## Female Labor Supply in Egypt, Tunisia and Jordan

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#### 1. Introduction

Economic development and women's opportunities are intrinsically linked. While most measures of economic development fail to fully account for women's contribution through domestic work, limitations on women's ability to contribute through work outside the home slows economic development. If women are not able to go to school or to work outside the home because of cultural, legal or other institutional barriers, then a country will not be using all of its resources effectively. In the Middle East, this is a particular problem because women's labor force participation rates are the lowest in the world.

Although the region still lags behind the rest of the world in women's labor force participation, the region has made substantial improvements in closing the gender gaps in literacy and educational attainment. For example, in 1986 in Egypt the youth literacy rate was seventeen percent higher for boys compared to girls, but by 2010, this gap had shrunk to seven percent. Additionally, women have been increasing their educational attainment at a much faster rate than men in the Middle East. In many countries in the region women now have higher schooling rates than men (especially at the tertiary level), while 25 years ago this was not the case for a single country.

As Middle Eastern women have become more educated, their willingness to seek out a career and enter the labor force has also increased. Much of the increase in labor force participation has resulted from higher levels of education. The discouraging part of this trend is that educated women have less labor force attachment today compared to a generation ago. <sup>2</sup> Women with a university degree 20 years ago were more likely to seek work than women today who finish their degree. Even more disappointing is that highly educated women are even less likely to find employment now than they were 20 years ago.

Overall, the region has a female labor force participation rate of 21 percent, but these rates vary significantly throughout the region.<sup>3</sup> Female participation rates range from a high of 52 percent in Qatar

to a low of 13 percent in Syria. While Syria has the lowest participation rates, it is not an outlier as most Middle Eastern countries outside of the Gulf have female participation rates in the teens or low 20s, and the countries with the five lowest participation rates are all found in the Middle East and North Africa. Thus, nearly all countries in the region have much lower participation rates when compared to others outside of the Middle East.

The failure of women's labor force participation rates to rise is largely due to their limited job prospects. Young women with a university degree have the highest unemployment rate among any age/education demographic group. For example, in Tunisia 30 percent of adult women with more than a secondary education are unemployed, more than double the rate for any other educational level. For women under the age of 30, more than half of university educated women are unemployed. This is due to both supply and demand factors. As education levels have risen, there has not been sufficient job creation in the economy to absorb these newly educated women. However, the 'lack of jobs' story is only partly true. Additionally, as there is a strong preference towards working in the public sector, the decline in the role of the public sector in the economy has hit young educated women worse than other groups.

The connection between female labor force participation and the delayed transitions from childhood to adulthood for youth is a strong one. The two main transitions that youth need to make are the transition from schooling to work and from dependents within their parents' households to forming their own families. In the welfare life course that dominated prevalent in the MENA region, schooling was acquired as a credential for employment in the public sector. Women acquired higher levels of schooling to both be able to work in 'acceptable' jobs in the public sector and to find better husbands. Women with higher levels of education tend to marry men with higher levels of education, and university serves as a place to meet potential partners. Thus, education for women is both an

investment for direct earnings and also investment for being able to select a partner with better job opportunities.

This paper demonstrates how the institutional features of the labor market lower women's labor force participation in the Middle East. In the next section of the paper we compare the participation rates of Middle East women with rates for women in other regions. We then focus on current rates of labor force participation in different countries in the region. Finally, we compare three cases, Jordan, Tunisia and Egypt to show how differences in labor market institutions lead to different behavior by women in the workforce. The analysis shows that the private sector wage work is still largely not an option for married women and that the role of the informal sector determines whether women stay in the labor force or drop out when they marry.

### 2. Female Labor Force Participation in the Global Context

Compared to every other region of the world, women in the Middle East are less likely to work outside the home. This is true for women of all education levels and of all ages, though there are clear differences between countries in the Middle East and between groups within countries. This section of the paper will examine the difference in female labor force participation between countries while the next section will begin to look at differences within countries.

Figure 1 shows female labor force participation rates for developing regions of the world from 1990 to 2010. These data come from the World Bank and use consistent definitions of labor force participation, from the International Labour Organisation. The data include women aged 15 and older, and data are excluded from countries such as Iraq that do not have accessible data for the entire time period.

This figure shows that women in MENA participate in the labor force at half the rate as the rest of the world. The average rate over the 21 years was less than 20 percent, while the average for the world was

48 percent. The only region whose rate is not double the Middle East is South Asia, which has a labor force participation rate of 35 percent.

Labor force participation rates for women have increased in many regions, though the world average has remained flat. In the Middle East participation rates have increased from 18 percent to 21 percent, but the pace of this growth has been slower than that of most other regions. Participation rates in sub-Saharan Africa increased from 58 percent to 63 percent and rates in Latin American rose from 40 percent to 53 percent. Not all regions improved. Participation rates in East Asia and South Asia actually decreased over this time, but for those who did improve, other regions improved more rapidly than did the Middle East.

### [Place Figure 1 here]

Despite the nature of the Middle East as an outlier, it is important to avoid oversimplifying explanations for these regional differences. Explanations for these differences that are based upon cultural factors are usually off the mark. Islam, in particular, has received the most attention. Because of Islamic theology's relegation of women to a subordinate position outside the home, some observers blame low workforce participation rates on Islam.<sup>5</sup> Despite the convenience of this explanation, Islam is not the source of the gender gap.<sup>6</sup> Outside of the Middle East, Muslims tend to have labor force patterns more similar to their regions of residence. For example in the US, Muslim women who are daughters of immigrants and who have been raised in the US have similar work patterns to other American women.<sup>7</sup> Instead, economic and institutional factors such as work opportunities for men in high wage countries and social pressure for women to stay at home with children are seen as much more salient explanations.<sup>8</sup> Cross-country studies that find significance in the role of religion also tend to find that the most important factor is education, a characteristic which, up until recently, women in

the Middle East also lagged far behind. The next section will begin to explore some of the differences between MENA countries in order to better understand the source of these low participation rates.

#### 3. Differences between Middle East countries

Despite the overall low levels of participation for the entire region, there are large differences between Middle East countries. This section offers some preliminary explanations of these differences by focusing on characteristics of countries that have similar participation rates. One way to organize the countries in the region is by relative wealth. Figure 2 shows a scatter plot of female labor force participation rates and gross national income per capita for fifteen MENA countries for 2010. This figure uses a log scale and units on the horizontal axis are in hundreds of US dollars per person. Labor force participation rates range from a high for 52 percent in Qatar and 44 percent in the United Arab Emirates to a low of 13 percent in Syria.

There are natural groupings of countries on this graph. The clearest difference between countries occurs between the Gulf and the rest of MENA. Kuwait, Qatar and UAE have female participation rates over 40 percent while the non-Gulf countries have rates less than 30 percent. While these labor force participation rates are inflated by the presence of expatriates, the labor force participation rate of nationals is still very high. For example, the World Bank data indicate a rate of 52 percent for Qatar women for all women aged 15 and over, while Qatari national statistics indicates that the rate is 31 percent for Qatari females. Although the rate for Qatari women is lower than expatriate women, the rate for Qatari women is still higher than the averages seen in other countries in the region, outside of the Gulf.

[Place Figure 2 here]

On the logarithmic scale used in figure 2, one can see the positive correlation between female labor force participation rates and average income. Among the countries not in the GCC, Yemen is an outlier largely due to being the poorest country in the region. While most countries outside of the Gulf are "Middle Income" according to the World Bank, Yemen represents the poorest country in the region. Yemen is in accord with expectations due to the historical "U-shaped" curve when plotting female labor force participation and income. <sup>11</sup> As will be shown below, the tendency for participation rates to be lowest for middle incomes individuals occurs within countries and is not just an explanation of between-country differences.

A second natural grouping includes those countries in the Mashreq plus Iran. Iran, Jordan, West Bank/Gaza and Syria all have GNI per capita between \$3000 to \$5000 and have female labor force participation rates below 20. These countries represent not only the lowest levels of female labor force participation in the region, but with the addition of Algeria, the five lowest in the world. The next natural grouping includes three North African countries including two that are featured in this paper: Tunisia, Egypt and Morocco. These countries have GNI between \$2500 and \$4500 and labor force participation rates in the 20s.

What accounts for these differences? Largely, it is the relative size of the public sector and education levels. In the Gulf, the states are wealthy enough to be able to absorb most women that want to work into the education, health and public administration sectors, and this wealth allows women to work in an acceptable environment that is often gender segregated. There is a premium for women to be able to work in culturally appropriate job and most of these jobs are found in the public sector. For example, in Qatar many female workers are employed in companies like Qtel, the public telephone utility. This allows these women to work in an environment that is not only female only, but also that is largely Qatari only. This gives them the privilege of both gender segregation and the ability to avoid issues of

expatriate workers that are often met with suspicion. In countries with small and shrinking health and education sectors, like Jordan, opportunities for educated women in culturally appropriate have been shrinking. <sup>12</sup>

Each country also has specific historical and institutional factors that affect the labor force participation rate. In Tunisia Habib Bourguiba shepherded the Code of Personal Status through the assembly when he was prime minister in 1956. This radical law gave women greater equality under the law including: enabling women to initiate divorce, changes inheritance laws to make them more favorable toward women and the abolition of polygamy. These changes also influenced the literacy and education gap as women were given the legal right to education and the right to work. Additionally, the legalization of abortion in the 1960s and limitations of family allowance benefits to only four children led Tunisia to be one of the first countries in the region to see its fertility rates decline. With the rise in women's education and the decline of fertility, there was an increase in labor force participation. However, in order to get a better sense of the determinants of labor force participation, it is useful to examine the subject using the available microdata, which is covered in the next section.

### 3. Determinants of Labor Force Participation in Tunisia, Jordan and Egypt

This section of this paper will examine three case studies—Egypt , Tunisia and Jordan—in order to understand the relationship between age, marriage, education and fertility in determining labor force participation for Arab women. In the analysis below, we will examine the role of these different factors in each individual country.

#### [Place Table 1 here]

The Egyptian and Jordanian labor market panel surveys (ELMPS and JLMPS) are unique data sets collected on behalf of the Economic Research Forum for the purpose of making consistent labor force

data available between different Arab countries. The ELMPS has been collected in four rounds (1988,1998,2006,2012) of which only the 2006 is the most recent data available for this study. The JLMPS had its first round collected in 2010 and those data are available for this study.

Table 1 describes labor force participation by age, education and marital status for Egyptian women in the 2006 ELMPS. These data show the basic pattern of labor force participation by women that is found throughout the Middle East. Three of the most important factors that determine labor force participation are age, education and marriage. There is a life-cycle effect in labor force participation as women begin with relatively low levels of labor force participation as many are still acquiring their schooling. As schooling ends, there is a large rise in participation, but this rise is transitory and begins to fall as women age. In Egypt, for unmarried women, the ages of peak labor force participation are between 30 and 34. After this time, women slowly begin to drop out of the labor force. For married women, the pattern is slightly different as they tend to keep low levels of participation throughout their 20s and into their thirties, until they slowly decrease participation in their 40s. This is particularly true of women with at least a secondary education. For women with only a basic education, their participation levels begin to decline in their late 30s.

The next important factor is education. Education levels are broken down into four categories: Illiterate, below secondary education, secondary education only and above secondary education. Education tends to increase labor force participation, but not monotonically. Women in Egypt with below a secondary education tend to participate less that illiterate women, but women with secondary or above work more. For married women and for unmarried women, the highest participation rates are found for those with above a secondary education. Unmarried women with above a secondary education have the highest participation rates, as approximately three quarters of those in their thirties participate in the labor force.

Marriage has the perhaps the most significant impact on participation rates. Women aged 25-29 who are married participate in the labor force at half of the rate that women who are not married participate. However, this effect diminishes for women in their 30s as many of those with more than a secondary education enter the workforce at this age. This is likely due to the effect of the limited number of children (more educated women have fewer children) going to school that allows educated women to then enter the workforce. Despite this increase in participation for some married women, unmarried women tend to have more labor force attachment at all education levels and ages.

The impact of marriage on labor supply is negative for all women, but it has a particularly large effect for on marriage for women in their 20s who have secondary or less education. For women aged 25-29, their labor force participation rate decreases from 56 percent when single to 20 percent when married. For those with below secondary schooling the effect is equally large. Women aged 20-24 with below secondary schooling who are single have a participation rate of 40 percent while those who are married only have a 13 percent participation rate.

Participation rates for Jordan are similar by age and marital status as those found in Egypt. Jordanian women between the ages of 20 and 24 who have never been married have a participation rate of more than 15 percent, while those who are married only have a participation rate of 5 percent. For those women aged 25-29 and 30-34, the impact of marriage on labor force participation is even greater.

Unmarried Jordanian women in their late 20s and into their 30s have a participation rate twice that of married women that same age (42 percent compared to 16 percent for 25-29 year olds). These differences are even more dramatic for those women with more schooling. While an unmarried woman with more than a secondary degree has a participation rate of 80 percent, married well educated women only have a participation rate of 40 percent. So, like the same cohort in Egypt, young Jordanian women increase their labor force participation as they get in to their later 20s and early 30s. However,

for married Jordanian women, the participation rate only increases from 5.5 percent to 17.3 percent. Thus, effect of marriage on labor force participation is to cut it in half among young women. For older women the effect is even more dramatic as participation rates decrease from 36 percent to 16 percent comparing single and married women between the ages of 36 and 45.

The Tunisian data come from the Tunisian labor force survey of 2010. This is a representative household survey collected to show basic household labor force trends on an annual basis. Like the case for Jordanian women and Egyptian women, the three most important factors determining labor force participation are age, education and marital status. Unlike the Jordanian and Egyptian cases, education in Tunisia tends to increase participation for all marriage status and age groups. Recall that for the case of Egypt, women with below a secondary education would work less than illiterate women, and this was especially the case for married women. In Tunisia, unmarried women with above secondary schooling who are between 30 and 34 years old attain participation rates that are three times those for women who are illiterate. The same is true for unmarried women aged 25-29 and 35-39. While 90 percent of single women in their 30s with advanced education are in the labor force, only 30 percent of single illiterate women in their 30s are.

For married women, the difference is even more striking. While married women have lower participation rates overall, it is much more likely that a woman will continue to be in the workforce if she is educated than if she is not. Labor force participation rates for married illiterate women range from the single digits for women in their teens to 17-19 percent for women in their 30s. For women with schooling beyond the secondary level, these rates increase from 72 percent for 25-29 year old married women to 86 percent for 35-39 year old married women. Thus for married women, being educated leads to an individual to be four times more likely to be in the work force compared to those who are illiterate.

### 4. Marriage and Labor Force Participation of Young Women

From the above description of how education, marriage and age impact labor force participation, it is clear that between 15 and 29, women undertake several critical decisions which impact their overall life course. It is during this time that the decisions about education are made. Simultaneously as the education decision, the decision about whether or not enter the formal workplace is made since choosing particular education path also influences the possibility of future employment. Finally, it is still in these years that decisions about children are made. Based upon the earlier discussion, a decision to increase education will have the effect of increasing labor force participation once a woman finishing, though decreasing participation during schooling. Additionally, the decision to have more education may delay marriage, which will also increase participation. However, many women still drop out of the labor force at marriage, and this section will examine how marriage decisions affect participation decisions in Egypt, Jordan and Tunisia.

Women in Jordan work far less than women in Egypt and Tunisia. This may largely be due to the impact of marriage on labor force participation in Jordan is more significant than it is in Egypt or Tunisia. For example, for women aged 25-29 with only a secondary education in Jordan only 6 percent are in the work force. In Egypt, this level is 13 percent (though still not high) and in Tunisia it is 20 percent. Thus, in order to understand why participation rates in countries like Jordan and Algeria are so low, it is useful to understand why so many more women drop out of the labor force at marriage, when compared to other cases (in this case, Egypt).

The Egyptian and Jordanian data sets are particularly useful as they have work history data. These panel surveys are structured in such a way that the enumerator collects a retrospective work history for each respondent. This allows the current paper to be able to describe a longitudinal work history for each respondent. This longitudinal nature of the data is particularly useful in describing transitions within an

individual's work history, which is not possible to do with standard labor market surveys, including the Tunisian labor market survey discussed earlier.

By looking at the work histories, one can see the direct effect that marriage has on the type of work one holds. In Egypt, for example, there are 2,030 married women with complete work histories. Women are then in one of four sectors of employment one year before marriage: public sector, private sector wage work, private sector non-wage work, and inactive. In general, women working in the public sector one year before marriage remain in the public sector after marriage. Fully 94 percent of women who were in the public sector before marriage stayed employed in the public sector. The rest of the balance went to becoming inactive in the labor market.

However, women in the private wage sector did not see their employment viable after marriage to the same degree. Only 56 percent of women who had been employed in the private wage sector remained there after getting married. Most of these women who changed sector went to inactivity (40 percent of the total who started in private wage work), while the others went into private nonwage work.

### [Place Figure 3 here]

Women in Jordan have fairly similar transition patterns with one important difference. For those women working in the public sector before marriage (about 40 percent of the survey), nearly all (93 percent) stayed in public sector work after they got married. The benefits and work environment of the public sector is conducive to being married for women, so there is little need to transition away from the public sector.

Another 35 percent of women were employed in the private sector as wage workers in Jordan one year before marriage. Of these women in the private sector only 59 percent of them stayed as private sector

wage workers after marriage. Nearly all of those who left the private sector after marriage went into inactivity.

The difference comes with those women who were inactive before marriage. Of the Jordanian women that were inactive before marriage 98 percent of them were still inactive at marriage. For Egyptian women, on the other hand, 44 percent of these women transitioned from a state of inactivity to one of private nonwage work. Thus, for Egypt, the informal sector allows women that were inactive before marriage to contribute to the family in a way that is not available to women in Jordan due to the relatively small number of women who work informally in Jordan. The trade off is that while 23 percent of Jordanian married women work in the private wage sector during their year of marriage, only 9 percent of Egyptian women due. Both Jordanian and Egyptian women are equally likely to leave the private wage sector upon marriage, but the size of the sector in Jordan means that more women remain there after they get married.

This pattern is seen even more distinctly in Figure 3 which shows work histories for all of the ever married women in the Egyptian sample. As women approach their marriage more and more women leave inactivity as they are leaving schooling and entering the work force. Many of those are entering the public sector (this is overwhelmingly the case for those with secondary and above schooling), but they are also entering into private wage work and private non-wage work (largely informal activities). At marriage, however, women leave private wage work and private non-wage work receives a big boost.

#### [Place Figure 4 here]

For Jordanian women, the pattern is different. While inactivity rates continue to decrease into the year of marriage for Egyptian women, Jordanian women see a spike in inactivity during the marriage year.

This is largely because of the transition from private wage work into inactivity at marriage. While Egyptian women also transition between private wage work to inactivity, they also transition to private

nonwage work and the relative size of the Jordanian private wage sector means that this transition at marriage has a much larger quantitative impact on the averages for all women. Thus, the key difference in understanding married women's lower participation rates in Jordan is that women transition into inactivity while in Egypt, they are more likely to transition into the informal sector.

In Tunisia, despite the relatively high level of participation compared to other countries, it is still lower than what one might predict given its high education levels and low fertility rates. The reasons for these low participation levels include explanations about high levels of non-wage income (for example, from remittances from Europe) to those that depend upon cultural explanations. According to cultural explanations, Islam plays a role in stifling women's ability to work outside the home, especially in a work environment that is not sex segregated.

This paper explores a slightly different interpretation. Because of the sharp decrease in labor force participation immediately following marriage, Fargues argues that "...society allows women to work in the public space, but husbands do not." <sup>16</sup> We will attempt to test this idea versus a competing hypothesis, which is simply that women drop out of the workforce when they become married due to time constraints. Specifically, it is a matter of specialization within the household and that husbands focus on earning income outside of the home and wives focus on household production. The key variables here will be the relative impact of a husband's education and the structure of the household on female labor force participation.

## [Place Table 2 here]

Table 2 shows how the husband's education level is related to the wife's labor force participation. In this table, the values across the column are given by the husband's education level and values for the rows are the wife's education level. Women who are illiterate and whose husbands are illiterate have a 12.6 percent labor force participation rate. Illiterate women who are married to men with less than

secondary degrees work more than those whose husbands are illiterate. However, this is the exception to following overall trend: for women with less than secondary schooling, the more education the husband has, the less likely the wife is to work.

There are two possible explanations for this trend. First, when the husband has more schooling, the husband is better able to provide for his family and there is less need for the wife to work. Additionally, a husband with more education is more likely to have a good job that will allow them to avoid the shame of a wife working in a culturally inappropriate job. Since the wife has only a low level of education, available jobs are not likely to be deemed appropriate. The second explanation is that the more educated the husband is relative to the wife, the less power the wife has in the household decision-making, including whether or not she will work, and thus the wife stays at home due to her lack of power.

We can get a better insight as to the relative power of these two explanations when examining those women with at least a secondary degree. For both those with a secondary degree and those with more than a secondary degree, the more education the husband has, then more likely the wife is to work. Since the first explanation above (concerning the pull of the labor market for wives of low-education husbands), would still hold here, it definitely seems as if this is evidence against the second explanation. In households where education levels are roughly equal (both with at least a secondary education), there is little difference between a husband with a secondary and a husband with more schooling. However, the pattern clearly holds that the more educated the husband is (so long as the wife has a secondary degree) that the more likely the wife is to work. When considering wives with post-secondary schooling since nearly half work in the government, there is no stigma to a wife working in these culturally appropriate jobs.

#### 5. Conclusion

Women in the Middle East work less than women in any other part of the world. This is largely due to institutional factors that include cultural attitudes about what constitutes appropriate work for women and attitudes about mixed-sex workplaces. The critical elements in affecting the ability of women to work take place during their youth when decisions about education, marriage and family formation are made.

Women in Jordan, West Bank/Gaza, Syria and Algeria work far less than women in Egypt, Morocco and Tunisia. By using micro data from Egypt, Jordan and Tunisia, we are better able to understand the underlying causes of these differences that are seen in country-wide averages. An important factor in this story is what happens at marriage. In Jordan, the impact of marriage on labor force participation is much more significant than it is in Egypt and Tunisia. Our analysis in this paper has allowed us to examine the possible institutional factors that explain the difference in the impact of marriage between countries.

The differences between private sector and the public sector are fundamental to understanding what happens at marriage. In Jordan, nearly 40 percent of women are employed in the private sector for wages a year before they marry. After marriage, only 20 percent work in the private wage sector. Because the Egyptian private wage sector is smaller, women do not move from private wage work to inactivity. Instead, they move from private wage work to private non-wage work, either working informally or as an unpaid family member. In both countries, women tend to keep their jobs after marriage much more frequently when they work for the public sector.

However, with the shrinking relative importance of the public sector and the skills mismatch between what is being taught at the university level and the skills that are sought by private sector employers, the return to the investment in education is diminished.<sup>17</sup> However, the lack of jobs for the current generation of young men means delayed marriage and a larger percentage of women that stay in school

beyond their bachelor's level, only to find that there are relatively few suitable matches in terms of both employment and education level. If, through tradition, women are more likely to marry men older than them and at least as well educated as they are, the rapid rise of female schooling in the region means that more educated women are likely to either not marry or to marry men that are less educated than they are. This shift was most apparent in Iran due to their quickly rising and then falling birthrates has led to a mismatch between prime marriage age men and women. The result has been a fall in the age gap between men and women at first marriage.<sup>18</sup>

The public sector has an appeal to both men and women for multiple reasons. Specifically, the work days are shorter, there are better benefits in terms of pension and retirement and there is more job security. Additionally, for women, there is a host of special protections and considerations once they get married and achieve motherhood. Generous leave policies concerning maternity, special benefits to nursing mothers and additional days off of work to attend to family needs are part of the explicit package of government provided benefits to women. Private sector jobs are either not required to provide such benefits or if they do, private sector employers choose not to hire women due to the increased cost and absenteeism that is likely from hiring someone who may become a mother. The conflict between the type of jobs that young people expect and the ones that the economy can produce will continue to be a problem, even for post spring regimes.

Table 1 Labor force participation by Egyptian women by age, education and marital status

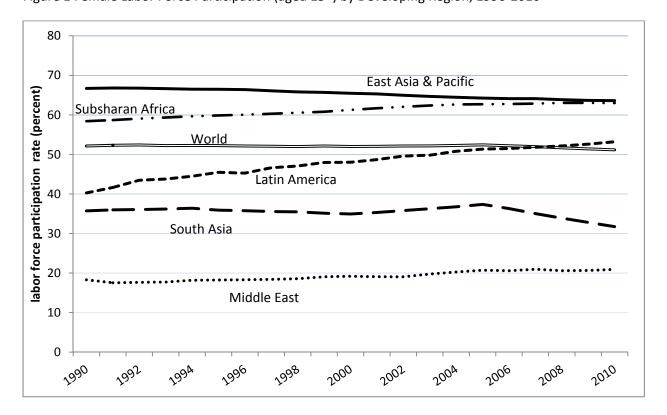
	Never Married					Ever Married				
	Illiterate	Below Sec	Secondary	Above Sec	All	Illiterate	Below Sec	Secondary	Above Sec	All
15-19	22.0	5.3	9.3	18.2	8.3	20.0	8.5	7.7	*	11.7
20-24	22.1	19.4	17.4	30.9	21.7	15.9	8.0	9.8	15.9	12.0
25-29	19.5	36.4	34.9	53.8	39.8	24.8	9.6	12.9	30.3	19.4
30-34	28.6	16.7	69.7	77.8	54.3	28.5	17.0	17.8	46.1	27.0
35-39	43.7	37.5	42.1	76.5	51.7	25.7	15.2	41.8	54.7	32.9

Table 2 Relationship between Husband's Education and Wife's Labor Force Participation, Tunisia

		Husband		
Wife's Education	Illiterate	Less than Secondary	Secondary	More than Secondary
Illiterate	12.6	14.2	11.0	9.5
Less than Secondary	15.4	13.4	10.5	7.0
Secondary	19.5	21.2	26.8	28.9
More than Secondary	*	64.2	74.6	80.4

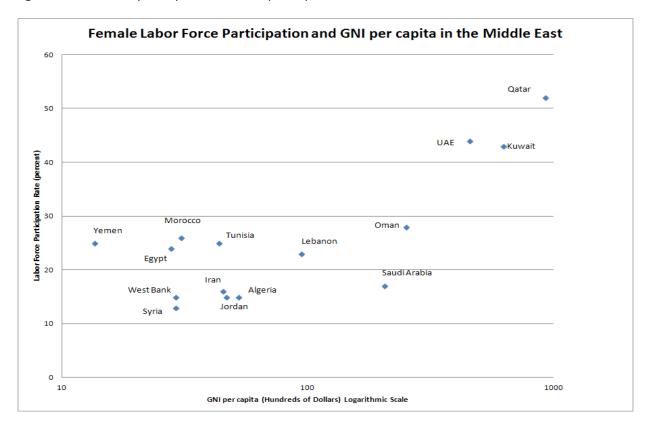
Source: Authors' calculations using Tunisian Labor Force Survey, 2010.

# Figure 1 Female Labor Force Participation (aged 15+) by Developing Region, 1990-2010



Source: World Bank Development Indicators, World Bank, http://data.worldbank.org/indicator/SL.TLF.CACT.FE.ZS/countries/1W-ZQ (accessed April 5, 2013)

Figure 2 Labor force participation and GDI per capita



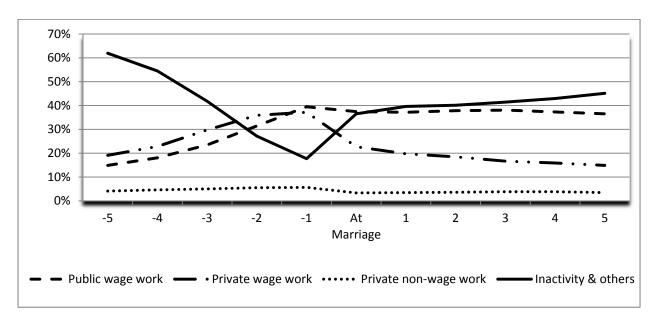
Source: World Bank Development Indicators, 2010 data. World Bank. *World Bank Data*. http://data.worldbank.org/indicator/SL.TLF.CACT.FE.ZS/countries/1W-ZQ?display=graph (accessed June 5, 2013).

Figure 3. Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Egyptian Females



Source: Authors' Calculations based upon 2008 Egyptian Labor Market Panel Survey.

Figure 4. Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Jordanian Females



Source: Authors' Calculations based upon Jordanian Labor Market Panel Survey, 2011.

#### **Notes**

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