women can carry out their domestic duties and take care of children while working in the informal sector or work as an unpaid family worker. However, the double or triple work load puts too much pressure on women who decide to contribute financially to their family. As Bahramitash (2013) states, "women are conditioned by prevailing gender norms to assume this triple workload" (54). Although the double burden is not unique to women living in MENA, it appears that defining women as care givers and restricting women to the private sphere has exacerbated the so-called double burden of working women in MENA.

In her discussion of the breakdown of the classic patriarchy, Kaniyoti (1988) argues that many women, particularly poorer and less educated women, pay the heavy price of the

[44] While patriarchy and patriarchal laws exist in other regions as well, as has been discussed in the last chapter, patriarchy is more prevalent in the MENA region.

patriarchal bargain, "but are not able to cash in on its promised benefits" (282). While men are still keeping their entitlements to the public sphere and do not participate in the household chores, many women have to find ways to earn a living while carrying all of the responsibilities put on their shoulders by the patriarchal order. Among other scholars, Haghighat-Sordellini (2010) argues that women with lower socioeconomic status often do not have "strong kinship support and cannot rely on their male family members in case of economic need" (139). In particular, widowed and female headed households are among the most disadvantaged groups in MENA. It appears that many women – particularly poorer women – do not have the so-called economic protection of the classic patriarchy, the economic protection resulting from the so-called patriarchal bargain. Patriarchal societies not only oblige women to bear and raise children, and to provide care for all family members, but also demand that women observe all the patriarchal rules at home and at work. Women, who have to work out of necessity, need to still be very cautious not to shake the male kin's honor by working for pay. While patriarchy no longer holds up its end of the bargain particularly for the female headed households, women simply have no choice. The informal sector of the economy (mainly working from home) appears to be where these women can maneuver many of the obstacles put in their way by the patriarchal state and ideology in order to make ends meet.

However, it should be stressed that women are highly creative in accommodating economic needs within traditional societies. They even find ways to use their seclusion to their own advantage, such as doing business in places accessible only to women. Although the economic role of women is marginalized in MENA, their creativity, social networking and bonding have assisted them in challenging the patriarchal order. In their study of women and work in the informal sector in Iran, Bahramitash and Kazemipour (2011) conclude that

"[u]nderneath the veil of the hidden world of the informal sector, there is a huge and vital economic and social world where Iranian women generate an income, raise credit, take care of each other, and make ends meet" (255).

Women in MENA are engaged in a multitude of struggles and have numerous responsibilities assigned to them by law, society, and their families. Although they are subject to different forms of discrimination, they are resourceful and resilient in the face of great hardship. Though their work may not be recognized as such and may not even be reported as economic activity, their contributions to the well-being of their families and their communities should not be ignored.

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Chapter 5. Conclusion

Why is the rate of FLFP in MENA the lowest in the world? More precisely, why, when compared with other developing regions, do women in MENA not participate in the labor market in large numbers, considering the declining fertility rates and higher levels of female enrollment in all levels of schooling? This dissertation investigates the reasons behind the low rate of FLFP in MENA through three interconnected essays.

In the first essay, I develop a series of panel data models which test the effects of Islam, the culture of patriarchy and oil income exclusively on FLFP across fifty four countries over three decades. Considering the culture of patriarchy as the region's prominent characteristic, I find that belonging to the region of MENA is associated with a lower than average FLFP rate, while being a Muslim country or an oil producing country is not. These are significant results, since none of the previous studies have tested the above questions over long periods of time, for as many MENA and non-MENA countries as in this study, and have not tested the effects of each factor separately. Moreover, the first essay shows that the effect of education on FLFP is ambiguous in MENA. While basic education has a moderately positive effect on FLFP, tertiary education has no effect on FLFP. Furthermore, it appears that the fertility rate in MENA is declining somewhat independently from the rate of FLFP (perhaps due to persistent inflation and economic stagnation in recent years in MENA). Consequently, although women are more educated and have fewer children, they do not participate in the labor market as much as women do in other developing regions, most likely because of the persistence of the culture of patriarchy in the MENA region.

In the second paper, I undertake the quantification of patriarchy, which is the first index developed to measure patriarchy. Using ten proxies for patriarchy, I measure patriarchy for 59 countries over three decades. Using principal component analysis, I develop three indices for patriarchy, each of which measures a different aspect of patriarchy for each country in each decade. The technique developed in this essay not only allows us to compare the level of patriarchy in different countries or regions with regard to different aspects of patriarchy, it also allows us to compare the changes in the level of patriarchy over time. The results clearly show that MENA had and still has the highest level of patriarchy with regard to women's participation in the public sphere, and education and demography. The level of patriarchy with respect to education and demography is, however, much smaller than that with respect to participation in the public sphere. The average score for patriarchy with respect to education and demography is declining moderately over time. The study shows that oil income is associated with higher levels of patriarchy, but this is mainly with regard to women's participation in the public spheres. Islam, however, seems to be associated with higher levels of patriarchy with regard to women's participation in the public sphere, education and demography. The study indicates, however, that public sphere related patriarchy is uniquely large in MENA Muslim countries: it is not only much stronger than patriarchy in non-Muslim countries, but also stronger than that in other Muslim countries in the world.

The third essay is an examination of many studies in the fields of anthropology and sociology focusing on women and work in MENA. This comprehensive essay is a survey of studies on women's unpaid work (productive and reproductive work) as well as women's participation in the informal sector. The main finding of this essay is that the economic contribution of women in MENA is notoriously undercounted in labor statistics since many

women participate in the informal sector and work as unpaid family workers, forms of work that are undocumented. The gender ideology of the region has made women's work invisible by defining the work women do as simply part of their responsibilities. Since paid employment outside the home is the domain of men, and women are expected to provide care and produce goods and services for their families at home, women often prefer not to work for pay, and if they do, to do so from home. The study shows that women from lower income families, particularly women from female headed households, have to work in the informal sector in order to survive poverty. This shows that contrary to what the patriarchal gender contract in MENA promises women, many women, particularly poorer women, are not supported by the patriarchal bargain, and yet women are expected to observe all the patriarchal rules and regulations imposed on them. Contrary to other regions, because of the gender ideology present in MENA, many educated women prefer to work in the informal sector in white-collar occupations. The study shows that patriarchy puts women in a disadvantaged position by negatively affecting not only the demand for but also the supply of women's labor in the formal sector. Consequently, many women have to work in the informal sector with low pay and no protection where their contributions to the wellbeing of their family and society are not recorded, creating an illusion that FLFP is low or that women are simply 'at leisure'.

As discussed in all three essays, the major limitation on any study on women and work in MENA is the severe lack of data. The first essay could have been improved for instance, if there were enough data on the age of women at first marriage due to its correlation with all the variables in the model. The second paper could have been much enhanced if there were data on variables such as domestic violence, girls' suicide rates or the gender gap in managerial positions. Because of the general lack of data on women and work in the informal sector and

women's unpaid work (production and reproduction), the third paper faces a major shortcoming that it is based on studies on a few MENA countries. With more and better data, future research can enhance our understanding of how and in which ways patriarchy affects women's life options in general and women's employment in particular. Furthermore, there is a desperate need for time-use data across MENA countries. By employing time-use allocation, future research can better measure the economic contributions of women to the household and the economy of the region.

The main contribution of this thesis is to show that FLFP in MENA is low because of the patriarchal culture of the region. Although patriarchy has indeed limited women from participating in the labor market, it has also pushed women to work as unpaid family workers or to work in the informal sector where their work is not accounted for as such, causing FLFP to appear lower than it is in reality. This is a considerable finding with significant policy implications. Contrary to what economists assume, in MENA, development policies alone (higher education, lower fertility rate, higher income) are not always key factors in changing the rate of FLFP. In MENA, patriarchy is in effect the law of the land, enforced by patriarchal states and legitimized by religion. Even desperate economic need has not been able to shake the patriarchal order. Policy makers who are interested in improving women's social status in MENA should consider economic as well as non-economic factors. Women's employment in MENA is often determined by the interaction between economic, ideological and political forces.

The real enemy of women's empowerment in MENA is not Islam as many social scientists had argued. Islam can be as helpful as it has often been harmful to women's status, since it can be interpreted in many different ways. In heavily patriarchal settings such as in

MENA, Islam becomes misogynistic, simply because it is interpreted by men who possess social, political, economic and most importantly legal power over women.

It is vital that economic development policies be accompanied by appropriate changes in labor laws and family laws. Women's material circumstances in MENA are grounded in women's legal rights. Simply focusing on increasing women's education in order to improve women's status through participation in the formal labor force is not sufficient. The fact that girls enroll in large numbers in tertiary schools in MENA is not mainly to participate in the labor force. Considering their limitations in the labor market, girls across MENA pursue higher education most probably in order to increase the possibility of marrying someone with a higher income who will be able to provide for them in the future. Higher education is often a path to a financially secured life by marriage, not a path to employment, financial independence and empowerment. Hence, policy makers should take into account the different sources of oppression that limit women's life chances in MENA.

It is imperative to note again that the level of participation in the labor force is an important, but not always reliable, indicator of women's participation in economic activities. The concern should be with measuring the contribution of women to production and reproduction rather than their labor force participation. Thus, in MENA countries in particular, we should broaden our definition of work and acknowledge that non-market work, which is non-monetized work, is the invisible yet essential contribution of women to society.

It is also important to note that states in this region are very powerful. They often define and regulate gender relations in production and reproduction. With the spread of Islamism in the region, women's issues have become a battleground for male politicians seeking to demonstrate

not only their power but also their dedication to Islam. The spread of political Islam and patriarchal interpretations of Islam by men in political power will most probably reinforce male domination and create even deeper gender inequalities in MENA.

Not only are women in MENA heterogeneous, but their experiences are vastly diverse. Across the region, women react differently to different forms of oppression and gender inequalities. Furthermore, to insist only on the low rate of FLFP in MENA is to overlook many facts and to create stereotypes that women in MENA gain education, marry later, have fewer children, but do not participate in economic activities in large numbers. It is true that patriarchy has caused many women to become simply consumers, but also there are many women across MENA who do not desire to work for pay and never pursue employment. The problem with relying solely on labor statistics in MENA is not that they are inaccurate, but that they are an incomplete account of reality.

The picture of FLFP in MENA is not a puzzle if one uses a holistic approach and looks deep and hard beyond numbers and statistics. With a multidisciplinary approach, one can see that the puzzle is in fact a picture of numerous hard working women, working at home, on the farm, in the family workshop, on the streets, and in factories, universities and hospitals. It is a picture showing a fifty-year-old woman selling matches on the street late at night to send her children to university. It is a female master's student in design, conducting a fashion show in her home basement. Women are resourceful and against all odds find ways to survive, even if their resourcefulness is not recognized by labor statistics or their efforts are not documented as work.