Life Course Transitions and Female Labor Force Outcomes in Egypt

Maia Sieverding
Ph.D Student, Graduate Group in Sociology and Demography
University of California, Berkeley
2232 Piedmont Avenue
Berkeley, CA 94720-2120

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Abstract

Scholars have argued that strong life course effects contribute to the very low rate of labor force participation among women in the Middle East. Cross-sectional studies have indicated that women drop out of the labor force around the age that they marry and form families. In this paper, I use a different, longitudinal approach to examine how the transition to marriage is associated with labor force outcomes among young women in Egypt. By restricting the analysis to women who were unmarried in 1998, I am able to reduce cohort variation and analyze the transition to marriage without relying on a cross-sectional comparison of women at different points in their life course. I then use a nonparametric matching estimator to compare labor force outcomes between women who were married by 2006 and those who remained unmarried at that time.

I. Introduction

The relationship between women's work and family formation has been a long-standing area of interest and debate in demographic research on the Global South. If there is one point on which recent literature on the work-family nexus agrees, it is that causal relationships between these two aspects of women's lives are complex, multi-faceted and multi-directional. Indeed, Lloyd (1991) has pointed to the endogeneity of work and family formation as the central difficulty in modeling the relationship between women's work and fertility, and a key reason why many scholars have stayed away from the issue. In this paper, I take a longitudinal approach to questions of work and family formation in an attempt to gain a different angle on the problem of causality by looking at the sequencing of women's labor force and family transitions.

The potental fruitfulness of a longitudinal study is suggested by Liefbroer and Corijn's (1999) event-specific conception of work-family relationships. A focus on key life events – i.e. on how the transitions between different work and family statuses are interdependent – can provide a new perspective on the various pathways that lead women to different work-family outcomes. Within the Middle East, Egypt is an interesting case in which to apply a longitudinal approach to the study of work and family because of the influential role of state policy in shaping women's employment patterns and the demonstrated life course effects in women's labor force participation. Egypt is also one of the few – if not the only – countries in the Middle East where a large-scale longitudinal labor force survey exists.

Female labor force participation (LFP) rates in Egypt are low by international comparison. As of 2006, only 28 percent of women in urban areas and 26 percent in rural areas were engaged in paid work (Assaad and El Hamidi 2009, 224).[1] A number of factors have been argued to contribute to low female LFP in Egypt, including prevailing gender norms of male provider and female nurturer (Hoodfar 1997; Amin and Al-Bassusi 2004; Assaad and El Hamidi 2009), the structure of the national and regional economies (Moghadam 1998; Moghadam 2005), gender discrimination in the private sector (Moghadam 1998; Assaad and Arntz 2005), and the importance women place on finding socially appropriate jobs (Barsoum 2004; Assaad 2008). Analyses of cross-sectional data have made it clear that rural versus urban location, education, the employment status of men in the household, and a woman's stage in her life course are also important determinants of women's work (Assaad and El Hamidi 2001; El Kogali 2002; Assaad and Arntz 2005; Assaad and El Hamidi 2009).

[1] The comparable rates for urban and rural men are 77 percent and 80 percent, respectively, demonstrating a clear gender gap in employment (Assaad and El Hamidi 2009, 224)

Cross-sectional analyses have indicated that life course effects in female LFP in Egypt derive primarily from the fact that women tend to drop out of the labor force around the time that they marry and have children. The gap between married and unmarried women's LFP appears to be driven in large part by married women's much lower participation in the private sector. Fully 83 percent of ever-married women who were in the labor force in 2006 were employed in the public sector, compared to 34 percent of unmarried women (Assaad and El Hamidi 2009, 239). The predominance of government employment among women in the formal economy is the legacy of long-standing state policies that promoted women's education and employment in the public sector (MacLeod 1991; Singerman and Hoodfar 1996; Assaad and El Hamidi 2009). However, since the implementation of Egypt's Economic Reform and Structural Adjustment program in 1991, the Egyptian state has increasingly withdrawn from these policies, leading to a decline in the share of public sector employment among women, as well in as female LFP overall (Assaad and El Hamidi 2009).

These historical factors have led to considerable differences in the age structure of public versus private employment in Egypt. Whereas the modal age of urban women who were employed in the public sector in 2006 was 45, and the employment rate was fairly constant across age, the modal age in the private sector was 23 – almost exactly the median age of marriage for young women in Egypt – after which the employment rate declined steadily (El Zanaty and Way 2006; Assaad and El Hamidi 2009).[2] In sum, while women appear to be remaining in the public sector as a life-long career, their participation in the private sector workforce often ends around the age of marriage and childbearing. This is likely due to the fact that maternity leave and other policies that accommodate women's reproductive roles are much more common in the public sector (Moghadam 1998; Assaad and El Hamidi 2009). The public-private sector divide therefore provides an interesting lens through which to examine how institutional factors might mediate the relationship between work and family formation among Egyptian women.

II. Research Questions and Hypotheses

The aim of this paper is to address two questions about the relationship between labor force participation and family formation among women in Egypt: (1) How does women's labor force participation change as they transition into marriage? and (2) How do these patterns vary across women working in different sectors of the economy?

In formulating my hypotheses with regards to these questions I draw heavily on two prominent perspectives on the relationship between women's work and family formation. Arising primarily out of the historical experience of the Global North, the role incompatibility hypothesis posits that increased female labor force participation will result in marriage delay and fertility decline. According to this view, participation in the labor force is often irreconcilable with women's traditional role in the family. As a result, women's increasing participation in work outside the household, and their growing economic independence, causes them to delay marriage and childbearing, as well as to bear fewer children (Rindfuss and Brewster 1996). Role incompatibility is likely to be most influential when women's work and family roles come into greatest conflict, which occurs when women are engaged in formal, paid labor outside of the home and when there are young children in the household (Donahoe 1999).

[2] Although cohort effects certainly play a part in these trends, since private sector employment was open to an even smaller segment of the female population in the past than it is today, they are not the whole story. The age distribution of urban female workers in the public sector has made a pronounced shift to the right since 1988, reflecting the aging government workforce. The age distribution of workers in the private sector, in contrast, has remained centered over the mid-twenties. Although not conclusive, these trends suggest that the age profile of private sector workers is changing quite slowly compared to the public sector.

The role incompatibility perspective is implicit in many accounts of women's employment in Egypt that stress the pressures women face to drop out of the labor force when they marry and have children. In this longitudinal analysis, I therefore expect to find that working women who marry will be more likely to drop out of the labor force than their peers who remain unmarried. I also expect that women who are employed at a given time are less likely to have married and had children by a later time than their peers who were not employed. Conversely, I expect that women who have formed families are less likely to have worked in the past.

Yet in an important qualification, another view on women's work and family formation argues that the relationship between women's work and family is mediated by a wide variety of local factors, the effects of which may not be entirely predictable (Cynthia B. Lloyd 1991; Donahoe 1999). This view, which I call the mediating factors perspective, therefore implies more complex relationships in a longitudinal analysis of women's work and family formation. One important mediating factor is the presence of "family friendly" employment policies. In the presence of policies such as maternity leave, flexible hours, and work from home arrangements we should expect that the negative impact of family formation on female LFP that is predicted by role incompatibility will be attenuated. In the subsequent analysis, I examine the potential effects of mediating factors through the lens of the public-private sector divide in Egypt's labor market. Due to greater prevalence of family-friendly policies in the public sector, I expect that working women employed in the public sector will be more likely to marry, as well as more likely to keep their jobs after marrying, than women who work in the private sector.

III. Data and Methods

The data employed in this paper are from the Egypt Labor Market Panel Survey (ELMPS), which was carried out by the Economic Research Forum in cooperation with the Central Agency for Public Mobilization and Statistics of the Government of Egypt. The ELMPS consists of two survey waves carried out 1998 and 2006, respectively. The original 1998 survey, the Egypt Labor Market Survey, was based on a nationally representative, stratified sample of 5,000 households drawn from the same sampling frame used to conduct the Egyptian census. Egypt's two largest urban areas, Cairo and Alexandria, were deliberately oversampled in an attempt to capture more women employed in the private sector, who tend to be concentrated in major cities (Barsoum and Assaad 2000).

The second wave of the ELMPS was composed of households surveyed in 1998, households that split from the 1998 sample households, and a refresher sample of 2,500 households (Barsoum 2007).[3] Of the original households surveyed in the ELMS, 3,684 were successfully re-interviewed. An additional 2,167 households that split from the 1998 households were also interviewed, yielding a panel of 17,357 individuals (Assaad 2008). Within this panel, I restrict my analysis to urban women because the structure of labor market opportunities in rural and urban Egypt is extremely different, and as a result rural women's participation in the formal labor force is very low (Assaad and El Hamidi 2009). This restriction resulted in a sample of 5,239 women who resided in an urban area in both 1998 and 2006.

In order to focus on how the transition to marriage affects women's labor force participation, I further restrict the sample to women who were never-married in 1998 and either never-married or married in 2006. I also restrict the sample to women aged 16-30 at the time of the first survey wave in 1998.[4]

[3]Analyses by the survey implementers indicate that most of the sample attrition between 1998 and 2006 was due to the fact that a number of the original 1998 questionnaires were lost and the households therefore could not be re-located. As there was nothing systematic about the files that were lost, they assume that attrition can be considered random (Barsoum 2007). Of the 1,115 households that could not be re-interviewed, 615 were among those whose files had been lost. Remaining non-response was due to death, relocation or refusal to participate (Assaad 2008).

[4] The legal age of marriage for women in Egypt is 16. As a result, the ELMPS codes all women aged 15 and under as "below legal age" regardless of their actual marital status.

This helps to ensure that all of the women in the sample were of childbearing age throughout the eight years between the two survey waves. Furthermore, the small population of women who remain unmarried after age 30 are likely both to be quite different from their younger peers and to remain single. Restricting the sample to this age range resulted in a loss of 91 cases. Finally, five cases were eliminated due to missingness on the key dependent variable – labor force participation in 2006 – yielding a final sample of 727 women. Throughout the analysis I also assume that women have not borne children prior to marriage. This is quite plausible in Egypt, where childbearing takes place almost exclusively within marriage (Donahoe 1999), and there are strong social sanctions against extra-marital relationships.

The analysis is divided into two parts. In the first section, I present a descriptive analysis of the labor force and marital transitions that the young women in the sample underwent between 1998 and 2006. In particular, I focus on difference in labor force transitions by women's marital status in 2006 and their sector of employment in both survey years. In the second part of the analysis, I employ a non-parametric matching estimator to estimate differences in labor force outcomes between women who where unmarried and married, respectively, in 2006.

IV. Labor Force Transitions among Urban Egyptian Women

Of the 727 women aged 16-30 who were unmarried in 1998, 323 remained unmarried in 2006 while 404 had married. Among the married, all but 67 had at least one child. The average number of children at this early stage in the married women's reproductive careers was 1.35, with the vast majority of women having one or two children, although several had up to four. Although there is no way of looking at completed fertility from the data I use in this paper, by looking exclusively at women who have young children I am able to focus on the years during which the role incompatibility hypothesis predicts that women will face the greatest conflict between work and family.

Table 1 presents the mean and standard deviation for each marital status group with respect to several key demographic and socioeconomic variables. The fairly long duration between the first and second waves of the ELMPS complicates the determination of women's relevant educational attainment, particularly given the young age of the population. At the time of the 1998 survey, 347 of the women were students, but by 2006 only 29 were still in school, seven of whom were married. The variable for educational attainment in 2006 is therefore a more accurate reflection of the population's completed education.[5] However, half of the women who left school between 1998 and 2006 were also married by 2006, and it is not possible to determine from the data which event occurred first.

Due to these data constraints, a trade-off must be made between obtaining the most accurate educational attainment for the sample and introducing post-treatment bias, where "treatment" is marriage. In making this trade-off, I rely on previous studies that suggest that remaining in school after marriage is uncommon among girls in Egypt (Lloyd et al. 2003). This finding implies that the number of cases in which a woman's highest educational attainment is in fact obtained post-marriage is likely to be small. Throughout the rest of the analysis I therefore use both 1998 and 2006 data for educational attainment under the assumption that the later data is a more accurate indication of completed schooling.

As of 1998, women in both groups had, on average, completed primary level education. By 2006 the mean educational attainment of both groups was in the range of a general secondary degree. However, whereas women who remained unmarried gained a full three levels of schooling, women who were married by 2006 gained only two and a half levels. In most other respects the two groups' characteristics appeared to be quite similar, the main exception being that women who were married in 2006 had mothers who were slightly more educated and more likely to be employed full-time.

The conflict between using the most accurate data and introducing post-treatment bias re-emerges in determining the labor force participation of women in the sample. It is quite possible that women

[5] Adult education is extremely rare in Egypt. I therefore assume that school exit after the age of 16 can be treated as final, i.e. that once women leave school they do not return.

entered and then left the labor force during the eight year gap between the surveys, and again it is impossible to determine from the 1998 and 2006 data points whether this happened before or after marriage. There is, however, a partial solution to be found in one survey item that recorded the year of first entry into the labor force for all household members who had any work experience. First of all, this shows that 281 women in the sample have ever been active in the labor force,[6] or 33.7 percent of the total sample. One-hundred forty, or 50 percent, of those women were unmarried in 2006. Of the other half, 114 entered the labor force before the year they that married and the remaining 27 entered after (N=19) or during (N=8) the year that they married. The fact that the vast majority of women with labor force experience started working before they got married suggests that the information gained by considering all work experience prior to 2006 as pre-treatment outweighs the potential for introduction of post-treatment bias.

Table 2 shows that 101 women were working in 1998 (14 percent of the sample) and 203 (28 percent) in 2006. An additional 39 women entered and then exited the labor force between 1998 and 2006. This considerable increase in LFP is not surprising in light of the fact that many of the women were still in school in 1998. By 2006, the LFP of women in the sample had reached a level extremely close to that of urban women in Egypt overall (27.6 percent) (Assaad and El Hamidi 2009).

Table 3 breaks down women's labor force transitions by marital and childbearing status. Given the fairly small cell sizes, the transition probabilities given in the table must be interpreted with caution. Still, several patterns are apparent. Women who were unmarried in 2006 had a greater probability of remaining in the labor force throughout the eight year period, although the number of women who did so was small. Women were working in 1998 were twice as likely to have dropped out of the labor force if they had subsequently married than if they had not. Conversely, women who were unmarried were twice as likely to have transitioned into the labor force. These transition probabilities are displayed graphically in Figure 1.

The patterns visible in Table 3 are consistent with the argument that women are likely to drop out of the labor force when they transition into marriage, as well as with a general picture in which many ever-employed women participate in the labor force for a relatively short period of time, often before marriage. Overall, 36.5 percent of unmarried women were active in the labor force in 2006, compared to 21.0 percent of married women. But whereas marriage and childbearing do appear to affect women's likelihood of being in the labor force, the converse is not true. Women who were employed in 1998 were no less likely to have married by 2006 than were their peers who were not employed in 1998 (transition probabilities of 0.53 and 0.55, respectively).

Due to the fact that public sector employment in Egypt is generally more accommodating of women's family roles than is private sector employment, a public-private sector comparison of women's labor force transitions provides a useful means of looking at how mediating factors might affect the likelihood that women will make these transitions. Figure 2 illustrates labor force transition probabilities among women who were employed in 1998. Although married women employed in both the public and private sectors were more likely than their unmarried counterparts to have left the labor force since 1998, the drop in LFP among married women who were formerly employed in the private sector is striking. Even among unmarried women, those employed in the public sector were more likely to have remained in the labor force through 2006 than those who were employed in the private sector. The patterns evident in this figure are again consistent with Assaad and El Hamidi's (2009) claim that the younger age distribution of women employed in the private sector relative to the public sector is due to the fact that women often find private sector employment to be incompatible with their family roles, and therefore leave the labor force at a young age.

Differences in women's labor force transition probabilities by marital status and sector correspond to the distribution of women in the 2006 labor force by these factors. Figure 3(a) shows the distribution of women active in the labor force in 2006 by marital status and sector of employment. As

[6] The ELMPS codes labor force participation based on three categories; employed, unemployed, and "doesn't desire work." For this portion of the analysis, I treat only employed women with wage salaries as in the labor force.

can be seen by the width of the bars, unmarried women predominate overall. They are also considerably more likely to be employed in the private sector than are married women, although a substantial portion of them are in the public sector as well. The profile of women who entered the labor force between 1998 and 2006 is remarkably similar for both married and unmarried women, as shown in Figure 3(b). Given the relatively low level of public sector hiring during the early 2000s, the fact that so many labor force entrants still went into the public sector suggests that many women may only be willing to work in the public sector, particularly those who are married.

V. Preliminary Matching Estimates

Establishing a causal relationship between women's labor force participation and family formation is complicated by the bi-directionality of the relationship between these two aspects of women's lives. Furthermore, marriage, practically by definition, is a process of selection. There is little reason to doubt that some of the same demographic, socioeconomic and personal characteristics that lead women to marry and bear children earlier or later in their lives also affect whether or not they participate in the labor force. The standard approach to dealing with this selection problem in studies of women's employment in Egypt has been to regress female LFP on a variety of covariates that control for the structure of a woman's family (Assaad and El Hamidi 2001; Assaad and Arntz 2005).

In this paper, I take a different approach to the relationship between employment and marriage that exploits the longitudinal structure of the ELMPS dataset. My first move in this direction was to restrict my analysis to women who were unmarried in 1998, which allowed me to look at the sequencing of women's family and work transitions. In this section, I employ a Genetic Matching algorithm (Sekhon, Forthcoming) to generate a non-parametric estimate of the labor force outcomes of women who were unmarried and married in 2006. In this analysis, the algorithm matches each individual in "treatment" status – women who were unmarried in 2006 – to one or more individuals in "control" status – women who were married in 2006. I show below that matching results in better balance of socioeconomic and demographic characteristics across women in the two groups. Matching therefore allows for a greater degree of comparability across the groups, which in combination with the longitudinal structure of the ELMPS data can be exploited to gain a different view of how family transitions influence women's labor force participation in Egypt.

Using the sample of 727 women, I estimate the average treatment effect for the treated (ATT), matched separately with each control group, on three binary indicators of labor force participation, which will be explained below. Basic socioeconomic and demographic characteristics are used as covariates, the complete list of which can be seen in Table 4.[7] Preliminary balance statistics comparing covariate differences before and after matching across women who were unmarried and married in 2006 are presented in Table 4. The higher the p-value of the t-test or Kolmogorov-Smirnov (KS) test for a given covariate, the closer the means or distributions of that variable, respectively, were between the two groups. For example, the p-value for the KS test for the covariate "education in 2006" increased from 0.04 before matching to 0.99 after matching. In other words, the difference in the distribution of 2006 education across the two groups went from significant before matching to insignificant after matching. Although differences between the two groups prior to matching were not large, overall the improvement in covariate balance suggests that matching was beneficial in generating more comparable datasets from which to derive estimates of labor force outcomes across marital statuses.

Table 5 presents matching estimates and Abadie-Imbens standard errors for this preliminary matching analysis with respect to three different measures of labor force participation. The ELMPS codes

[7] The final version of this analysis will include covariates for parental education and employment status. It is also important to note that in the context of Egypt, husband's employment is also an important determinant of women's labor force participation (Assaad and El Hamidi 2001). However, in this analysis the husband's characteristics are by definition post-treatment so I leave them out of the matching algorithm.

labor force participation into three categories: employed, unemployed, and "don't desire work." The first two outcome measures in Table 5 collapse these three categories into two binary indicators, where 1 indicates the presence of the outcome. "Active labor force" codes only currently employed women as in the labor force. This measure is most relevant in terms of the role incompatibility hypothesis, which is essentially concerned with whether women do or do not work. The "broad labor force" measure, more true to technical definitions of labor force participation, codes both employed and unemployed women as in the labor force.[8] It is thus a measure of whether women do or do not *want* to work. The final outcome measure indicates whether or not the woman is employed in the public sector specifically.

As we might expect, this analysis shows that women who remained unmarried in 2006 were more likely both to work and to want to work than their peers who had married by that time. Preliminary matching estimates for both measures of overall labor force participation were highly significant. Unmarried women were somewhat less likely than their married peers to work in the public sector, but this difference was not significant. This result is somewhat unexpected, as several analyses have indicated that unmarried women are much less likely to be employed in the private sector than are married women.

VI. Conclusion

In this paper I adopted a longitudinal approach to the question of how young Egyptian women's labor force participation in different sectors of the economy changes as they transition into marriage. I restricted my analysis to young women who were unmarried in 1998, then examined their labor force outcomes in 2006, comparing across those who had married in the intervening eight years and those who had not. Descriptive analysis of this sample illustrated that women who had married by 2006 were less likely to be in the labor force than their unmarried peers, as well as less likely to have ever been in the labor force. Women who were employed in 1998 and subsequently married were also more likely to have dropped out of the labor force than their unmarried counterparts. This pattern was particularly pronounced among women who had formerly been employed in the private sector. Indeed, supporting a mediating factors perspective on women's work and family formation, this descriptive analysis concurred with the argument that public sector employment in Egypt is more conducive to women's family lives than is private sector employment.

I then employed a non-parametric matching estimator to compare labor force outcomes in 2006 across the married and unmarried groups. These results are preliminary, as the final version of the paper will include a wider set of covariates in the matching algorithm. Nevertheless, two points may be made with regards to this analysis. First, although differences in socioeconomic and demographic covariates across the two marital status groups were not large, matching did improve upon covariate balance, producing a matched dataset in which the two groups were more comparable. Second, somewhat surprisingly, the matching estimates indicated that married women were not significantly more likely to be employed in the public sector than were unmarried women. This result suggests that the decline of the public sector under Egypt's structural adjustment program may be pushing more married women into the private sector, and not just out of the labor force altogether. Given the absence of family-friendly policies in the private sector, further research about which women are taking up private employment and what this implies for their future labor force participation should be carried out.

[8] The definition of unemployment utilized in the ELMPS requires that the individual not have worked a single hour in the week prior to the survey, not been attached to a regular job, desired work, been able to start a job in the next 2 weeks if one was found, and have engaged in some type of job search activity in the past three months or been signed up for the public sector employment queue (Assaad 2008: 138).

Tables and Figures

Table 1: Mean and Standard Deviation of Socioeconomic Characteristics by Marital Status in 2006
Urban women who were unmarried, Age 16 – 30 in 1998

	Unmarried (N= 323)	Married (N=404)	Total (N=727)
Age 1998	19.88	20.30	20.11
	(3.58)	(3.15)	(3.36)
Education 1998	3.29	3.58	3.45
	(3.16)	(3.31)	(3.25)
Education 2006	6.21	6.02	6.11
	(2.20)	(2.18)	(2.19)
Father's Education	2.96	3.05	3.03
	(1.67)	(1.72)	(1.70)
Mother's Education	2.00	2.19	2.18
	(1.35)	(1.62)	(1.61)
Father Permanent Employment*	0.92	0.84	0.86
Mother Permanent Employment*	0.09	0.21	0.20
Cairo Residence*	0.39	0.42	0.4
Upper Egypt Residence*	0.15	0.16	0.16

Notes: Standard deviations are given in parentheses. * Denotes dummy variable where 1 indicates the presence of the characteristic. Standard deviations are not shown for dummy variables. Education is coded by highest level completed. 1 = Illiterate, 2 = Read and Write, 3= Primary, 4 = Preparatory, 5= Vocational Secondary, 6 = General Secondary, 7= Post-Secondary (2-year), 8 = University or above.

Table 2: Labor Force Transitions among Study Sample

In Labor Force 1998	In Labor Force 2006 No	Yes	Total
No	485	141	**626 (86%)**
Yes	39	62	**101 (14%)**
Total	**524 (72%)**	**203 (28%)**	**727 (100%)**

Note: Percent of total study sample given in parentheses.

Table 3: Labor Force Transition Probabilities by Marital Status
Urban Women who were Unmarried, Age 16 – 30 in 1998

Active in the Labor Force	Unmarried	Married
Never (no transition)	0.57	0.70
1998 and 2006 (no transition)	0.12	0.09
1998 only (transition out of LF)	0.04	0.08
2006 only (transition into LF)	0.26	0.13
Total	0.99	1.00

Note: Transition probabilities use 2006 sample weights. Not all columns sum to 1.0 due to rounding.

Table 4: Preliminary Matching Analysis Balance Statistics

Women who were unmarried in 2006 compared to women who were married in 2006

	After matching mean treatment	After matching mean control	Before matching t-stat p-value	After matching t-stat p-value	Before matching KS p-value	After matching KS p-value
Age 1998	19.768	19.734	0.11	0.46	0.00	0.99
LFP 1998	0.146	0.146	0.65	1.00	NA	NA
Edu 1998	3.229	3.198	0.35	0.47	0.17	0.99
Edu 2006	6.158	6.173	0.14	0.04	0.04	0.99
Cairo Res.*	0.276	0.276	0.92	1.00	NA	NA
Upper Egypt*	0.254	0.263	0.39	0.56	NA	NA

Notes: KS = Kolmogorov-Smirnov goodness of fit test. * Indicates a dummy variable. KS test statistics are not calculated for dummy variables.

Table 5: Preliminary Matching Estimates

Women who were unmarried in 2006 compared to women who were married in 2006

	Estimate	Abadie–Imbens Standard Error	t-statistic
Active Labor Force 2006	0.115	0.041	2.785**
Broad Labor Force 2006	0.327	0.041	7.817**
Public Sector 2006	-0.019	0.032	-0.580

Notes: **Significant at 0.01 level.

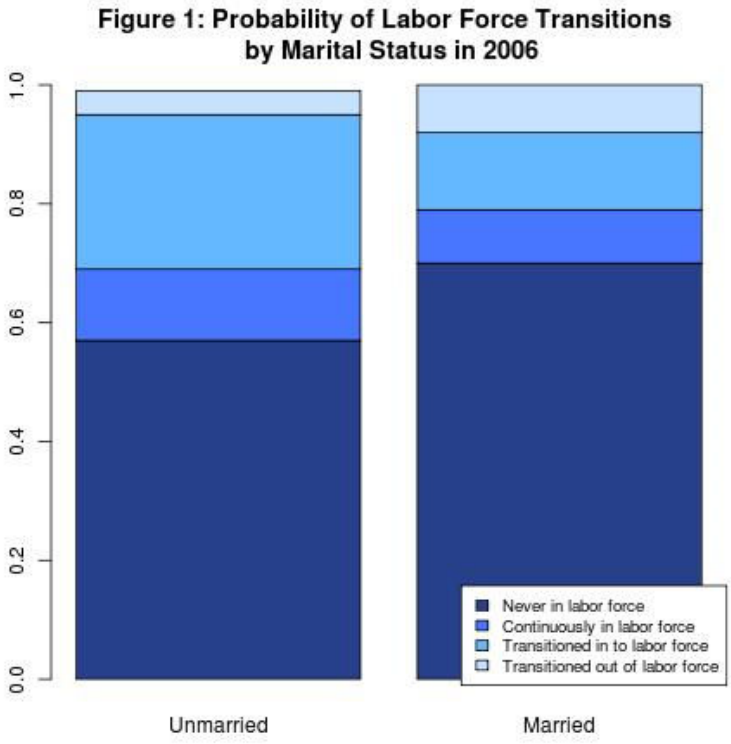


Figure 2: Transition Probabilities for Women Active in the Labor Force in 1998 by Marital Status and Sector of Employment

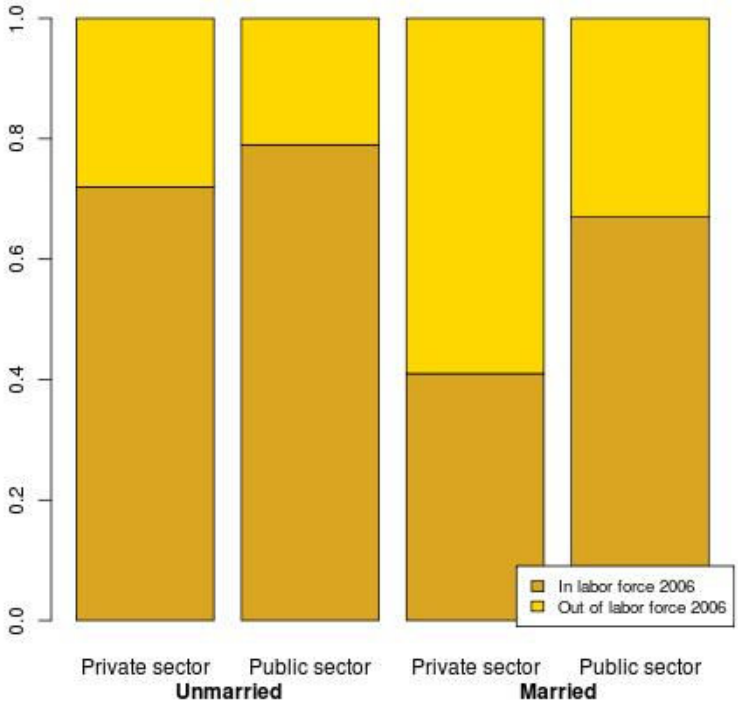
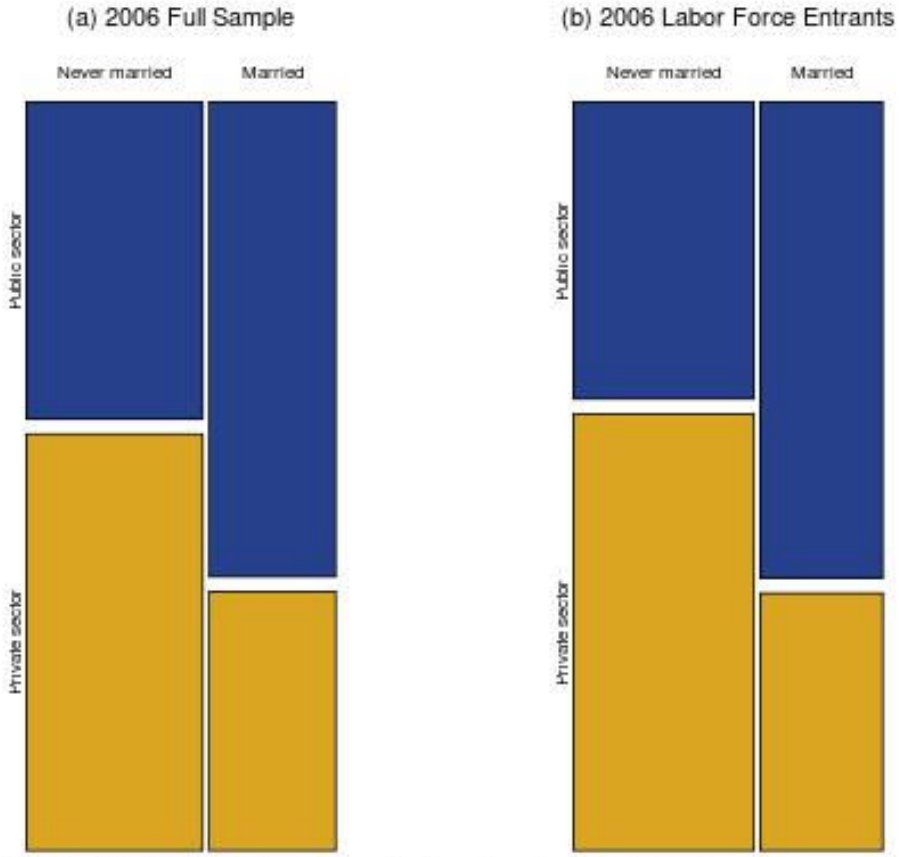


Figure 3: Sector of Employment by Marital Status



Note: The width of the bars reflects the relative number of women in each marital status in 2006.

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