The Social-Economic Situation of Middle East Youth on the Eve of the Arab Spring

December 8-9, 2012
Beirut, Lebanon

Investigating Female Labor Force Participation: A Dynamic Analysis for Egypt and Jordan

Rana Hendy

Workshop Organizers

Silatech
Young People...Enterprise...Employment...

Middle East Youth Initiative
مبادرة شباب الشرق الأوسط

Host

AUB
American University of Beirut
الجامعة الأميركية في بيروت

Issam Fares Institute for Public Policy and International Affairs

Investigating Female Labor Force Participation:
A dynamic Analysis for Egypt and Jordan[�]

Rana Hendy[*]

September 2012

Abstract

Using data from both the Egyptian and the Jordanian Labor Market Panel Surveys, the present research aims at investigating females' labor force participation and, to analyze the effect of marital and parental status on employment choices over time. The later are public employees, private employees, employers, self-employed, unpaid family workers and, inactive and others. Very different results are expected for each of these states as the family-friendly policies are not equally applied in all sectors. Marital and parental statuses are expected to affect differently female participation in the labor force. A multinomial logit model is estimated to assess the effect of the different factors on females' employment choices. The results of this study are expected to be of great importance to show which policies should be made available to improve women's economic conditions in the labor market and to make sure that the private sector can be as attractive for female workers as the public sector.

Keywords: C14, C33, C35, J21, J88.
JEL Classifications: Gender, Labor force participation, Marriage, Egypt, Jordan.

1. Introduction

A number of empirical studies have shown that females' labor force participation is a key motor for economic development. Also, there is an increasing recognition that a

[*] PhD, Economic Research Forum (ERF), 21, Al-Sad Al-Aaly St, Dokki, Giza, Egypt- P.O. Box: 12311. Tel: (+202) 333 18 607. Email: rhendy@erf.org.eg

woman's labor force participation is highly associated with her family choices such as decisions related to marital status (see McElroy 1985, Johnson and Skinner 1986 & 1988, and Van Der Klauw 1996).

Interestingly, participation decisions may vary over the life cycle due to changes in family conditions such as moving, change in marital status and birth of children. A growing literature has applied estimable dynamic models for women's life cycle choice problems (Eckstein and Wolpin 1989b).

Egypt and Jordan have two of the lowest female labor force participation rates (LFPR) in the world (Assaad et al. 2012, Assaad 2007, Kalimat and Al-Talafha 2011 & Mryyan 2012). According to the World Bank, Jordan and Egypt have LFPR of 15.3% and 20.8% respectively (World Development Indicators). Not only is female LFPR very low, but it also appears to have been relatively stagnant over the past decade with the curtailment of public sector hiring in both countries. The private sector employment has been growing fairly rapidly, this employment is generally perceived to be inhospitable to women, especially married women. In fact, women working in the private sector tend to quit the labor force at marriage, whereas those working in the government are much more likely to stay on, as government employment is seen as more family friendly. Faced with a more inhospitable labor market, women in Egypt and Jordan are opting to stay out altogether or to leave at marriage.

Much of the literature on female participation in Egypt and Jordan is concerned with the barriers women face in the labor market, either from prevailing social norms about women's mobility and the sorts of jobs deemed acceptable for them or from the discrimination they face in the private sector (Assaad et al. 2012, Hendy 2010, Miles 2002; Peebles et al. 2007 & Kalimat and Al-Talafha 2011). Miles (2002) cites the rapid increase that occurred in women's labor force participation in Jordan from the mid-1970s to the early 1990s supported by state policies to increase employment for educated women in the public sector. These policies were intended to reduce the conflict between reproductive and productive responsibilities by providing a generous maternity leave and requiring institutions that hired a certain number of women to provide day care. With the introduction of economic adjustment policies in the mid 1980s and early 1990s in Jordan and Egypt respectively, the expansion of public sector employment came to an abrupt halt, leading to a significant narrowing of employment opportunities for educated women. A more recent study done under the auspices of Al-Manar Project of the National Center for Human Resources Development in Jordan (NCHRD) explored in more detail the barriers facing women in the private sector (Peebles et al. 2007). The study concludes that some of the barriers facing women in the private sector are related to a number of factors, including highly protective legislation on women's working conditions and maternity leave that lead employers to avoid hiring married women, employers discriminating against married women out of a conviction that their marital responsibilities would prevent them from being as committed to their jobs as men or young unmarried women, social insurance legislation that treats women as dependents rather than independent workers even when they work, and practices that confine women to occupations that are closely associated with their more traditional roles in the household such as education and health care. Hendy (2011) investigates the effect of marriage on public versus private employment in Egypt. A structural dynamic model

is estimated. Hendy shows that a greater state dependence over time is observed for the public employment which implies that women who have public sector jobs before marriage tend to keep their activity status with marriage. However, females in the private sector seem to have higher probabilities to move into inactivity at marriage.

The recent literature on developing countries stresses the different forms of market work that that enable women to take care of their home responsibilities (Hill 1983, 1989, Tiefenthaler 1994, Assaad and El-Hamidi 2001). In particular, self-employment can allow women to generate income while simultaneously taking care of their chidren and other household responsibilities. Even within wage employment, public sector employment often involves shorter hours and the presence of childcare facilities that makes it more compatible with child rearing (Assaad & Zouari, 2009).

This paper agrees with the general thrust of the literature that it is the interplay between conservative social and cultural norms about gender roles in the household and in society, on the one hand, and economic and policy-related factors, on the other, that shapes the prospects for female employment in Egypt and Jordan. In particular that the shift away from public sector employment in recent decades has severely restricted the employment prospects of educated married women, which had expanded significantly in the previous era.

The present research aims at investigating females' labor force participation in two MENA economies i.e. Egypt and Jordan and, to analyze the effect of marital and parental status on employment choices over time. It is worth noting that marriage is the only type of socially accepted unions in the Arab word. And, as it is has been shown in previous studies (Assaas & Zouari; 2009 and Hendy; 2011), Ewomen tend to make all decisions related to the labor market at the timing of marriage rather than motherhood. For this reason, this study pinpoints the transitions that occur at marriage. In the analysis, I distinguish between four employment statuses. These are public wage work, private wage work, private non-wage work (which includes employers, self-employment and unpaid family workers) and, inactivity and others (which include both inactive and unemployed individuals). Very different results are expected for each of these states as the family-friendly policies are not equally applied in all sectors. Marital and parental statuses are expected to affect differently female participation in the labor force conditional on the employment status.

The paper will be organized as follows: Section 2 shows the data used. Section 3 exhibits some stylized facts. In section 4, we conduct a dynamic analysis on marriage and women's labor market participation. This section allows an overview of the trends and levels of participation in paid labor force. A distinction between the different segments of the labor force according to gender, age and levels of education is made. Section 5 is devoted to the presentation of the methodology and empirical results. And, section 6 concludes and calls for some policy implications.

2. Data

The data used in this study comes from both the Egyptian and the Jordanian Labor Market Panel Surveys (ELMPS and JLMPS). These are comparable surveys and administrated to nationally representative samples of households. In Egypt, the data

has been collected in two rounds: 1998 and 2006. Note that 8,349 households were surveyed in 2006 among which 3,684 were in the original 4,816 households interviewed in 1998. An additional 2,167 new households emerged from these 3,684 households as a result of splits, and a refresher sample of 2,498 households was added in 2006. The full 2006 sample includes 37,140 individuals. For Jordan, data collection started in Jordan in December 2009 and was concluded in June 2010, with joint collaboration between Economic Research Forum (ERF), National Center for Human Resource Development (NCHRD) and the Jordanian Department of Statistics (DOS). The survey is nationally representative covering 5000 households. It was conceived as a periodical longitudinal survey, of which 2010 is the first round.

In both surveys, the questionnaire is composed of three major sections: (1) a household questionnaire administered to the head of household or the head's spouse that contains information on basic demographic characteristics of household members, ownership of durable goods and assets, and housing conditions, (2) an individual questionnaire administered to the individual him/herself containing information on parental background, detailed education histories, activity status, job search and unemployment, detailed employment characteristics, a module on women's work, migration histories, job histories, time use, earnings and fertility. (3) a household enterprise and income module that elicits information on all agricultural and non-agricultural enterprises operated by the household as well as all income sources, including remittances and transfers. The data provide detailed information about the individuals' employment history starting from their first entry into the labor market till the survey's date. We have all the details about the jobs they occupied, including employment status, economic sector, occupation, job stability and formality of employment. Also, information about labor market experiences and behaviors are available.

3. Some Stylized Facts

In the present section, we consider all individuals aged 16 and above. The working sample consists of 22 133 and 14 911 individuals for Egypt and Jordan respectively. These are equally divided between males and females as it is shown in Table 1.

[Table 1 about here]

Table 2 presents the distribution of the population among the four employment alternatives considered in this study. Those are public wage work, private wage work, private non-wage work and, inactivity and others. For males, 30.82 and 25.85 percent work in the private sector in Egypt and Jordan respectively. And, the proportion of males who work in the public sector is greater in Jordan. Inactivity rates IR are around 76 and 20 percent for Egyptian females and males respectively. IR are even more pronounced sexes in Jordan for both sexes. Clearly, comparing Egypt to Jordan, women are significantly more engaged in private non-wage activities.

[Table 2 about here]

Figure 1 illustrates the average age of first marriage for men and women. Very similar figures are observed for Jordanian and Egyptian women since they both tend to get married by age 20. However, Egyptian men marry a bit later than Jordanian ones. As

it is showed in Figure 1, the average age of marriage for men is around 26.5 in Egypt and 25 in Jordan

[Figure 1 about here]

These figures are confirmed in Figure 2 that shows the distribution of the age of first marriage for both sexes in Egypt and Jordan.

[Figure 2 about here]

Table 3 and 4 show some descriptive statistics on this study's variables of interest. Ever-married seems to represent the majority's marital status in the samples. 69.47 and 62.29 percent are ever-married individuals respectively in the Egyptian and Jordanian samples. Turning our attention to the education variables, in general, the Egyptian population is more educated than the Jordanian one since 48.16 percent of Egyptians have a secondary and above level of education versus 41.11 percent in Jordan. And, 22.72 versus 48.71 percent have a below than secondary level of education in Egypt and Jordan respectively. However, Egypt seems to suffer much more than Jordan from high illiterate levels with 29.80 percent and only 10.18 for Jordan. Moving to the gender aspect of education, a much greater proportion of Egyptian females are illiterate compared to their Jordanian counterparts with 38.23 versus only 14.32 percent. In addition, the proportion of fathers and mothers who are illiterate seems to be greater in Egypt than in Jordan. But, older generation (fathers) were more active in Egypt than in Jordan. And, in both countries samples, the age distribution looks very similar.

[Tables 3 and 4 about here]

In Table 5 and 6, we distinguish between the ever-married and never-married populations. In Table 5, we observe that inactivity rates, for women, are generally higher in Jordan. And, interestingly, ever-married women aged 16 and above have lower   inactivity rates compared to their never-married counterparts. Never-married women tend to work in private wage activities. Whereas, it is clear that ever-married ones have a strong preference for the government/ public sector. This goes in line with our expectations as the public sector is considered to be more family-friendly because of the flexibility of working hours, longer maternity leave etc…
 Table 6 shows that ever-married Egyptian males tend to be concentrated in the public wage work followed by the private non-wage work. This is the case in both economies with about 31.95 and 28.49 percent in the public sector in Egypt and Jordan respectively. For the private non-wage work, the proportion of Egyptian men working in this sector is 30.46 percent relatively to only 17.63 percent in Jordan. This shows to what extent the Egyptian working population- in general- tends to be more engaged in activities such as entrepreneurship, self-employment and unpaid work.

[Tables 5 and 6 about here]

Tables 7 to 10 analyze the employment distribution by age-group and marital status. Four age groups are considered: 16-25, 26-35, 36-45 and, 45 and above. In Table 7, the analysis for Egyptian women shows that inactivity decreases with age until age 45 then re-increases at the end of the professional career. Note that a more pronounced

decrease with age is observed for never-married females. For all age groups, the proportions of ever-married females working in the public sector are significantly high. In contrast, never-married ones seem to be highly concentrated in the private wage work. Nevertheless, never-married females of older age groups tend to act similarly to ever-married ones since they tend to prefer public sector employment. Very similar figures are illustrated in Table 8, for Jordanian females.

[Tables 7 and 8 about here]

Contrarily to females, males' inactivity levels are relatively low. Yet, they are much lower in Egypt than in Jordan for all age groups with 8.37, 2.02 and 2.83 percent for Egyptian males aged 16-25, 26-35, 36-45 and, 45 and above respectively. Also, the never-married masculine population seems to have a preference for private wage jobs. An explanation for this is that labor earnings are expected to be higher in this sector. Moreover, the private non-wage work is more common within the ever-married and older age groups population.

[Tables 9 and 10 about here]

In Table 11, we analyze the correlation between the employment status and levels of education for men and women in Egypt. We present in this Table 3 lines per employment alternative. The first line shows the frequencies and the second (in bold) and third lines shows the proportions by row and column respectively. Interestingly, for both sexes, the majority of the above secondary educated population is employed in the public sector; e.g. 40.70 percent and 52.53 percent for men and women respectively. For men, inactivity rates are the highest among the secondary educated group. However, illiterate females seem to have the highest inactivity rates compared to the other education levels groups.

[Table 11 about here]

Moving to the Jordanian case, the figures are different from Egypt as it is shown in Table 12. It is interesting to see that the public sector in Jordan is conquered by highly educated females and less educated males. In other terms, 78% of females who have public sector jobs have an above secondary education and 47 % of males having the same type of jobs have only a below secondary education. Turning our attention to the private wage sector, we observe that it is, as the public sector, mostly dominated by high educated women and less educated men. More surprisingly, for both men and women, 49.77 % of inactive men and 44.94 % of inactive women have a below secondary education which implies and inactivity rates among this education group are clearly higher than for the illiterate group.

[Table 12 about here]

In Tables 13 and 14 we present the employment distribution of Egyptian and Jordanian females by education level and marital status. For the ever-married females' population, on the one hand, 44.5 percent of the inactive population in Egypt are illiterate and 45.32 percent of Jordanian ones have a below than secondary level of education. Similarly, the illiterate population in Egypt is strongly engaged in private non-wage jobs. Though, in Jordan, those are rather secondary or below secondary educated. Females with higher levels of education tend to work either in the public or the private wage sector. And, similar figures are observed for never-married females.

[Tables 13 and 14 about here]

Tables 15 and 16 show employment status of Egyptian and Jordanian males by education levels and marital status. Ever-married Jordanian engaged in private non-wage activities seem to have higher levels of education compared to Egyptian ones. In other words, the majority of those in Jordan has a below than secondary level of education. In Egypt, they are mostly illiterate. Interestingly, workers who achieve more than secondary education are over-represented (with respect to the entire sample) in the public sector. This is true for both men and women. I would say that this suggests that the public sector is the preferred occupation for workers (with the greatest opportunities).

[Tables 15 and 16 about here]

4. Dynamic Analysis

The present section is devoted to a dynamic analysis of the labor as well as the marriage market. The aim of the analysis is to assess the effect of marriage on employment transitions.
In the following analysis we focus on the ever-married and ever-worked populations in order to be able to assess the effect of the transition into marriage on employment decisions. Therefore, the inactivity rates shown in section 3 are expected to be higher than those shown below since, in the previous Tables, we considered all individuals aged 16 and above.

Table 17 presents how men and women move from one employment sector to another because of marriage. In the following, we observe the employment status of each individual 1 year before marriage and compare it with the employment status at marriage observed at the time (year) of marriage. One the one hand, one can see that there is a strong state dependence in Egypt which implies that both men and women mostly continue to work in the same sector despite the transition into marriage. Nevertheless, these state dependences are relatively higher in the public sector. 98.98 % and 94.33 % of men and women respectively who used to work in the public sector before marriage tend to keep their jobs at marriage. State dependence rates for women are significantly lower in the private wage sector. Only 56.08 percent of women who used to work in the private wage sector one year before marriage continue working in the same sector at the timing of marriage. Looking at transitions from employment to inactivity, it is clear that women who move to inactivity at marriage are mostly those who used to work in private wage activities before marriage; i.e. 40.88 % of women in the private sector move to inactivity at marriage and only 5.41 % of those in the public do. This goes in line with our expectations that women decide ex-ante to quite the private sector, and the labor market in general, at the year of marriage since they expect that this sector is not family-friendly enough to enable them to reconcile between family and work responsibilities. On the other hand, marriage seems to be an incentive for Egyptian women to move from inactivity to private non-wage. 43.83 % of women who used to be out of the labor force one year before marriage become engaged in private non-wage activities (especially in unpaid activities) at marriage.

[Table 17 about here]

Table 18 shows the same analysis for the Jordanian case. Transitions from the private wage sector to inactivity for women are fewer less compared to Egypt. And, Jordanian women seem to be less mobile than their Egyptian counterparts especially when they are inactive. In other terms, transitions from inactivity to activity are almost non-existent for women and very week for men.

[Table 18 about here]

Figures 3 and 4 illustrate the dynamic trends for both males and females in Egypt and Jordan. Marriage strongly affects females' employment choices. Interestingly, marriage dramatically decreases the private wage employment. In fact, this sector, in most countries, is remarkably less family-friendly than the public one. For this reason, women who work in the private wage sector before marriage tend to quit their jobs at marriage as presented in Figures 3 and 4. And, this is valid for both Egypt and Jordan. As for the difference between the two economies, the private non-wage work significantly increases after marriage in Egypt. In contrast, Inactivity seems to be the only alternative to the private wage employment in Jordan as shown in Figure 4. Clearly, Men do not seem to be affected by marriage [see Appendix B].

[Figures 3 and 4 about here]

In Figures 5 to 8, we replicate the above analysis taking into account the individual's level of education. We distinguish between below-secondary and secondary and above educational attainment. In Egypt, not surprisingly, individuals having a secondary or above education are mostly public employees. And, for this group, participation rates in the public sector are boosted until the timing of marriage. After marriage, the public employment stagnates. As it is illustrated in Figure 7, it is important to note that even for the highly educated group; the negative impact of the transition into marriage on the private wage work is clearly observed. Comparing the highly educated with the low educated group, it is clear that the drop in inactivity is more pronounced for the first group. Turning our attention to less than secondary education, these are likely to be employed in private non-wage jobs and continue working in this sector after marriage.

For Jordan, the figures are close to what is observed for Egypt. The major difference is that, for the secondary and above educated population, inactivity rates start increasing after marriage instead of stagnating as it is the case in case. The only explanation for this is that the drop in the private wage employment that occurs at marriage is not substituted by an increase in other types of jobs. As it has been mentioned above, in Egypt, the substitute was observed to be the private non-wage sector. In addition, the public sector is clearly the main activity for working females in Jordan both before and after marriage as shown in Figure 8.

[Figures 5 to 8 about here]

Figures 9 to 16 assess the effect of parental employment status on females' employment choices. Interestingly, these figures seem to suggest that personal networks in the public sector (i.e. parents) significantly increase the likelihood of being employed there. When it comes to the effects of mothers' employment status,

we only do the analysis for females since males seem not to be affected by this variable. Again, females seem to strongly follow their mothers' choices. Inactivity rates are higher when mothers are inactive.

[Figures 9 to 16 about here]

5. Empirical Analysis

As discussed above, female participation in the labor force in Egypt and Jordan is quite low by international standards and has not been increasing in the past decade despite significant increases in female educational attainment. We determined in Section 3 that female participation in employment strongly depends on educational attainment and marital status. We would therefore expect that as both educational attainment and the age at marriage rise, we should see increases in female labor force participation. However, the curtailment of public sector hiring that accompanied structural adjustment and economic reforms contributed to limiting the employment possibilities for educated and married women. These two opposing trends may account for the stability of female participation.

In this section, we examine the determinants of female participation in the Jordanian versus Egyptian labor market in an effort to ascertain the other forces that determine participation using an empirical approach. We estimate a multinomial model that distinguishes between being engaged in a public wage work, a private wage work, a private non-wage work or inactivity. The empirical analysis controls for individuals' characteristics such as the age-group, the marital status, the level of education, the region of residence and the parental working states.

Table 19 shows the results of the multinomial model for Egypt versus Jordan. Inactivity is considered to be the reference employment status. Clearly, the empirical results come to confirm what is observed in the descriptive analysis presented above. Being a married woman significantly decreases the probability of employment in the private wage sector by around 16 percent in Egypt versus 14 percent in Jordan. In Egypt, Marriage is also observed to significantly increase the probability of having a private non-wage work which is not valid for Jordan. Turning our attention to the age variable, we constructed four age groups in order to make the case on whether there is any relationship between age-groups and the different employment status. In the table, the above 45 years old are considered as the reference. For the 26 to 35 age-group, they are observed to have greater probabilities to work in private wage activities rather than being inactive. Only for Jordan, this age-group also has a greater probability of employment in the public sector while the coefficient is negative for the Egyptian case. And, for the 36 to 45 age-group- in Egypt- positive and significant coefficients are observed for the private wage and non-wage sectors while in Jordan, the positive and significant coefficients are for the public and private wage work.
All levels of education- illiterate being the reference- significantly boosts the probability of working in the public sector in both Egypt and Jordan. Interestingly, in Egypt, having any level of educational attainment decreases the probability of working in private non-wage jobs. This implies that the illiterate population is the most likely to be engaged in this type of employment.

Moreover, contrarily to Jordanian females, Egyptian ones seem to be highly influenced by their mothers' employment choices. Having a wage working mother significantly increases the probability of working in the public sector. And having a mother who is employer increases the probability of working in the private non-wage sector.

[Table 19 about here]

Tables 20 and 21 present the marginal effects for Egypt and Jordan respectively. Table 20 presents the probability for the reference individual for each employment state in Egypt. The reference individual is defined here as the non-married female, aged above 45, illiterate, living in a rural region and whose both parents are inactive. Not surprisingly, the highest probability for this profile is observed for the inactivity status with 89 percent chances. Then, this profile of women has a probability of 0.064 of being employed in the private non-wage sector followed by a 0.025 probability of working in the private wage sector. For Jordan, for the same profile, the probabilities of employment in public and private wage sectors are very close to the ones observed in Egypt. However, the probability of being inactive is significantly greater in Jordan. And, the probability of being engaged in private non-wage activities is clearly less pronounced compared to Egypt.
The impact of the explanatory variables has already been discussed earlier in Table 19.

[Tables 20 and 21 about here]

6. Conclusion and Policy Implications

The present research investigates females' labor force participation and, analyzes the effect of marital and parental status on employment choices over time in Egypt and Jordan. In the analysis, I distinguish between four employment statuses. These are public employees, private wage employees, private non-wage workers and, inactive and others. Both the descriptive and the empirical analysis of this research provide evidence on how transition into marriage impacts women employment choices over the life-cycle. And, the decision of quitting/ or not the labor market at marriage is shown to be highly correlated with the employment sector. It has been observed that married women have a greater preference to public sector employment. And, never-married women are more likely to work in the private wage sector. Results of this study also showed that Egyptian women benefit from having access to private non-wage activities such as entrepreneurship, self-employment and unpaid work. These types of jobs represent a substitute to private wage jobs after marriage. However, this is not the case for Jordanian women who don't really have the choice but moving to inactivity after marriage.

As argued in Assaad et al. (2012), participation rates are not only low in Egypt and Jordan, but declining once corrected for educational attainment, suggesting that the labor market opportunity structure for educated women is deteriorating over time. This deterioration can be directly attributable to the diminishing role of the family-friendly public sector in the Egyptian and Jordanian labor market in general due to the shrinking public sector opportunities. Also, we demonstrate in the present study that

the private sector has not provided a hospitable environment for women in general and for married women in particular. Much of the recent increase in the private sector employment for women has been in temporary positions that women either leave of their own accord or are induced to leave by their employers upon marriage.

The present research calls the Egyptian and Jordanian governments, on the one hand, to ensure policies that improve women's economic conditions in the labor market and, on the other hand, to make the private sector attractive for female workers as the public sector. Over the long run, gender norms about the division of labor within the household will have to shift to accommodate women's growing professional roles. A more equal sharing of caring responsibilities among men and women benefits female labor force participation, the economy and society as a whole (Hendy 2010).

References

Amer, M. (2012). The School-to-Work Transition of Jordanian Youth. ERF Working Paper No. 686. Economic Research Forum, Cairo, Egypt.

Amin, S. and H. Al-Bassisi, N. (2003). Wage work and marriage: Perspectives of Egyptian working women. Population Council Working Paper 171.

Assaad, R. (2012) The Structure and Evolution of Employment in Jordan. ERF Working Paper No. 674. Economic Research Forum, Cairo, Egypt.

Assaad, R. et El-Hamidi, F. 2001. "Is All Work the Same? A Comparison of theDeterminants of Female Participation and Hours of Work in Various EmploymentStates in Egypt", in The Economics of Women and Work in the Middle East and North Africa. Mine Cinar (Ed.) Research in Middle East Economics, Vol. 4.Greenwich, Conn.: JAI Press.

Assaad, R. et El-Hamidi, F. (2002). Female Labor Supply in Egypt: Participation and Hours of Work, in Human Capital: Population Economics In The Middle East. Ismail Sirageldin (Ed.). London: I.B. Tauris.

Assaad, R. et El-Hamidi, F. (2001). Is All Work the Same? A Comparison of the Determinants of Female Participation and Hours of Work in Various Employment States in Egypt, in The Economics of Women and Work in the Middle East and North Africa.
Assaad, R. and Zouari S. (2003) Estimating the Impact of Marriage and Fertility on the Female Labor Force Participation when Decisions are Interrelated: Evidence from Urban Morocco. Unpublished.

Assaad, R. (2007). Labor supply, employment and unemployment in the Egyptian economy: 1988-2006. Population Council Working Paper 0701.

Arcidiacono, P. and Miller, R. A. (2008). CCP Estimation of Dynamic Discrete Choice Models with Unobserved Heterogeneity. working paper.

Altug, S., and R. A. Miller (1998). The E_ect of Work Experience on Female Wages and Labor Supply, Review of Economic Studies, 62, 45-85.

Aguirregabiria, V., and P. Mira (2007). Sequential Estimation of Dynamic Discrete Games, Econometrica, 75, 1-54.

Aguirregabiria, V., and P. Mira (2010). Dynamic Discrete Choice Structural Models: A Survey, Journal of Econometrics 156, 38-67.

Aguirregabiria, V., (2007). Another look at the identi_cation of dynamic discrete decision processes: With an application to retirement behavior. Manuscript. University of Toronto.
22

Barssoum, G. (2007). Egypt labor market panel survey 2006: Report on methodology and data collection. Economic research forum Working Paper 0704.

Belzil, C. (2006). The Return to Schooling in Structural Dynamic Models: A Survey. Institute for the Study of Labor Working Paper 06-09.

Bourguignon, F., Browning, M., Chiappori, P.-A., and Lechene, V. (1994). Income and outcomes: A structural model of intrahousehold allocation. Journal of Political Economy 102, 1067-1096.

Buchinsky, M., J. Hahn, and V. J. Hotz (2005). Cluster Analysis: A Tool for Preliminary Structural Analysis, working paper. 47

Chiappori, P.-A., Fortin, B., and Lacroix, G. (2002). Marriage market, divorce legislation and household labor supply. Journal of Political Economy, 110, 37-72.

Eckstein, Z., Wolpin, K. (1989). The speci_cation and estimation of dynamic stochastic discrete choice models. Journal of Human Resources 24, 562-598.

Ericson, R., and A. Pakes (1995). Markov-Perfect Industry Dynamics: A Framework for Empirical Work, Review of Economic Studies, 62, 53-82.

Employment and Unemployment Surveys. Department of Statistics, Amman, Jordan.

Greene, H. W. (2003). Econometric Analysis (5th ed.). Person International.

Geweke, J., Keane, M. (2000). Bayesian inference for dynamic discrete choice models without the need for dynamic programming. In: Mariano, Schuermann, Weeks (Eds.), Book Simulation Based Inference and Econometrics: Methods and Applications. Cambridge University Press, pp. 100-131.

Haan, P. (2004). Discret Choice Labor Supply: Conditional logit vs. random coefficient models. DIW Discussion Paper 394.

Heckman, J. (1979). Sample selection bias as a speci_cation error. Econometrica 47(NO), 153-161.

Heckman, J. (1981). The incidental parameters problem and the problem of initial conditions in estimating a discrete time-discrete data stochastic process. In: Manski, 23 C., McFadden, D. (Eds.), Structural Analysis of Discrete Data with Econometric Applications. MIT Press.

Heckman, J., Lochner, L., Taber, C. (1998). Explaining rising wage inequality: explanations with a dynamic general equilibrium model of labor earnings with heterogeneous agents. Review of Economic Dynamics 1, 1-58.

Heckman, J., Singer, B. (1984). A method for minimizing the impact of distributional assumptions in economic models for duration data. Econometrica 52, 271-320.

Heckman, J., Navarro, S. (2007). Dynamic discrete choice and dynamic treatment effects. Journal of Econometrics 136, 341-396.

Hendy, R. (2011). On Marriage and Labor Market Transitions: A Structural Dynamic model. Unpublished.

Hendy, Rana. (2011). Rethinking the Time Allocation of Egyptian Females: A Matching Analysis, Gender and Work in the MENA Region Working Paper Series: Poverty, Job Quality and Labor Market Dynamics, No. 17. Cairo: Population Council.

Hotz, V. J., and R. A. Miller (1993). Conditional Choice Probabilities and Estimation of Dynamic Models, Review of Economic Studies, 61, 265-289.

Hotz, V. J., R. A. Miller, S. Sanders and J. Smith (1994). A Simulation Estimator for Dynamic Models of Discrete Choice, Review of Economic Studies, 60, 265-289.

JLMPS 2010. Jordan Labor Market Panel Survey of 2010 dataset. Economic Research Forum, Cairo, Egypt.

Kalimat, H. and Al-Talafha, H. (2011). Obstacles Hindering Women's Labor Force Participation in Jordan. A report for Al-Manar Project. National Center for Human Resource Development, Amman, Jordan. [http://faculty.yu.edu.jo/altalafha/default.aspx?pg=2a8bb290-406e-474f-8bac-2527567253fe]. Accessed June 2012.

Kasahara, H., and K. Shimotsu (2007a). Nonparametric Identi_cation and Estimation of Finite Mixture Models of Dynamic Discrete Choices, working paper.

Keane M., and K. Wolpin (1994). The Solution and Estimation of Discrete Choice Dynamic Programming Models by Simulation and Interpolation: Monte Carlo Evidence" The Review of Economics and Statistics, 76, 648-672.

Keane M., and K. Wolpin (1997). The Career Decisions of Young Men, Journal of Political Economy, 105, 473-522.

Miles, R. (2002). Employment and Unemployment in Jordan: The Importance of the Gender System. World Development 30 (3), pp.413-427.

Mrryan, N. (2012). Demographics, Labor Force Participation and Unemployment. ERF Working Paper No. 670. Economic Research Forum, Cairo, Egypt.

Mine Cinar (Ed.) Research in Middle East Economics, Vol. 4. Greenwich, Conn.: JAI Press.

Newey, W. K., and D. McFadden (1994). Large Sample Estimation and Hypothesis Testing, Chapter 36 in Handbook of Econometrics, 4, editors R. Engle and D. McFadden, Elsevier Science, Amsterdam, 2111-2245.

Rashad, H., Osman, M. and Roudi- Fahimi, F. (2005). Marriage in the Arab world. Population Reference Bureau. www.prb.org.

Pakes, A., M. Ostrovsky, and S. Berry (2004). Simple Estimators for the Parameters of Discrete Dynamic Games (with Entry/Exit Examples), working paper. 24

Peebles, D., N. Darwazeh, H. Ghosheh and A. Sabbagh. (2007). Factors Affecting Women's Participation in the Private Sector in Jordan". A report for Al-Manar Project. National Center for Human Resource Development, Canadian International Development Agency,Amman,Jordan.[http://www.almanar.jo/AlManaren/Portals/0/PDF2/Mayssa%20Gender%20report.pdf] Accessed June 2012.

Salem, R. (2012). Trends and Differentials in Jordanian Marriage Behavior: Marriage Timing, Spousal Characteristics, Household Structure and Matrimonial Expenditures. ERF Working Paper No. 668. Economic Research Forum, Cairo, Egypt.

Small, K., and Rosen, S. (1981). Applied welfare economics with discrete choice models. Econometrica, 49, 105-130.Mimeo, Cergy- Pontoise: Universitet' de Cergy Pontoise.

Spierings, N., Smits, J. and V. Mieke. (2008). Arab women's employment in a globalized world. A multilevel analysis of changing participateion rates and shifting influences in Egypt and Jordan. Institute for Management Research, RU, Nijmegen, The Netherlands. [http://www.ru.nl/publish/pages/529479/spieringssmitsverloo-workingpaper- Amman2008.pdf] Accessed June 2012.

Train, K.E. (2003). Discrete choice methods with simulation. Cambridge: Cambridge University Press.
Van Soest, A. (1995). Structural models of family labor supply: A discrete choice approach. Journal of Human Resources, 30, 63-88.

Wolpin, K. (1984). An Estimable Dynamic Stochastic Model of Fertility and Child Mortality, Journal of Political Economy, 92, 852-874.

World Development Indicators, The World Bank. [http://data.worldbank.org/data-catalog/world-development-indicators]

Tables

Table 1: Gender Distribution in Egypt and Jordan for age 16+

	Egypt		Jordan	
	Frequency	Percent	Frequency	Percent
Males	10,749	48.57	7,424	49.79
Females	11,384	51.43	7,487	50.21
Total	22133	100	14911	100

Source: Constructed by the author using the ELMPS and JLMPS datasets.

Table 2: Employment Status by Gender for Egypt and Jordan for age 16+

Males				
	Egypt		Jordan	
	Frequency	Percent	Frequency	Percent
Public wage employees	2,499	23.25	1,992	26.83
Private wage employees	3,313	30.82	1,919	25.85
Private non-wage employees	2,759	25.67	905	12.19
Inactive and others	2,178	20.26	2,608	35.13
Total	**10749**	**100**	**7424**	**100**
Females				
	Egypt		Jordan	
	Frequency	Percent	Frequency	Percent
Public wage employees	1,127	9.9	507	6.77
Private wage employees	422	3.71	400	5.34
Private non-wage employees	1087	9.55	92	1.23
Inactive and others	8,748	76.84	6,488	86.66
Total	**11384**	**100**	**7487**	**100**
Total				
	Egypt		Jordan	
	Frequency	Percent	Frequency	Percent
Public wage employees	3,626	16.38	2,499	16.76
Private wage employees	3,735	16.88	2,319	15.55
Private non-wage employees	3,846	17.38	997	6.68
Inactive and others	10,926	49.37	9,096	61
Total	**22133**	**100**	**14911**	**100**

Source: Constructed by the author using the ELMPS and JLMPS datasets.

Table 3: Sample's Descriptive Statistics, Egypt

	Egypt		
	Males	**Females**	**Total**

		Frequency	Percent	Frequency	Percent	Frequency	Percent
Marital Status	**Never married**	3,834	33.29	2,957	23.54	6,791	27.29
	Ever married	7,682	66.71	9,603	76.45	17,285	69.47
	1.Contractually married	37	0.32	53	0.42	90	0.36
	2.Married	7,387	64.15	7,741	61.63	15,128	60.80
	3.Divorced	60	0.52	196	1.56	256	1.03
	4.Widowed(er)	198	1.72	1,613	12.84	1,811	7.28
	5.Separated	0	0	0	0	0	0
Education Level	Illiterate	2,373	20.61	4800	38.23	7173	29.80
	Below secondary	2,914	25.31	2,556	20.36	5470	22.72
	Secondary	3,899	33.86	3485	27.75	7384	30.68
	Above secondary	2,328	20.22	1,716	13.67	4044	16.80
	Missing	2	0.02	3	0.02	5	0.02
Age	16-25	3,232	28.07	4342	34.57	7,574	31.46
	26-35	3,049	26.48	2,631	20.95	5,680	23.59
	36-45	1,885	16.37	1994	15.88	3,879	16.11
	45 and above	3,350	29.09	3593	28.61	6,943	28.84
Father's Education level	Illiterate	4,504	39.11	5673	45.17	10,177	42.27
	Below secondary	2,773	24.08	3,335	26.55	6,108	25.37
	Secondary	488	4.24	607	4.83	1,095	4.55
	Above secondary	440	3.82	594	4.73	1,034	4.29
	Missing	3,311	28.75	2351	18.72	5,662	23.52
Mother's Education level	Illiterate	5,639	48.97	7,800	62.10	13,439	55.82
	Below secondary	1,012	8.79	1,400	11.15	2,412	10.02
	Secondary	154	1.34	244	1.94	398	1.65
	Above secondary	95	0.82	152	1.21	247	1.03
	Missing	4,616	40.08	2,964	23.60	7,580	31.48
Father's Main Wage Status	Public wage worker	2,497	21.68	3,129	24.91	5,626	23.37
	Private wage work	2,111	18.33	2,793	22.24	4,904	20.37
	Private non-wage work	3,572	31.01	4,235	33.72	7,807	32.42
	Inactive	25	0.22	51	0.41	76	0.32
	Missing	3,311	28.75	2,352	18.73	5,663	23.52
Mother's Main Wage Status	Public wage worker	149	1.29	268	2.13	417	1.73
	Private wage worker	33	0.29	56	0.45	89	0.37
	Private non-wage work	474	4.12	766	6.10	1,240	5.15
	No job	6,244	54.22	8,508	67.74	14,752	61.27
	Missing	4,616	40.08	2,962	23.58	7,578	31.48
	Total	**11516**	**100**	**12560**	**100**	**24076**	**100**

Source: Constructed by the author using the ELMPS datasets.

Table 4: Sample's Descriptive Statistics, Jordan

	Jordan		
	Males	**Females**	**Total**

		Frequency	Percent	Frequency	Percent	Frequency	Percent
Marital Status	**Never married**	3,259	42.24	2,600	33.24	5,859	37.71
	Ever married	4,457	57.76	5,222	66.75	9,679	62.29
	1.Contractually married	0	0.00	0	0.00	0	0.00
	2.Married	4,363	56.54	4,487	57.36	8,850	56.96
	3.Divorced	40	0.52	130	1.66	170	1.09
	4.Widowed(er)	54	0.7	604	7.72	658	4.23
	5.Separated	0	0	1	0.01	1	0.01
Education Level	Illiterate	462	5.99	1,120	14.32	1,582	10.18
	Below secondary	4,130	53.53	3,438	43.95	7,568	48.71
	Secondary	1571	20.36	1568	20.05	3139	20.2
	Above secondary	1553	20.13	1696	21.68	3249	20.91
	Missing	0	0.00	0	0.00	0	0.00
Age	16-25	2,612	33.85	2,576	32.93	5,188	33.39
	26-35	1,838	23.82	1882	24.06	3720	23.94
	36-45	1,473	19.09	1,493	19.09	2,966	19.09
	45 and above	1793	23.24	1871	23.92	3664	23.58
Father's Education level	Illiterate	2,323	30.11	2214	28.30	4537	29.20
	Below secondary	2,173	28.16	2669	34.12	4842	31.16
	Secondary	317	4.11	482	6.16	799	5.14
	Above secondary	299	3.88	457	5.84	756	4.87
	Missing	2,604	33.75	2000	25.57	4604	29.63
Mother's Education level	Illiterate	3,414	44.25	3612	46.18	7026	45.22
	Below secondary	899	11.65	1355	17.32	2254	14.51
	Secondary	119	1.54	235	3.00	354	2.28
	Above secondary	56	0.73	145	1.85	201	1.29
	Missing	3,228	41.84	2475	31.64	5703	36.70
Father's Main Wage Status	Public wage worker	1,565	20.28	1906	24.37	3471	22.34
	Private wage worker	1,329	17.22	1521	19.45	2850	18.34
	Private non-wage work	2,167	28.09	2338	29.89	4505	28.99
	No job	51	0.66	57	0.73	108	0.70
	Missing	2,604	33.75	2000	25.57	4604	29.63
Mother's Main Wage Status	Public wage worker	63	0.82	125	1.60	188	1.21
	Private wage worker	52	0.67	86	1.10	138	0.89
	Private non-wage work	4371	56.67	5131	65.64	9502	61.18
	No job	0	0.00	0	0.00	0	0.00
	Missing	3230	41.86	2480	31.71	5710	36.72
	Total	**7,716**	**100**	**7,822**	**100**	**15,538**	**100**

Source: Constructed by the author using the JLMPS datasets.

Table 5: Employment Status for Ever-married versus Never Married Females, age 16+

	For Females					
	Egypt			**Jordan**		
	Ever Married	**Never Married**	**Total**	**Ever Married**	**Never Married**	**Total**

Public wage employees	974	153	1,127	365	142	507
	11.08	5.9	9.9	7	6.25	6.77%
Private wage employees	174	248	422	163	237	400
	1.98	9.56	3.71	3.13	10.43	5.34%
Private non-wage employees	972	115	1087	73	19	92
	11.06	4.43	4.43	1.41	0.84	1.23%
Inactive and others	6,669	2,079	8,748	4,614	1,874	6488
	75.88	80.12	76.84	88.48	82.48	86.66%
Total	8789	2595	11384	5215	2272	7487
	100	100	100	100	100	100

Table 6: Employment Status for Ever-married versus Never Married Males, age 16+

	For Males					
	Egypt			Jordan		
	Ever Married	Never Married	Total	Ever Married	Never Married	Total
Public wage employees	2,210	289	2,499	1,270	722	1992
	31.95	7.54	23.25	28.49	24.33	26.83%
Private wage employees	2,012	1,301	3,313	1,187	732	1919
	29.08	33.96	30.82	26.63	24.67	25.85%
Private non-wage employees	2,107	652	2,759	786	119	905
	30.46	17.02	25.67	17.63	4.01	12.19%
Inactive and others	589	1,589	2,178	1,214	1,394	2608
	8.51	41.48	20.26	27.24	46.98	35.13%
Total	6918	3831	10749	4457	2967	7424
	100	100	100	100	100	100

Table 7: Employment Status by Age Group for Ever-married versus
Never Married Egyptian Females, age 16+

	For Females in Egypt									
	Ever Married					Never Married				
	16-25	26-35	36-45	45 and above	Total	16-25	26-35	36-45	45 and above	Total
Public wage work	54	243	389	288	974	74	49	23	7	153
	2.89%	10.52%	20.46%	10.57%	11.07%	2.99%	15.22%	24.73%	13.46%	5.20%
Private wage	32	57	58	27	174	176	64	11	0	251

19

work

1.71%	2.47%	3.05%	0.99%	1.98%	7.11%	19.88%	11.83%	0.00%	8.53%

Private non-wage employees	150	237	261	326	974	97	18	12	2	129
	8.03%	10.26%	13.73%	11.96%	11.06%	3.92%	5.59%	12.91%	3.85%	4.39%
Inactive and others	1632	1772	1193	2083	6680	2127	191	47	43	2408
	87.37%	76.74%	62.76%	76.47%	75.89%	85.97%	59.32%	50.54%	82.69%	81.88%
Total	1868	2309	1901	2724	8802	2474	322	93	52	2941
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Constructed by the author using the ELMPS dataset.

Table 8: Employment Status by Age Group for Ever-married versus Never Married Jordanian Females, age 16+

For females in Jordan										
	Ever Married					**Never Married**				
	16-25	**26-35**	**36-45**	**45 and >**	**Total**	**16-25**	**26-35**	**36-45**	**45 and >**	**Total**
Public wage employees	22	175	132	36	365	40	70	20	12	142
	3.57	11.82	9.96	2.01	7	2.46%	17.41	11.9	15.38	6.25
Private wage employees	10	70	55	28	163	103	92	38	4	237
	1.62	4.73	4.15	1.56	3.13	6.34%	22.89	22.62	5.13	10.43
Private non-wage employees	2	12	30	29	73	8	6	3	2	19
	0.32	0.81	2.26	1.62	1.41	0.49%	1.49	1.79	2.56	0.84
Inactive and others	583	1,223	1,108	1,700	4,614	1,473	234	107	60	1,874
	94.49	82.64	83.62	94.81	88.48	90.70%	58.21	63.69	76.92	82.48
Total	617	1480	1325	1793	5215	1624	402	168	78	2272
	100	**100**	**100**	**100**	**100**	**100%**	**100**	**100**	**100**	**100**

Source: Constructed by the author using the JLMPS dataset.

Table 9: Employment Status by Age Group for Ever-married versus Never Married Egyptian Males, age 16+

For males in Egypt										
	Ever Married					**Never Married**				
	16-25	**26-35**	**36-45**	**45 and >**	**Total**	**16-25**	**26-35**	**36-45**	**45 and >**	**Total**
Public wage employees	36	532	713	929	2,210	102	158	17	12	289
	8.87	24.46	39.59	36.63	31.95	3.61%	18.08	20.24	25.53	7.54
Private wage employees	217	968	488	339	2,012	880	380	33	8	1,301
	53.45	44.51	27.1	13.37	29.08	31.14%	43.48	39.29	17.02	33.96
Private non-wage employees	119	631	549	808	2107	442	178	21	11	652

	29.31	29.01	30.48	31.86	30.46	15.64%	20.37	24.99	23.41	17.02
Inactive and others	34	44	51	460	589	1,402	158	13	16	1,589
	8.37	2.02	2.83	18.14	8.51	0.4961	18.08	15.48	34.04	41.48
Total	406	2175	1801	2536	6918	2826	874	84	47	3831
	100	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: Constructed by the author using the ELMPS dataset.

Table 10: Employment Status by Age Group for Ever-married versus Never Married Jordanian Males, age 16+

For males in Jordan										
	Ever Married					**Never Married**				
	16-25	26-35	36-45	45 and >	Total	16-25	26-35	36-45	45 and >	Total
Public wage employees	46	522	471	231	1,270	429	276	15	2	722
	38.66	45.16	33.4	13.04	28.49	19.49%	40.47	23.81	9.52	24.33
Private wage employees	56	423	455	253	1,187	484	229	17	2	732
	47.06	36.59	32.27	14.28	26.63	21.99%	33.58	26.98	9.52	24.67
Private non-wage employees	11	137	290	348	786	62	42	11	4	119
	9.24	11.85	20.56	19.65	17.63	0.03	6.16	17.46	19.05	4.01
Inactive and others	6	74	194	940	1,214	1,226	135	20	13	1,394
	5.04	6.4	13.76	53.05	27.24	55.70%	19.79	31.75	61.9	46.98
Total	119	1156	1410	1772	4457	2201	682	63	21	2967
	100	**100**	**100**	**100**	**100**	**100%**	**100**	**100**	**100**	**100**

Source: Constructed by the author using the JLMPS dataset.

Table 11: Employment Status by Education Level and Gender in Egypt, age 16+

For Egypt											
	Males						**Females**				
	Illiterate	Below sec.	Sec.	Above sec.	Missing	Total	Illiterate	Below sec.	Sec.	Above sec.	Missing	Total
Public wage employees	184	447	851	1,017	0	**2,499**	21	26	488	592	0	**1,127**
	7.36	17.89	34.05	40.70	0.00	**100**	1.86	2.31	43.30	52.53	0.00	**100**
	9.30	16.66	22.20	45.14	0.00	**23.25**	0.51	1.22	14.14	34.99	0.00	**9.90**
Private wage employees	678	916	1,197	521	1	**3,313**	71	59	166	126	0	**422**
	20.46	27.65	36.13	15.73	0.03	**100**	16.82	13.98	39.34	29.86	0.00	**100**
	34.28	34.14	31.23	23.12	50.00	**30.82**	1.73	2.77	4.81	7.45	0.00	**3.71**
Private non-wage employees	851	758	815	335	0	**2759**	778	154	125	29	1	**1087**

21

	84.21	78.54	102.21	35.04	0.00	**300.00**	208.22	44.58	32.29	14.77	0.15	**300.00**
	43.03	28.25	21.27	14.86	0.00	**25.67**	18.94	7.23	3.62	1.71	33.33	**9.55**
Inactive and others	265	562	970	380	1	**2,178**	3,237	1,893	2,671	945	2	**8,748**
	12.17	25.80	44.54	17.45	0.05	**100**	37.00	21.64	30.53	10.80	0.02	**100**
	13.40	20.95	25.31	16.87	50.00	**20.26**	78.82	88.79	77.42	55.85	66.67	**76.84**
Total	1978	2683	3833	2253	2	**10749**	4107	2132	3450	1692	3	**11384**
	18.4	**24.96**	**35.66**	**20.96**	**0.02**	**100**	**36.08**	**18.73**	**30.31**	**14.86**	**0.03**	**100**
	100	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: Constructed by the author using the ELMPS dataset.

Table 12: Employment Status by Education Level and Gender in Jordan, age 16+

For Jordan										
	Males					**Females**				
	Illiterate	Below sec.	Sec.	Above sec.	Total	Illiterate	Below sec.	Sec.	Above secondary	Total
Public wage employees	32	948	392	620	1,992	6	58	44	399	507
	1.61	47.59	19.68	31.12	100	1.18	11.44	8.68	78.7	100
	6.97	24.68	24.95	39.92	26.83	0.54	1.87	2.81	23.53	6.77
Private wage employees	80	1,097	309	433	1,919	20	100	44	236	400
	4.17	57.17	16.1	22.56	100	5	25	11	59	100
	17.43	28.56	19.67	27.88	25.85	1.79	3.22	2.81	13.92	5.34
Private non-wage employees	48	498	169	190	905	15	33	20	24	92

13.96	156.77	54.97	74.31	300	53.51	91.94	74.02	80.53	300
10.46	12.96	10.76	12.24	12.19	1.35	1.07	1.27	1.41	1.23

Inactive and others	299	1,298	701	310	2,608	1,075	2,916	1,460	1,037	6,488
	11.46	49.77	26.88	11.89	100	16.57	44.94	22.5	15.98	100
	65.14	33.79	44.62	19.96	35.13	96.33	93.85	93.11	61.14	86.66
Total	459	3841	1571	1553	7424	1116	3107	1568	1696	7487
	6.18	**51.74**	**21.16**	**20.92**	**100**	**14.91**	**41.5**	**20.94**	**22.65**	**100**
	100	100	100	100	100	100	100	100	100	100

Source: Constructed by the author using the JLMPS dataset.

Table 13: Employment Status by Education Level for Ever-married versus Never-Married Egyptian Females, age 16+

	Ever Married						Never Married					
	Illiterate	Below sec.	Sec.	Above sec.	Missing	**Total**	Illiterate	Below sec.	Sec.	Above sec.	Missing	**Total**
Public wage employees	21	21	448	484	0	**974**	0	5	40	108	0	**153**
	2.16	2.16	46.00	49.69	0.00	**100**	0.00	3.27	26.14	70.59	0.00	**100**
	0.56	1.41	19.59	38.84	0.00	**11.08**	0.00	0.78	3.44	24.22	0.00	**5.9**
Private wage employees	49	24	47	54	0	**174**	22	35	119	72	0	**248**
	28.16	13.79	27.01	31.03	0.00	**100**	8.87	14.11	47.98	29.03	0.00	**100**
	1.30	1.61	2.06	4.33	0.00	**1.98**	6.43	5.44	10.23	16.14	0.00	**9.56**
Private non-wage employees	727	122	97	25	1	**972**	51	32	28	4	0	**115**
	215.36	41.93	29.88	12.66	0.17	**300.00**	112.66	61.33	42.67	83.34	0.00	**300.00**
	19.31	8.19	4.24	2.00	50.00	**11.06**	14.91	4.97	2.41	0.90	0.00	**4.43**
Inactive and others	2,968	1,322	1,695	683	1	**6,669**	269	571	976	262	1	**2,079**
	44.5	19.8	25.4	10.2	0.0	**100**	12.94	27.47	46.95	12.60	0.05	**100**
	78.8	88.8	74.1	54.8	50.0	**75.88**	78.65	88.80	83.92	58.74	100.00	**80.12**

Total	3765	1489	2287	1246	2	**8789**	342	643	1163	446	1	**2595**
	42.84	**16.94**	**26.02**	**14.18**	**0.02**	**100**	**13.18**	**24.78**	**44.82**	**17.19**	**0.04**	**100**
	100	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Table 14: Employment Status by Education Level for Ever-married versus Never Married Jordanian Females, age 16+

	Ever Married					Never Married				
	Illiterate	Below sec.	Sec.	Above sec.	Total	Illiterate	Below sec.	Sec.	Above sec.	Total
Public wage employees	5	41	27	292	365	1	17	17	107	142
	1.37	11.23	7.40	80.00	100	0.70	11.97	11.97	75.35	100
	0.48	1.87	3.34	25.02	7	1.35	1.87	2.24	20.23	6.25
Private wage employees	16	40	12	95	163	4	60	32	141	237
	9.82	24.54	7.36	58.28	100	1.69	25.32	13.50	59.49	100
	1.54	1.82	1.49	8.14	3.13	5.41	6.60	4.21	26.65	10.43
Private non-wage employees	14	26	17	16	73	1	7	3	8	19
	66.41	86.29	79.84	67.45	300.00	14.29	128.57	36.51	120.63	300.00
	1.34	1.19	2.10	1.37	1.41	1.35	0.77	0.39	1.52	0.84
Inactive and others	1,007	2,091	752	764	4,614	68	825	708	273	1,874
	21.82	45.32	16.3	16.56	100	3.63	44.02	37.78	14.57	100
	96.64	95.13	93.07	65.47	88.48	91.89	90.76	93.16	51.61	82.48
Total	1042	2198	808	1167	5215	74	909	760	529	2272
	19.98	**42.15**	**15.49**	**22.38**	**100**	**3.26**	**40.01**	**33.45**	**23.28**	**100**
	100	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Table 15: Employment Status by Education Level for Ever-married
versus Never Married Egyptian Males, age 16+

	Ever Married						Never Married					
	Illiterate	Below sec.	Sec.	Above sec.	Missing	Total	Illiterate	Below sec.	Sec.	Above sec.	Missing	Total
Public wage employees	176	418	748	868	0	2,210	8	29	103	149	0	289
	7.96	18.91	33.85	39.28	0.00	100.00	2.77	10.03	35.64	51.56	0.00	100.00
	10.80	23.15	38.52	56.40	0.00	31.95	2.30	3.31	5.45	20.87	0.00	7.54
Private wage employees	519	581	606	305	1	2,012	159	335	591	216	0	1,301
	25.80	28.88	30.12	15.16	0.05	100.00	12.22	25.75	45.43	16.60	0.00	100.00
	31.84	32.17	31.20	19.82	100.00	29.08	45.69	38.20	31.25	30.25	0.00	33.96
Private non-wage employees	774	618	471	244	0	2107	77	140	344	91	0	652
	106.75	81.32	79.37	32.56	0.00	300.00	32.00	69.65	146.02	52.33	0.00	300.00
	47.48	34.23	24.25	15.85	0.00	30.46	22.13	15.96	18.19	12.74	0.00	17.02
Inactive and others	161	189	117	122	0	589	104	373	853	258	1	1,589
	27.33	32.09	19.86	20.71	0.00	100.00	6.54	23.47	53.68	16.24	0.06	100
	9.88	10.47	6.02	7.93	0.00	8.51	29.89	42.53	45.11	36.13	100.00	41.48
Total	1630	1806	1942	1539	1	6918	348	877	1891	714	1	3831
	23.56	**26.11**	**28.07**	**22.25**	**0.01**	**100**	**9.08**	**22.89**	**49.36**	**18.64**	**0.03**	**100**
	100	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Table 16: Employment Status by Education Level for Ever-married versus Never Married Jordanian Males, age 16+

	Ever Married					Never Married				
	Illiterate	Below sec.	Sec.	Above sec.	Total	Illiterate	Below sec.	Sec.	Above sec.	Total
Public wage employees	30	579	244	417	1,270	2	369	148	203	722
	2.36	45.59	19.21	32.83	100	0.28	51.11	20.5	28.12	100
	7.54	25.32	33.33	40.1	28.49	3.28	23.75	17.64	39.57	24.33
Private wage employees	70	656	183	278	1,187	10	441	126	155	732
	5.90	55.27	15.42	23.42	100	1.37	60.25	17.21	21.17	100
	17.59	28.68	25.00	26.73	26.63	16.39	28.38	15.02	30.21	24.67
Private non-wage employees	45	431	147	163	786	3	67	22	27	119
	11.18	157.67	37.74	93.40	300.00	8.64	164.50	56.26	70.60	300.00
	11.31	18.84	20.08	15.67	17.63	4.92	4.31	2.63	5.26	4.01
Inactive and others	253	621	158	182	1,214	46	677	543	128	1,394
	20.84	51.15	13.01	14.99	100	3.30	48.57	38.95	9.18	100
	63.57	27.15	21.58	17.5	27.24	75.41	43.56	64.72	24.95	46.98
Total	**398**	**2287**	**732**	**1040**	**4457**	**61**	**1554**	**839**	**513**	**2967**
	8.93	**51.31**	**16.42**	**23.33**	**100**	**2.06**	**52.38**	**28.28**	**17.29**	**100**
	100	100	100	100	100	100	100	100	100	100

Source: Constructed by the author using the JLMPS dataset.

Table 17: Employment Transitions at Marriage in Egypt

For Egypt					
	Type of Employment At Marriage				
	Public wage work	Private wage work	Private non-wage employees	Inactive and others	Total
Employment status 1 year before marriage					
MALES					
Public wage work	2,138	15	6	1	2,160
	98.98	0.69	0.28	0.05	100
Private wage work	61	2,674	66	21	2,822
	2.16	94.76	2.34	0.74	100
Private non-wage employees	32	43	1,967	13	2,055
	1.56	2.09	95.72	0.63	100
Inactive and others	98	81	43	180	402
	24.38	20.15	10.7	44.78	100
Total	2,329	2,813	2,082	215	7,439
	31.31	**37.81**	**27.99**	**2.89**	**100**
FEMALES					
Public wage work	715	1	1	41	758
	94.33	0.13	0.13	5.41	100
Private wage work	1	166	8	121	296
	0.34	56.08	2.7	40.88	100
Private non-wage employees	0	1	443	62	506
	0	0.2	87.55	12.25	100
Inactive and others	111	28	206	125	470
	23.62	5.96	43.83	26.6	100
Total	827	196	658	349	2,030
	40.74	**9.66**	**32.41**	**17.19**	**100**

Source: Constructed by the author using the ELMPS dataset.

Table 18: Employment Transitions at Marriage in Jordan

	Public wage work	Private wage work	Private non-wage work	Inactive and others	Total
	Type of Employment At Marriage				
Employment status 1 year before marriage					
MALES					
Public wage work	1,808	20	2	12	1,842
	98.15	1.09	0.11	0.65	100
Private wage work	23	1,553	27	15	1,618
	1.42	95.98	1.67	0.93	100
Private non-wage work	3	13	536	2	554
	0.54	2.35	96.75	0.36	100
Inactive and others	5	11	3	162	181
	2.76	6.08	1.66	89.5	100
Total	1,839	1,597	568	191	4,195
	43.84	38.07	13.54	4.55	100
FEMALES					
Public wage work	286	3	0	19	308
	92.86	0.97	0	6.17	100
Private wage work	4	172	1	113	290
	1.38	59.31	0.34	38.97	100
Private non-wage work	0	2	24	18	44
	0	4.55	54.55	40.91	100
Inactive and others	2	0	1	135	138
	1.45	0	0.72	97.83	100
Total	292	177	26	285	780
	37.44	**22.69**	**3.33**	**36.54**	**100**

Source: Constructed by the author using the JLMPS dataset.

Table 19: Empirical Results of the Multinomial Logit Model for Females in Egypt & Jordan

	Egypt			Jordan		
	Public work	**Private wage work**	**Private non-wage work**	**Public work**	**Private wage work**	**Private non-wage work**
Ref: Inactivity						
married	-0.0917	-1.659***	0.398**	0.0548	-1.450***	-0.0147
	-0.202	-0.224	-0.19	-0.271	-0.248	-0.558
age 15-25	-3.193***	-0.146	-0.349***	-0.990***	-0.559**	-2.038***
	-0.154	-0.251	-0.115	-0.235	-0.252	-0.481
age26-35	-1.762***	0.690***	0.222**	0.933***	1.002***	-0.710**
	-0.118	-0.236	-0.102	-0.18	-0.222	-0.331
age 36-45	0.0615	1.221***	0.467***	0.855***	0.994***	0.207
	-0.115	-0.235	-0.0969	-0.186	-0.226	-0.276
below secondary	1.256***	-0.257	-0.800***	0.972**	-0.17	0.127
	-0.298	-0.19	-0.0998	-0.44	-0.27	-0.342
secondary	4.519***	0.560***	-1.194***	1.550***	-0.372	0.54
	-0.233	-0.165	-0.111	-0.449	-0.298	-0.385
above secondary	5.683***	1.225***	-1.362***	3.963***	1.707***	0.833**
	-0.24	-0.179	-0.203	-0.424	-0.261	-0.367
urban region	-0.158*	0.258**	-0.796***	-0.558***	0.731***	0.00964
	-0.0931	-0.116	-0.0773	-0.113	-0.149	-0.245
father is wage worker	-0.281	0.179	-0.42	0.242	-0.273	13.66
	-0.548	-1.031	-0.509	-1.061	-0.672	-1,174
father is employer	-0.358	-0.226	-0.122	-0.0292	-0.473	13.75
	-0.551	-1.036	-0.509	-1.065	-0.679	-1,174
father is unpaid worker	1.105	0.884	-1.008	-0.147	-0.0845	13.68
	-1.063	-1.482	-0.946	-1.101	-0.726	-1,174
mother is wage worker	0.473***	0.366	-0.29	11.77	13.45	13.96
	-0.172	-0.286	-0.375	-1,667	-1,866	-3,521
mother is employer	0.439	-1.271	1.834***	11.72	12.58	14.3
	-0.341	-1.011	-0.148	-1,667	-1,866	-3,521
mother is unpaid worker	0.55	-1.325	1.731***	11.81	12.56	13.11
	-0.352	-1.01	-0.115	-1,667	-1,866	-3,521
Constant	-4.279***	-3.035***	-1.686***	-17.12	-15.95	-31.11
	-0.623	-1.071	-0.543	-1,667	-1,866	-3,711
Log likelihood	-6706.165	-6706.165	-6706.165	-3044.57	-3044.57	-3044.57
Pseudo R2	0.254	0.254	0.254	0.224	0.224	0.224

N			11743	11743	11743	7822	7822	7822

Notes: i. Coefficients & Standard errors are presented in the Table. ii. *** p<0.01, ** p<0.05, * p<0.1. ii. The reference age-group is above 45 years old. iii. The reference level of education is "being illiterate". iv. The reference parental employment status is "inactivity".

Table 20: Marginal Effects derived from the Multinomial Logit Model for Females in Egypt

	Public work		Private wage work		Private non-wage work		Inactive & others	
	dy/dx		dy/dx		dy/dx		dy/dx	
Probabity for the ref. ind.	0.020		0.025		0.064		0.890	
married	-0.001		-0.067	***	0.026	***	0.043	***
	0.004		0.014		0.009		0.017	
age 15-25	-0.060	***	-0.001		-0.016	**	0.078	***
	0.006		0.006		0.006		0.010	
age26-35	-0.025	***	0.021	**	0.014	**	-0.010	
	0.002		0.008		0.007		0.010	
age 36-45	0.000		0.044	***	0.028	***	-0.072	***
	0.002		0.012		0.007		0.013	
below secondary	0.040		-0.006		-0.041	***	0.007	
	0.013		0.004		0.004		0.013	
secondary	0.337	***	0.005		-0.071	***	-0.270	***
	0.025		0.004		0.004		0.024	
above secondary	0.721	***	-0.001		-0.073	***	-0.647	***
	0.029		0.004		0.003		0.027	
urban region	-0.002		0.008	***	-0.051	***	0.045	***
	0.002		0.003		0.005		0.006	
father is wage worker	-0.005		0.005		-0.025		0.025	
	0.011		0.026		0.030		0.041	
father is employer	-0.007		-0.005		-0.006		0.018	
	0.010		0.024		0.030		0.039	
father is unpaid worker	0.039		0.034		-0.042	**	-0.031	
	0.059		0.082		0.021		0.101	
mother is wage worker	0.012	**	0.011		-0.017		-0.006	
	0.005		0.010		0.017		0.020	
mother is employer	0.004		-0.021	***	0.232	***	-0.215	***
	0.008		0.006		0.030		0.030	
mother is unpaid worker	0.007		-0.021	***	0.207	***	-0.193	***
	0.009		0.00592		0.022		0.024	

Notes: i. marginal effects & standard errors are presented in the Table. ii. *** p<0.01, ** p<0.05, * p<0.1. ii. The reference age-group is above 45 years old. iii. The reference level of education is "being illiterate". iv. The reference parental employment status is "inactivity".

Table 21: Marginal Effects derived from the Multinomial Logit Model
for Females in Jordan

	Public work		Private wage work		Private non-wage work		Inactive & others	
	dy/dx		dy/dx		dy/dx		dy/dx	
Probabity for the ref. ind.	0.024		0.029		0.009		0.938	
married	0.003		-0.055		0.000	**	0.052	
	0.007		0.061		0.006		0.060	
age 15-25	-0.020		-0.014		-0.015	*	0.048	
	0.021		0.017		0.128		0.122	
age26-35	0.027		0.036		-0.006	*	-0.057	
	0.028		0.041		0.050		0.069	
age 36-45	0.025		0.037		0.001	*	-0.063	
	0.026		0.042		0.011		0.046	
below secondary	0.025		-0.006		0.001	*	-0.021	
	0.028		0.010		0.009		0.030	
secondary	0.061		-0.011		0.005	*	-0.055	
	0.065		0.014		0.043		0.073	
above secondary	0.325		0.049		0.003	*	-0.377	
	0.240		0.060		0.027		0.209	
urban region	-0.016		0.018		0.000	***	-0.003	
	0.016		0.021		0.002		0.026	
father is wage worker	-0.021	***	-0.032	***	0.951	***	-0.899	***
	0.844		0.762		30.130		28.525	
father is employer	-0.024		-0.033		0.996		-0.938	
	0.091		0.086		3.607		3.444	
father is unpaid worker	-0.024		-0.029		0.995		-0.941	
	0.028		0.037		0.528		0.503	
mother is wage worker	0.080	***	0.579	***	0.297	***	-0.955	
	205.490		765.520		796.320		1.464	
mother is employer	0.093	***	0.301	***	0.548	***	-0.942	
	290.660		760.010		933.090		0.509	
mother is unpaid worker	0.265	***	0.416	***	0.155	***	-0.836	***
	143.56		188.61		168.34		60.053	

Notes: i. marginal effects & standard errors are presented in the Table. ii. *** p<0.01, ** p<0.05, * p<0.1. ii. The reference age-group is above 45 years old. iii. The reference level of education is "being illiterate". iv. The reference parental employment status is "inactivity".

Figures

Figure 1: Average Age of First Marriage by Gender in Egypt and Jordan

Figure 2: Distribution of the Age of First Marriage by Gender

Jordan	Egypt
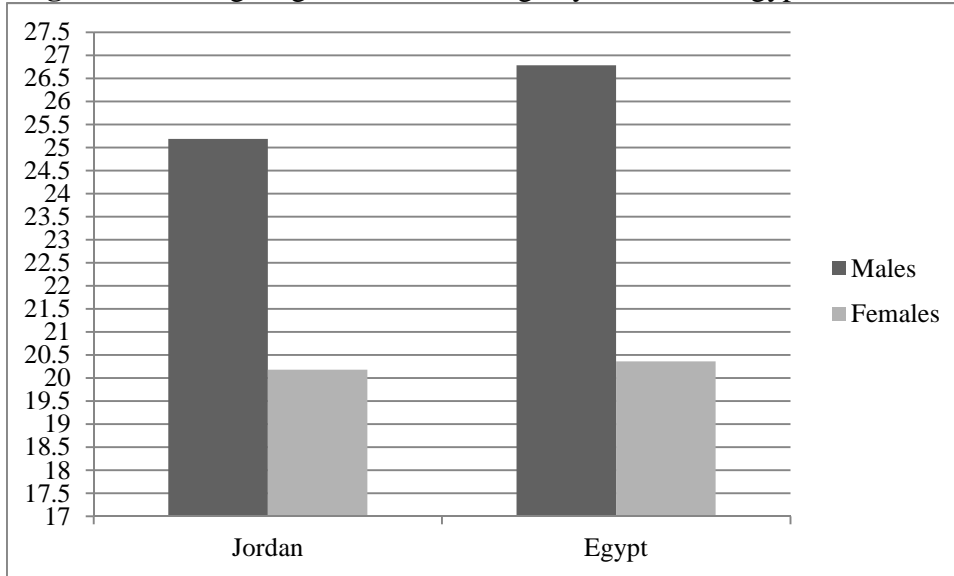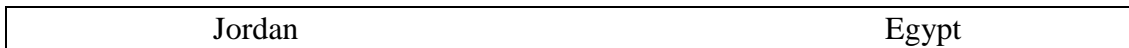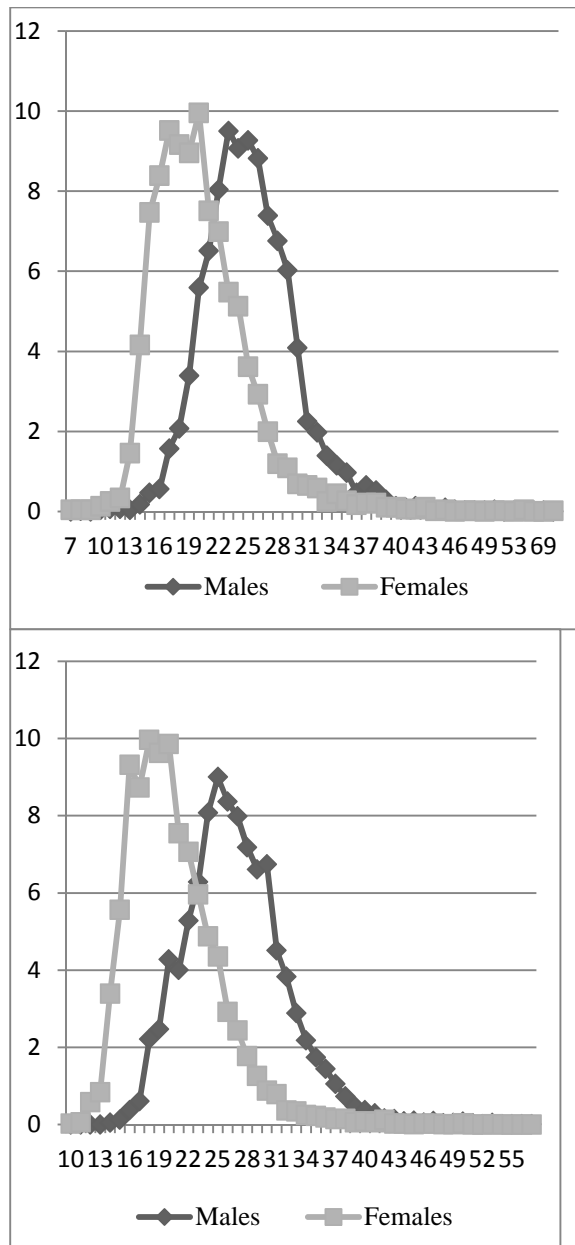
Source: Constructed by the author using the ELMPS & JLMPS datasets.

Figure 3: Marriage and Labor Market Dynamics by Employment Sector
for Ever-Married Egyptian Females (no age restrictions)
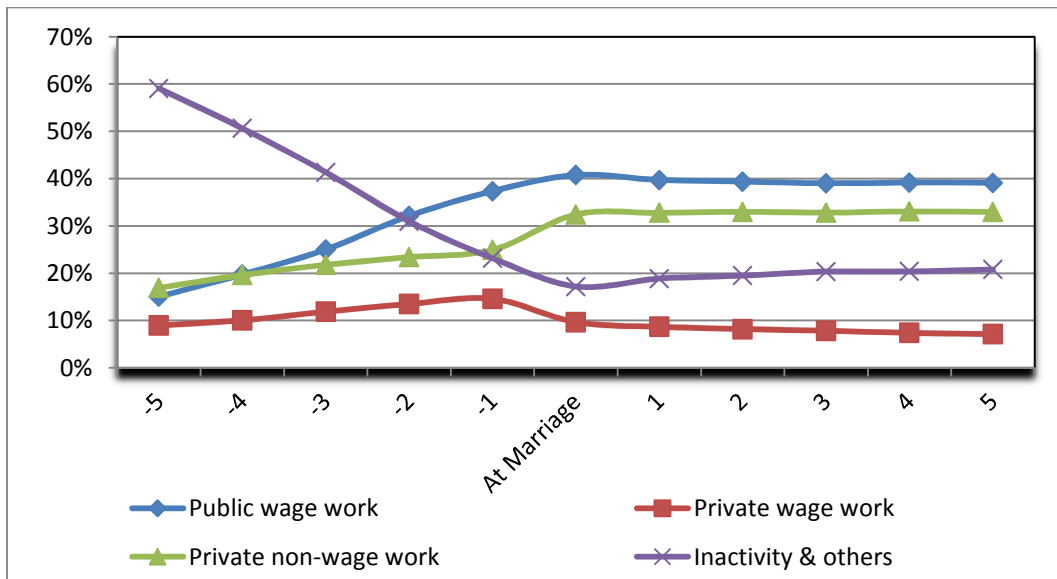
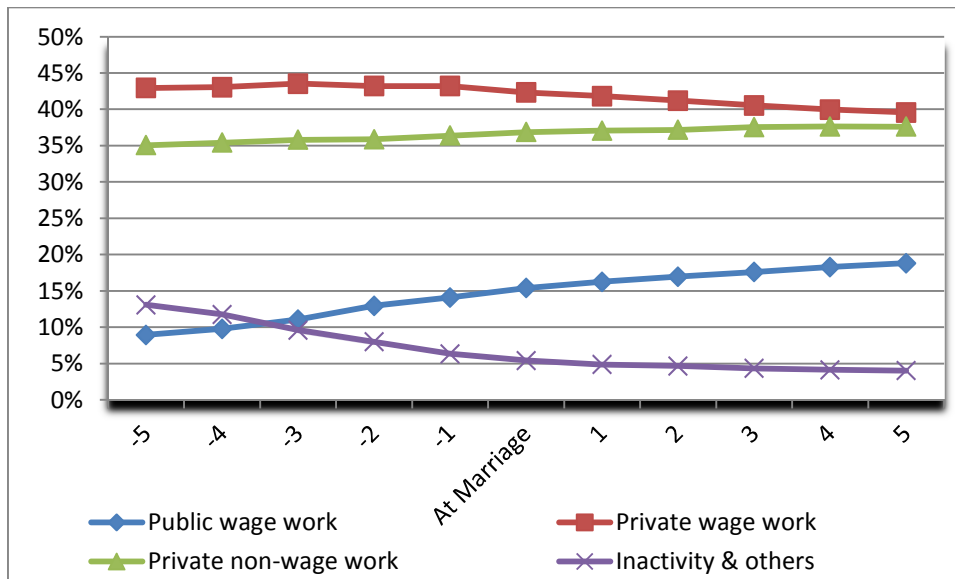**Figure 4:** Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Jordanian Females (no age restrictions)
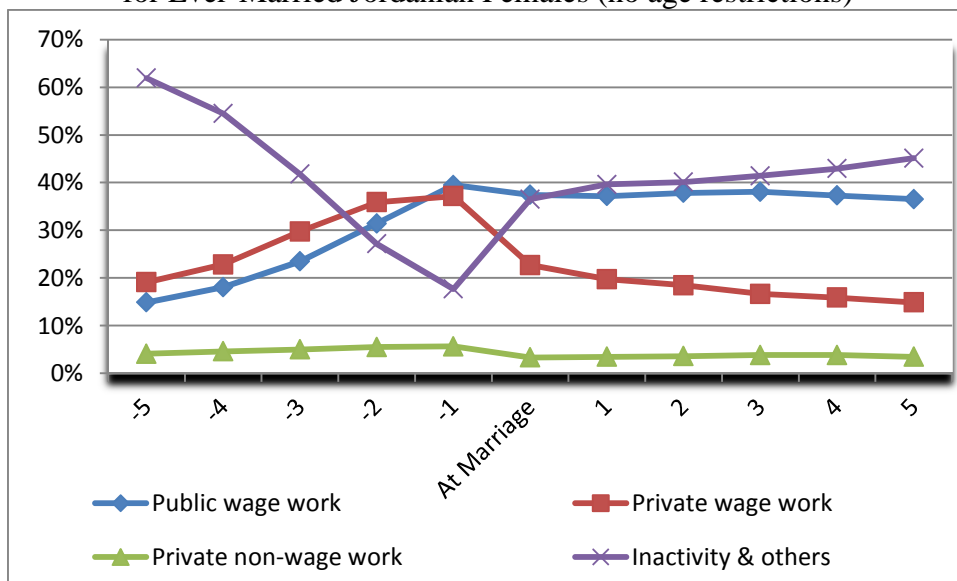
Figure 5: Marriage and Labor Market Dynamics by Employment Sector for Below Secondary Educated, Ever-Married Egyptian Females (no age restrictions)
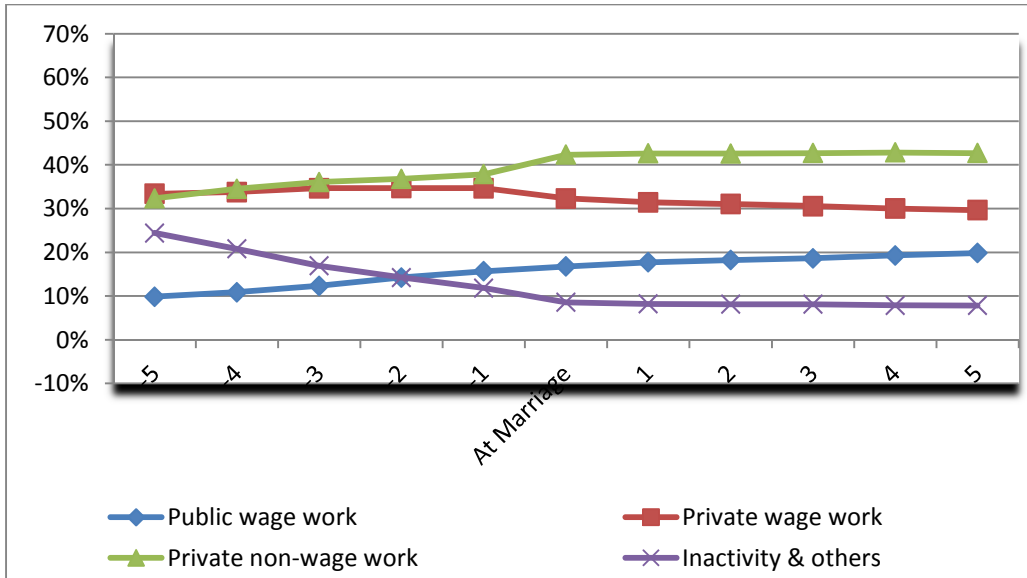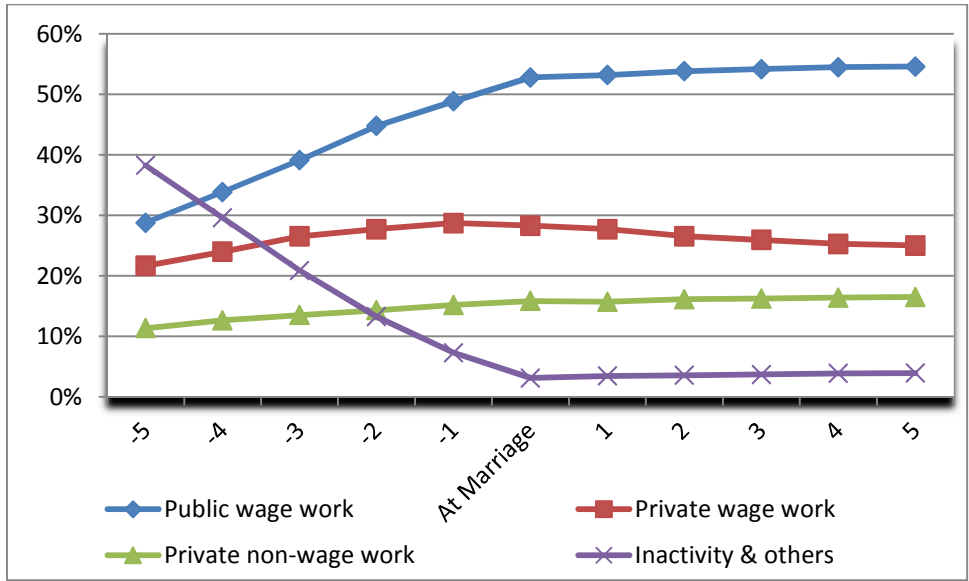
Figure 6: Marriage and Labor Market Dynamics by Employment Sector for Below Secondary Educated, Ever-Married Jordanian Females (no age restrictions)
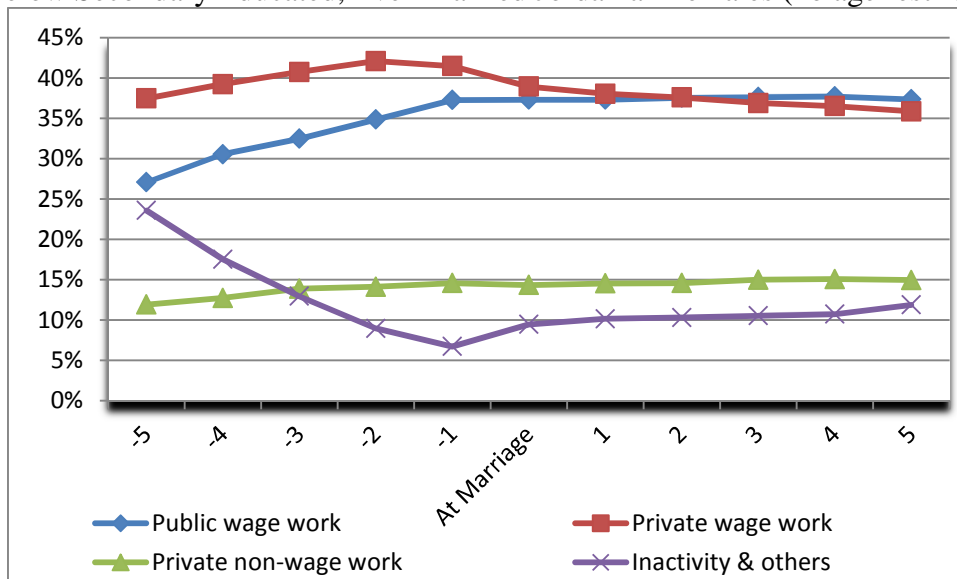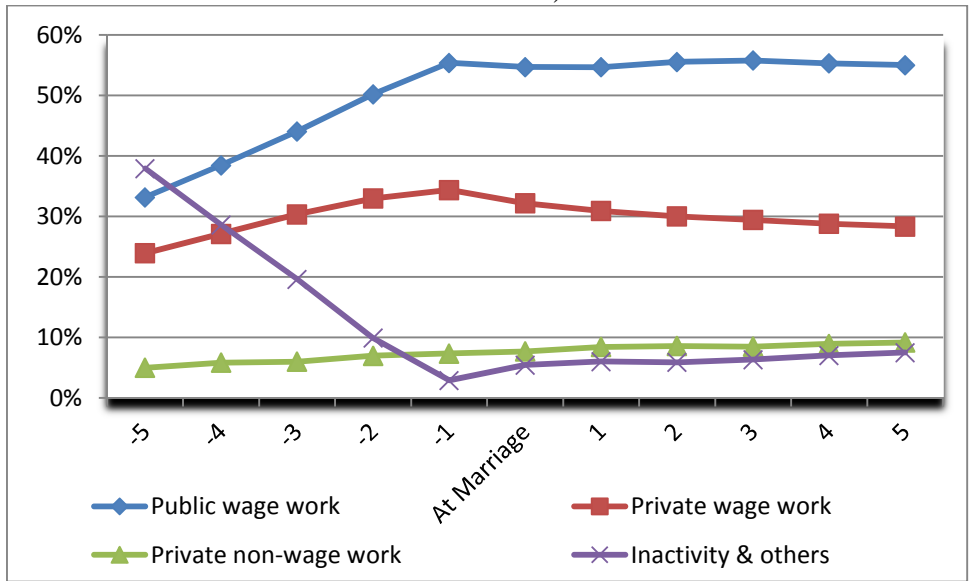
Figure 7: Marriage and Labor Market Dynamics by Employment Sector for Secondary and Above Educated, Ever-Married Egyptian Females (no age restrictions)
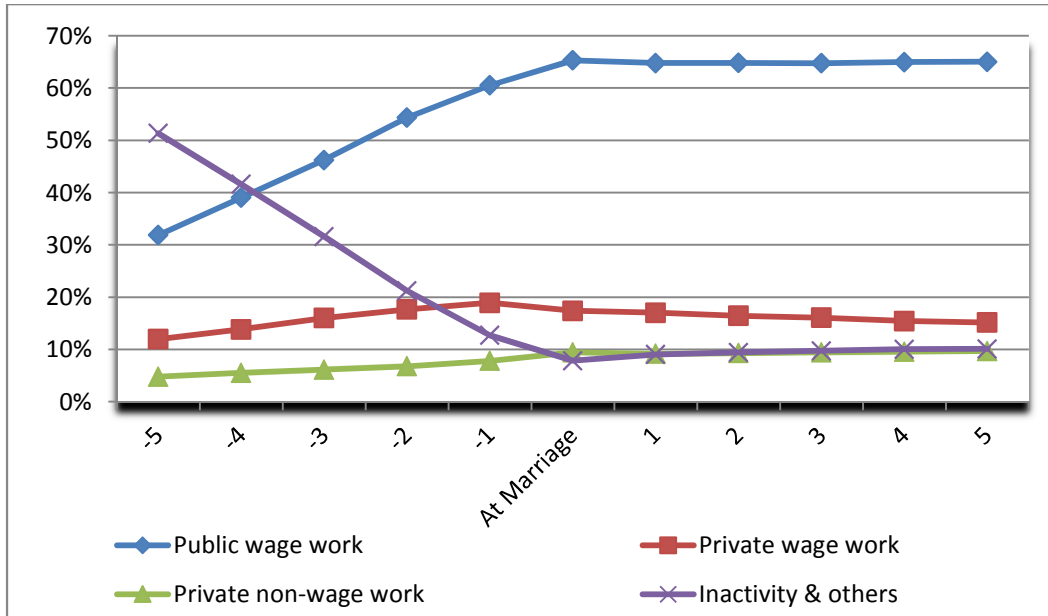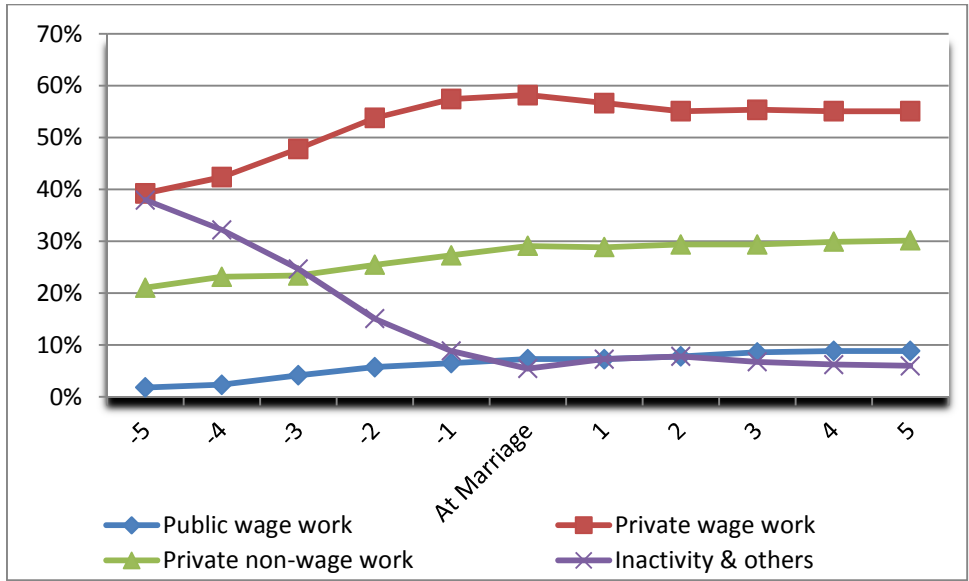
Figure 8: Marriage and Labor Market Dynamics by Employment Sector for Secondary and Above Educated, Ever-Married Jordanian Females (no age restrictions)
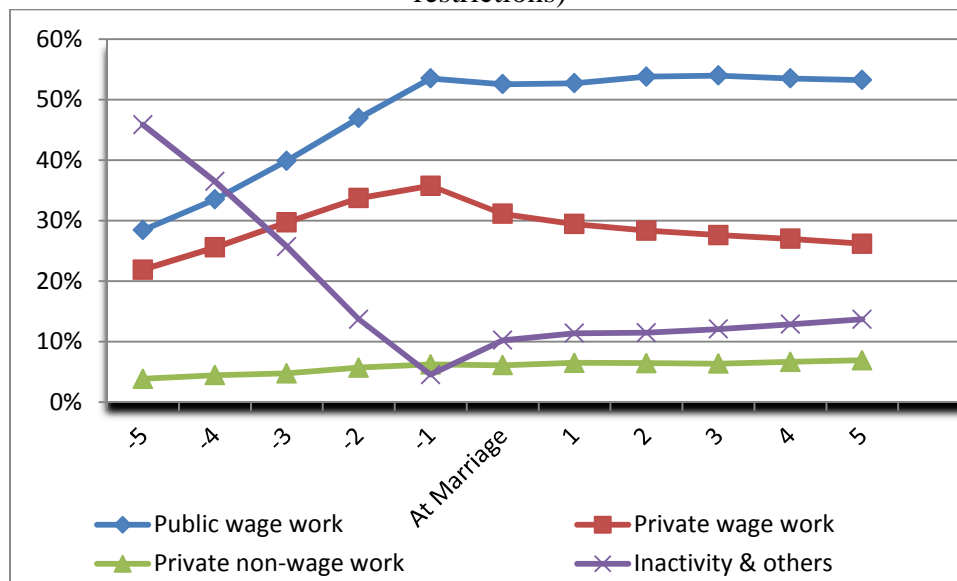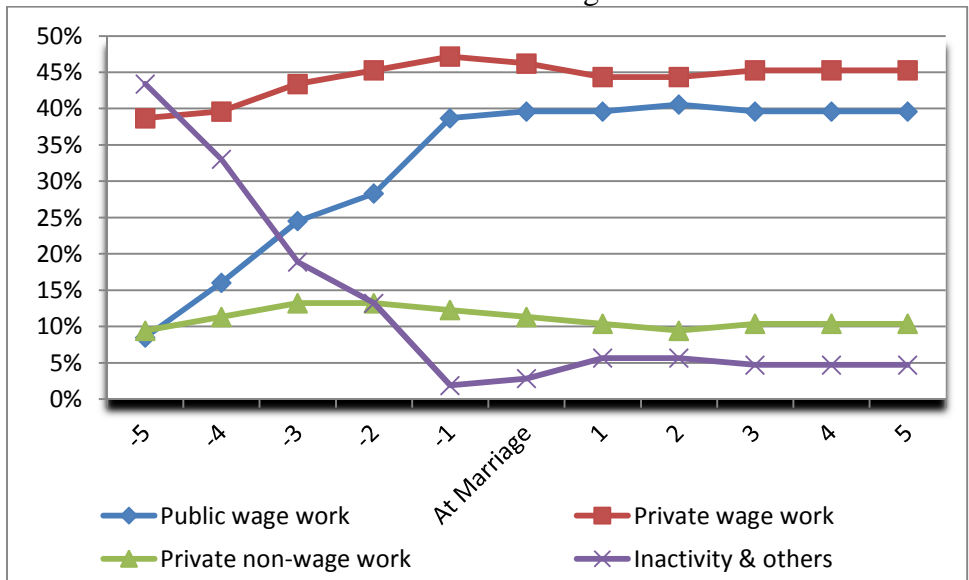
Figure 9: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Egyptian Females whose Mothers are Waged Employees
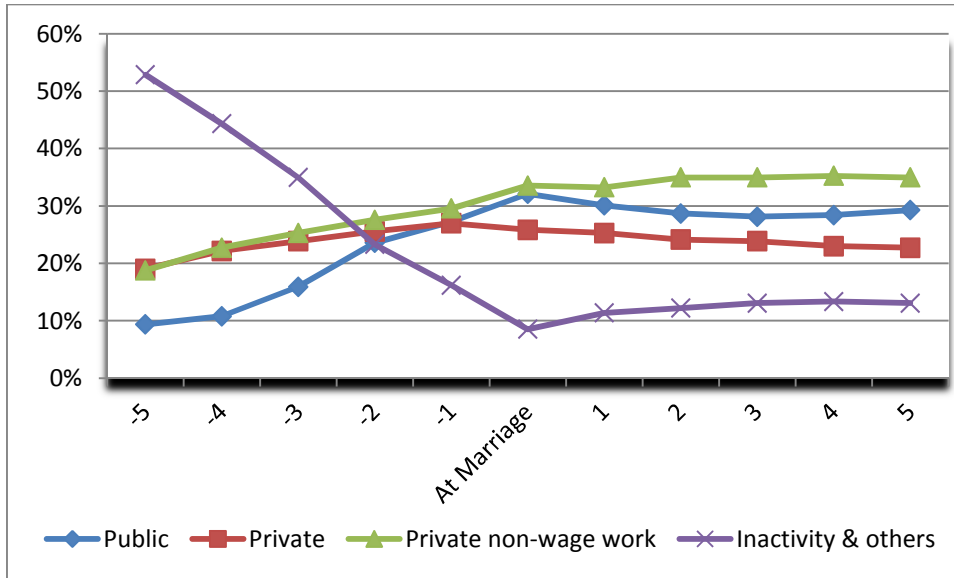
Source: Constructed by the author using the ELMPS dataset.
Note: Only the ever-married and ever-worked population is considered.

Figure 10: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Jordanian Females whose Mothers are Waged Employees
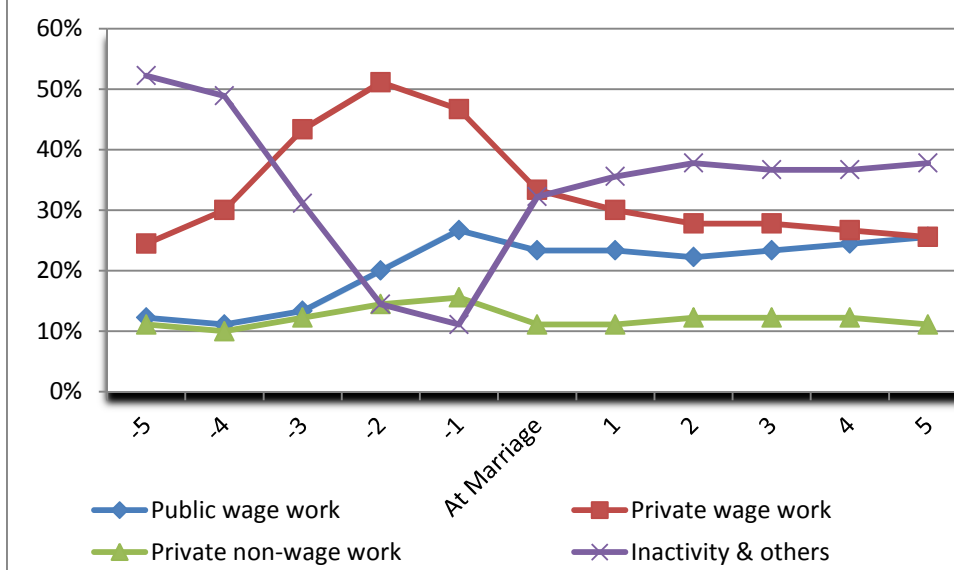
Source: Constructed by the author using the JLMPS dataset.
Note: Only the ever-married and ever-worked population is considered.

Figure 11: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Egyptian Females whose Mothers are Inactive
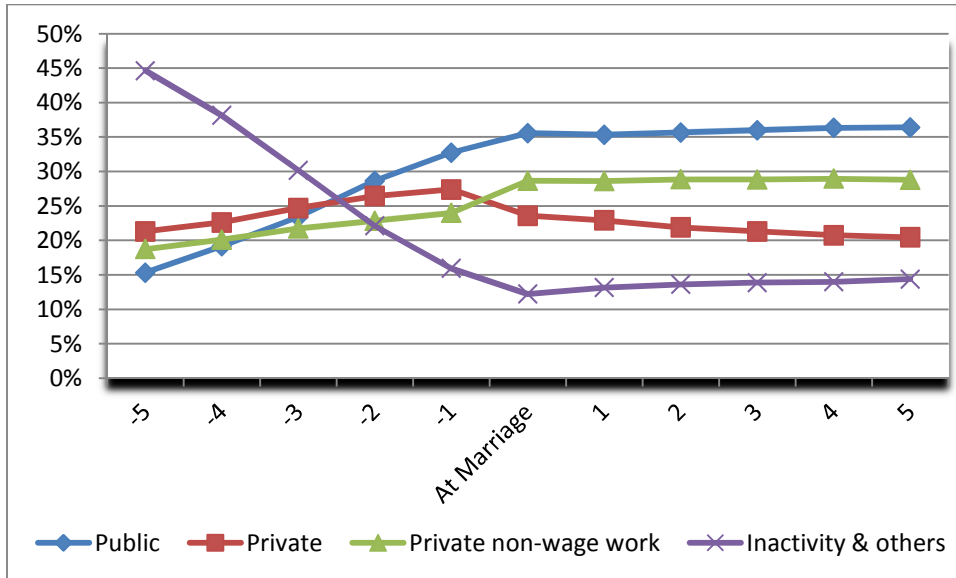
Figure 12: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Jordanian Females whose Mothers are Inactive
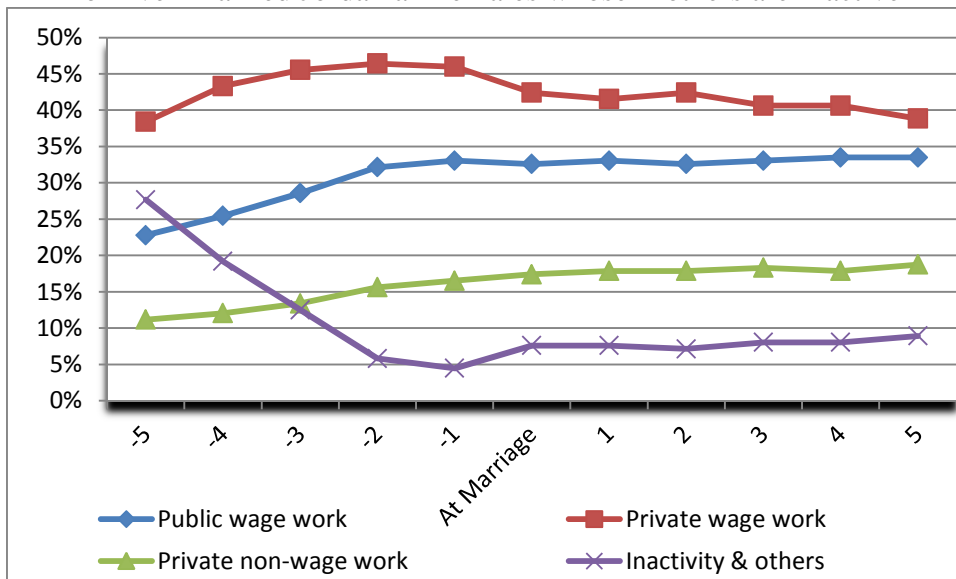
Figure 13: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Egyptian Females whose Fathers are Waged Employees (no age restrictions)
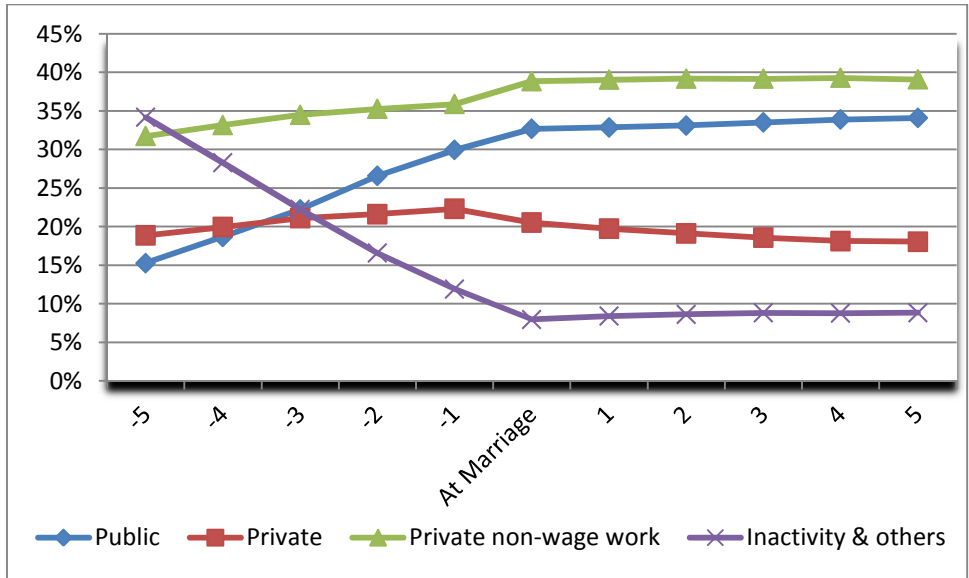
Figure 14: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Jordanian Females whose Fathers are Waged Employees (no age restrictions)
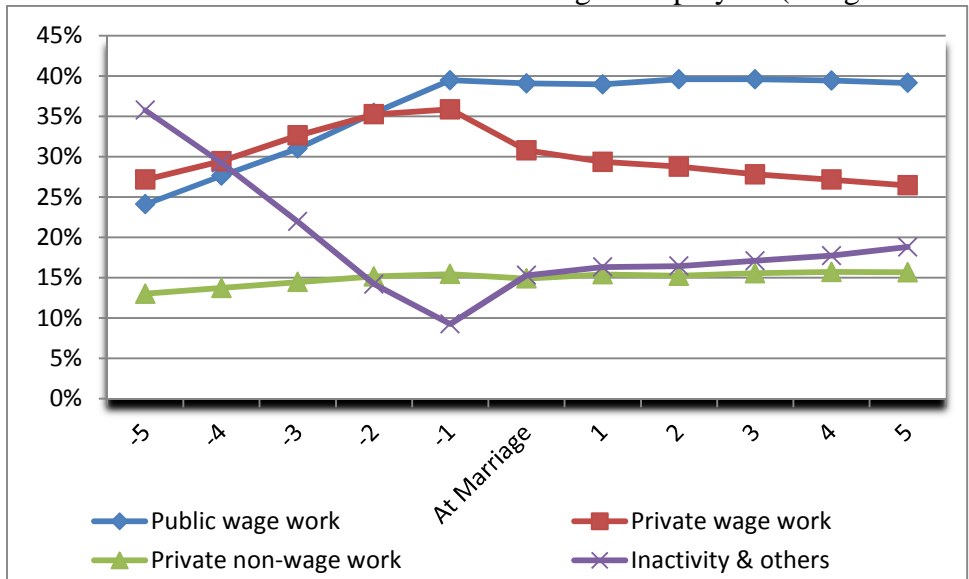
Figure 15: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Egyptian Females whose Fathers are Inactive
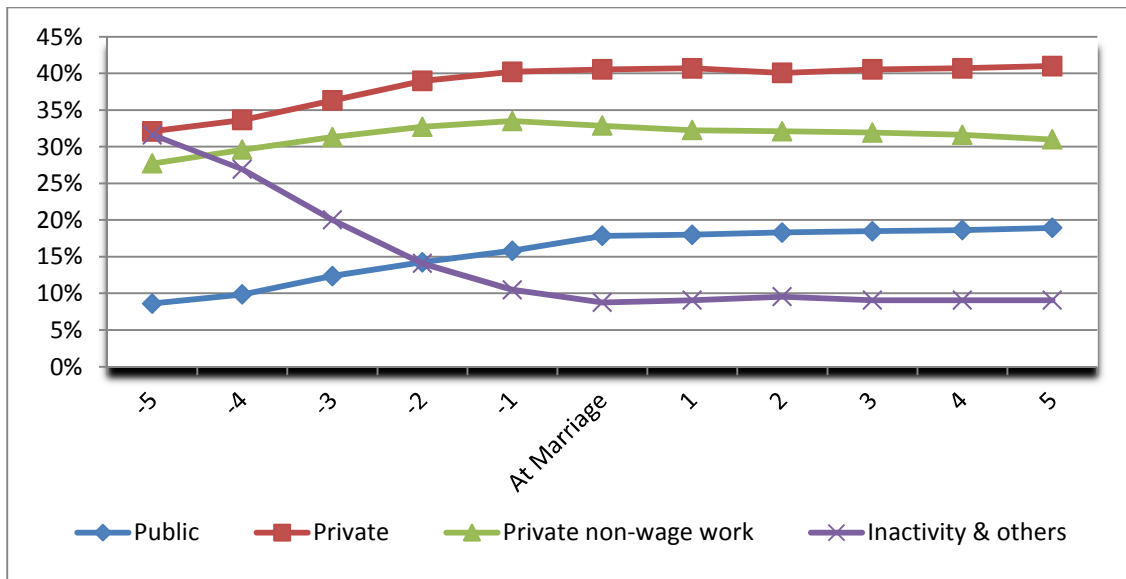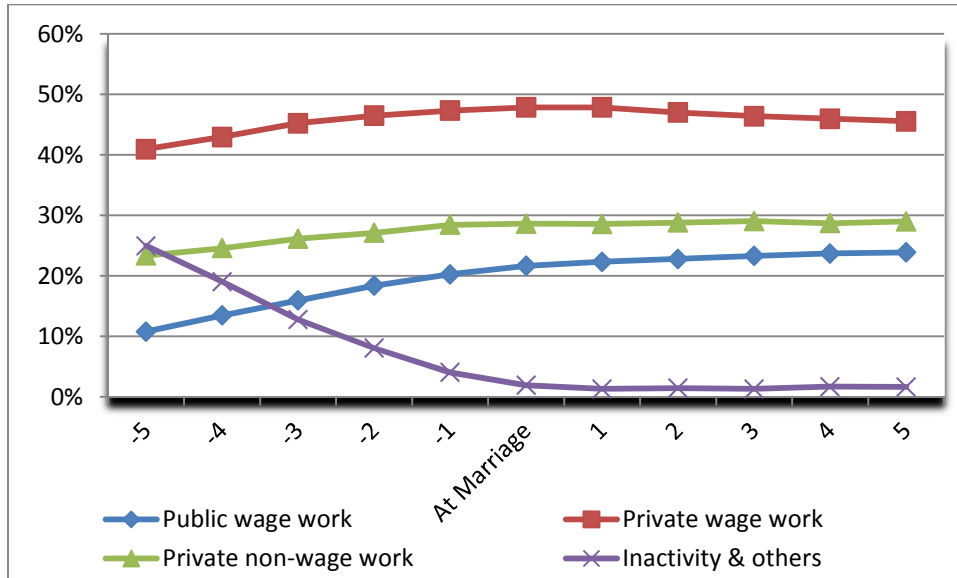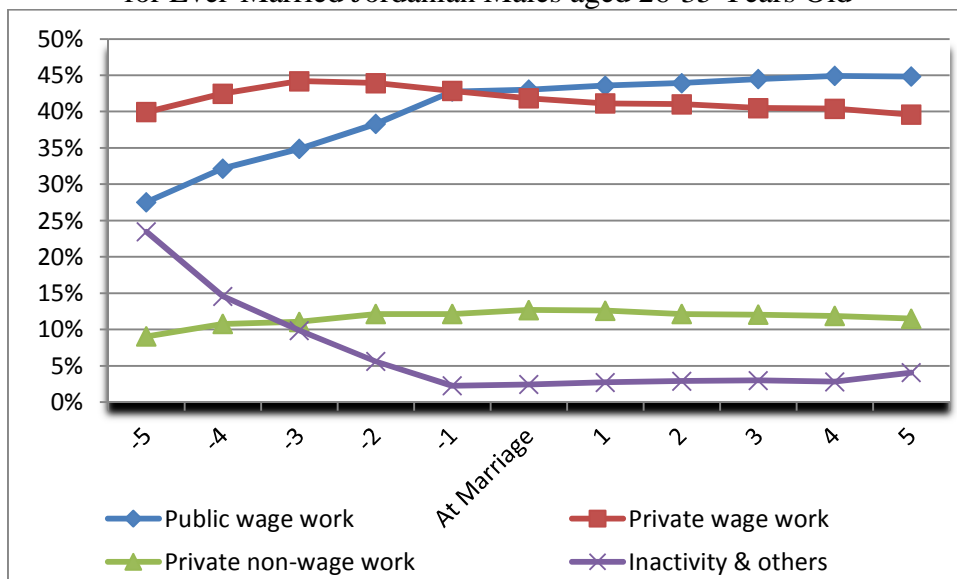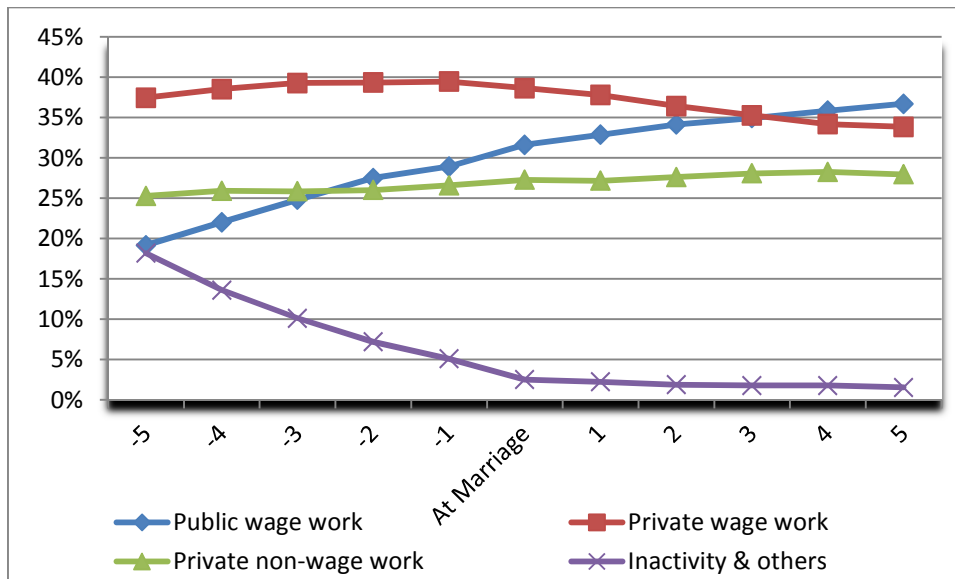
Source: Constructed by the author using the ELMPS dataset.
Note: Only the ever-married and ever-worked population is considered.

Figure 16: Marriage and Labor Market Dynamics by Employment Sector
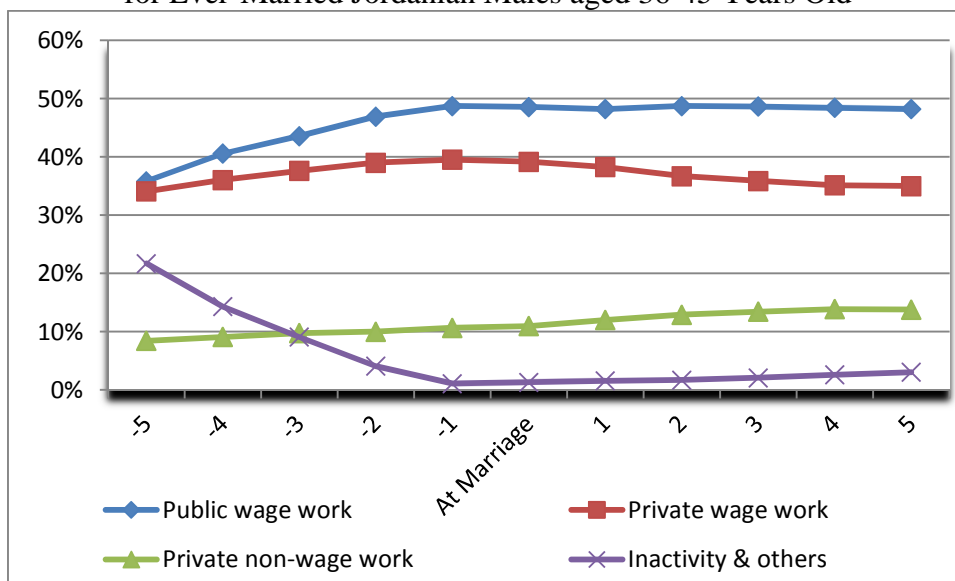for Ever-Married Jordanian Females whose Fathers are Inactive
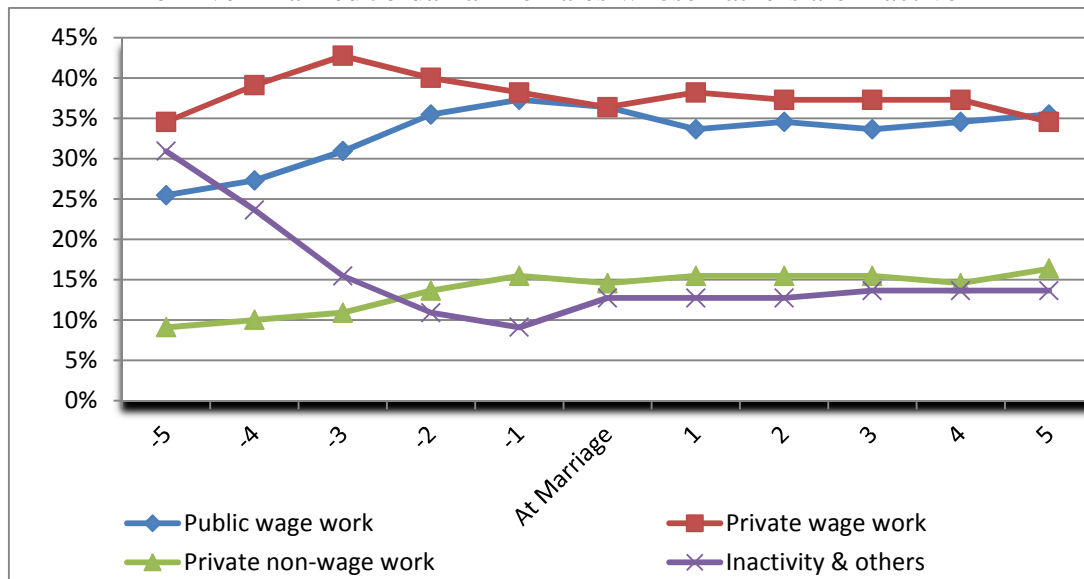
Source: Constructed by the author using the JLMPS dataset.
Note: Only the ever-married and ever-worked population is considered.

Appendix A: Further Dynamic Analysis on Marriage and females work

Figure A.1: Marriage and Labor Market Dynamics by Employment Sector
for Egyptian Females aged 16-25 Years Old
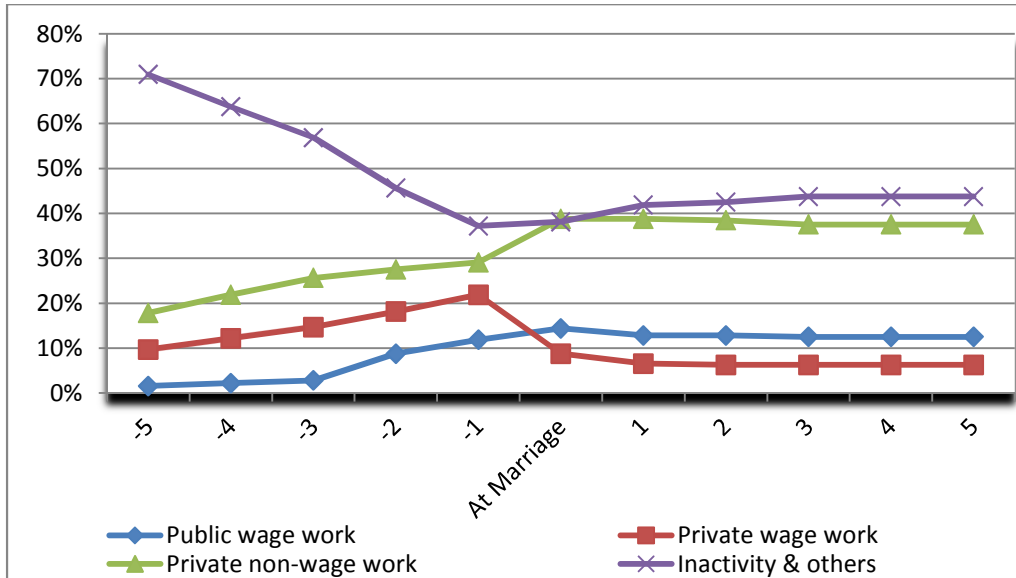
Figure A.2: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Jordanian Females aged 16-25 Years Old
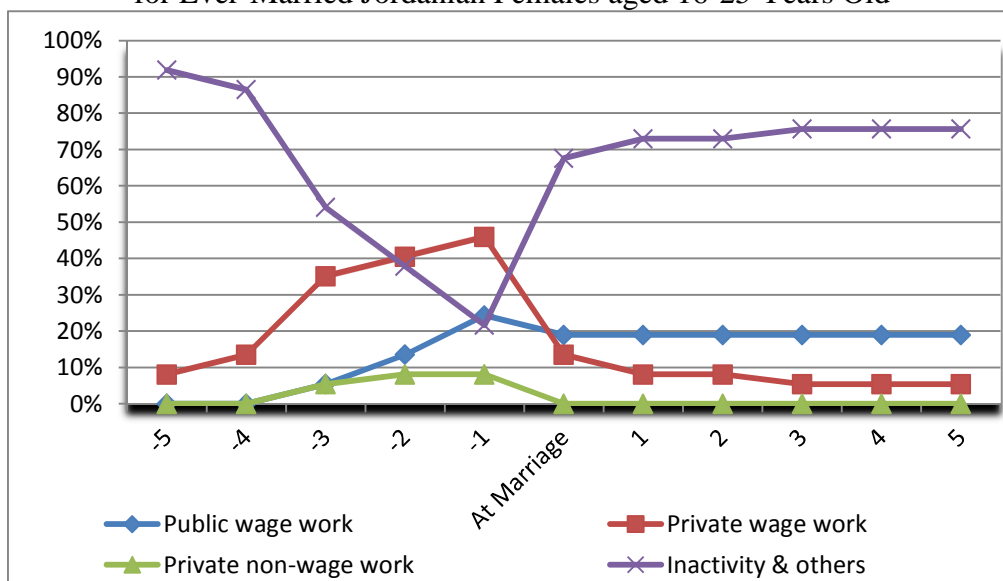
Figure A.3: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Egyptian Females aged 26-35 Years Old
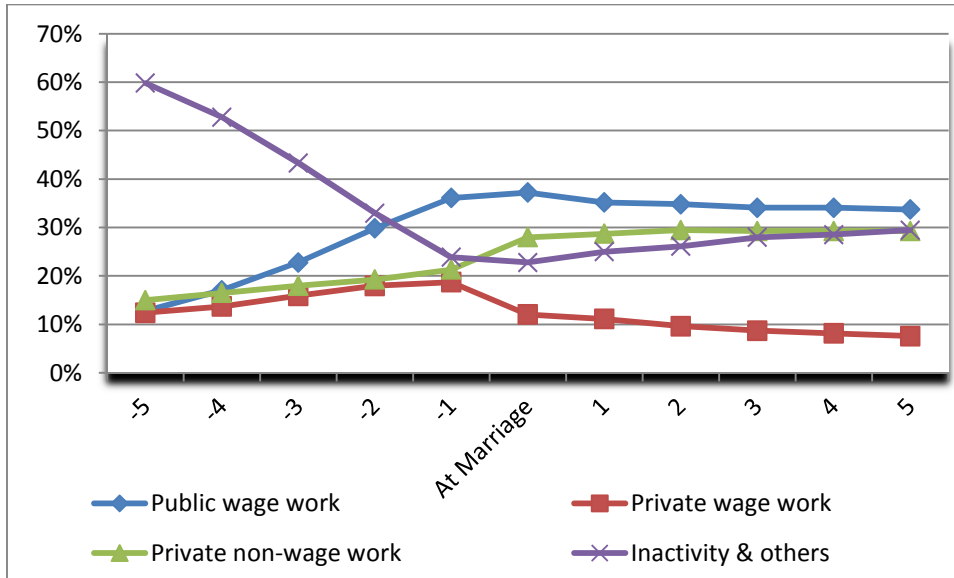
Figure A.4: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Jordanian Females aged 26-35 Years Old
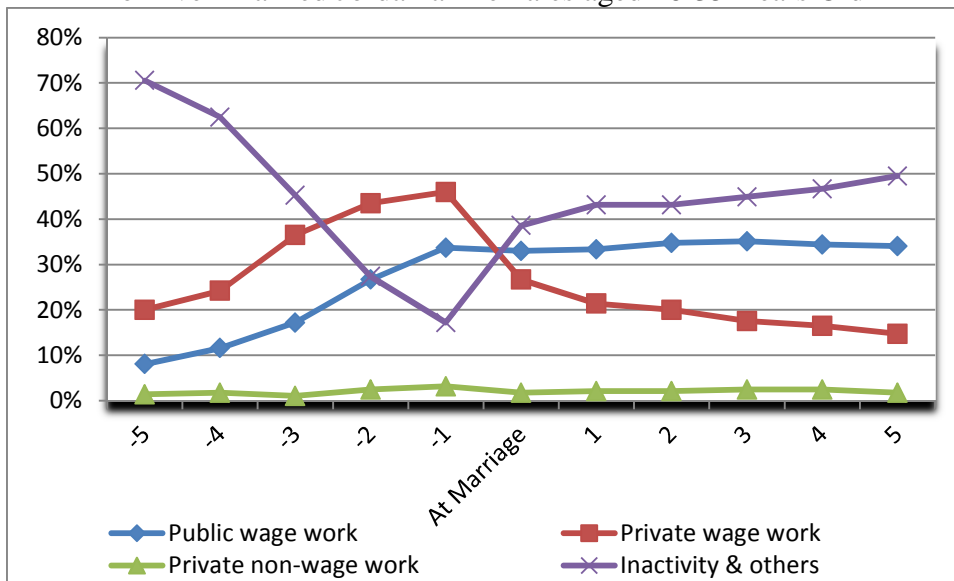
Figure A.5: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Egyptian Females aged 36-45 Years Old
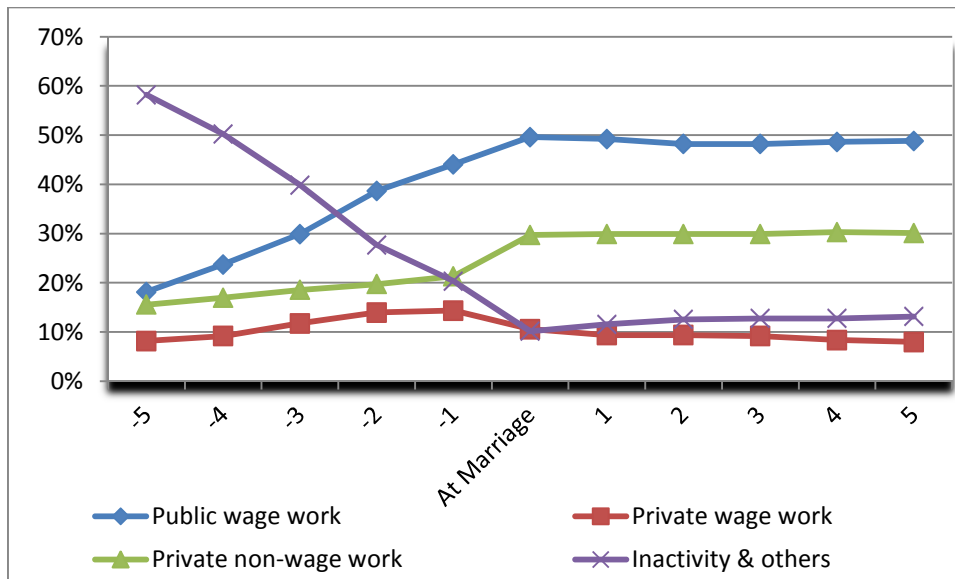
Figure A.6: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Jordanian Females aged 36-45 Years Old
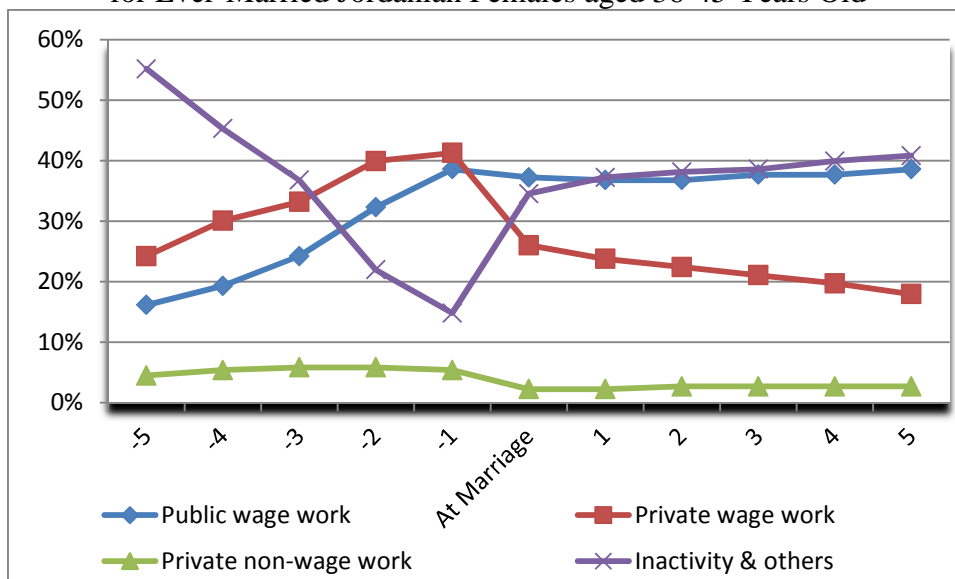
Figure A.7: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Egyptian Females aged 45 Years Old and Above
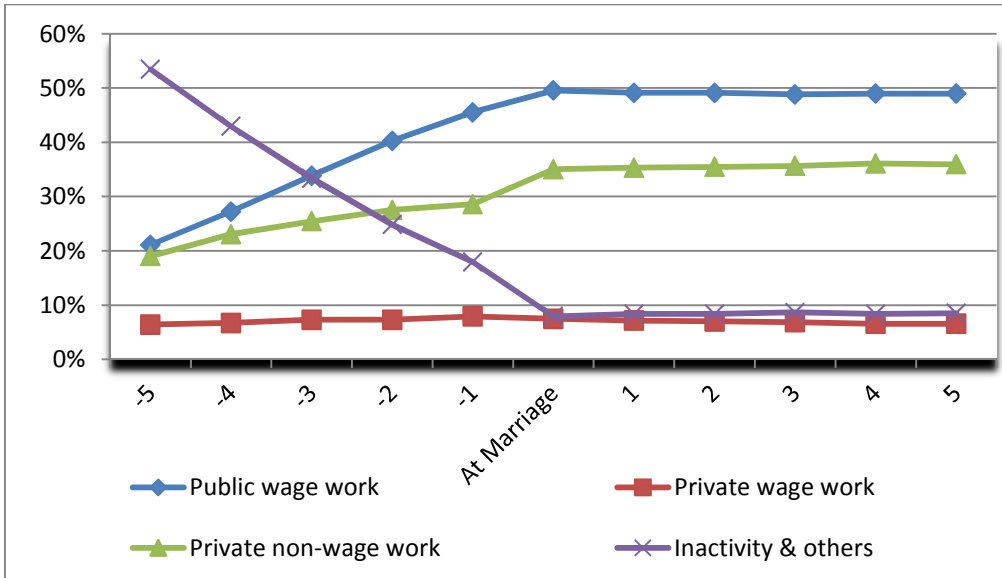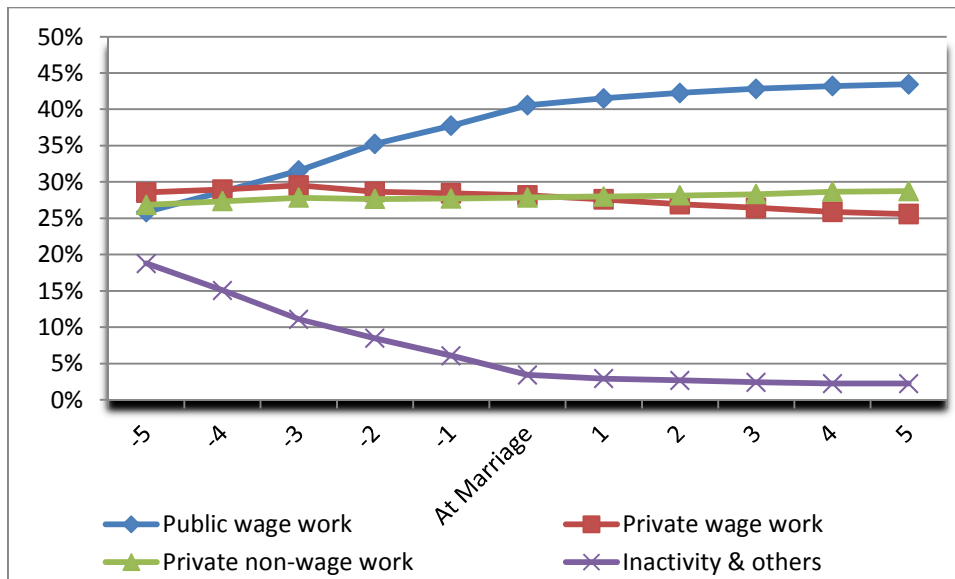
Source: Constructed by the author using the ELMPS dataset.
Note: Only the ever-married and ever-worked population is considered.

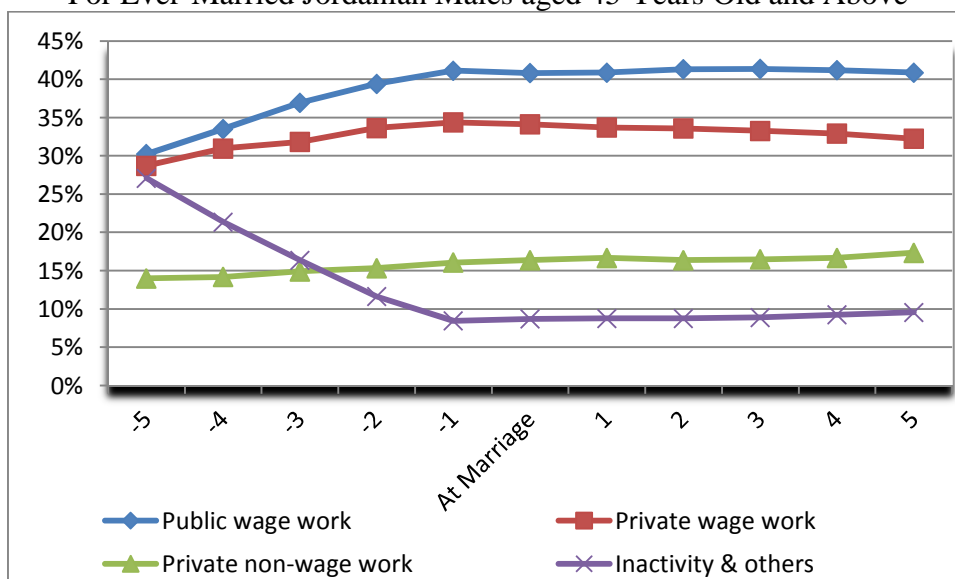**Figure A.8:** Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Jordanian Females aged 45 Years Old and Above
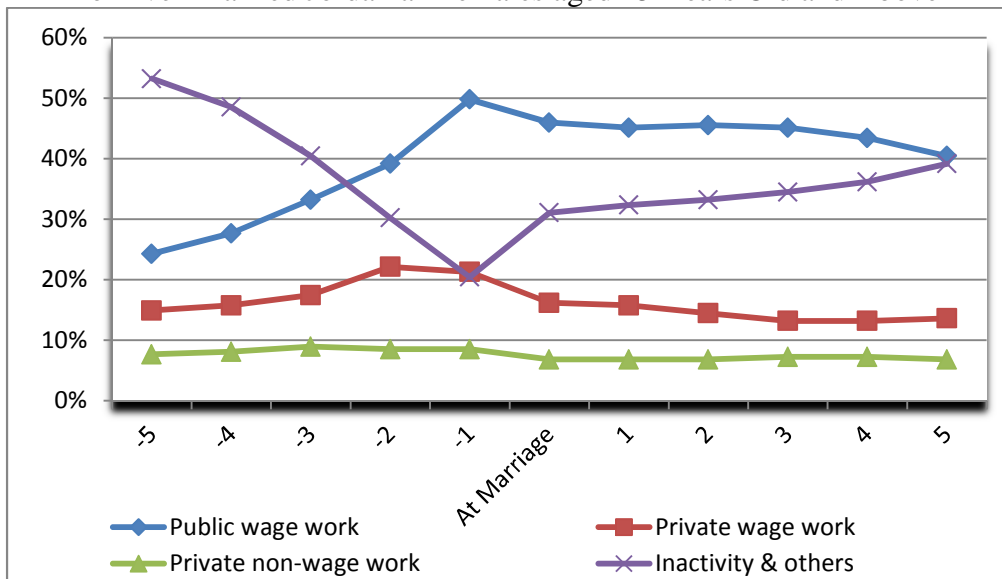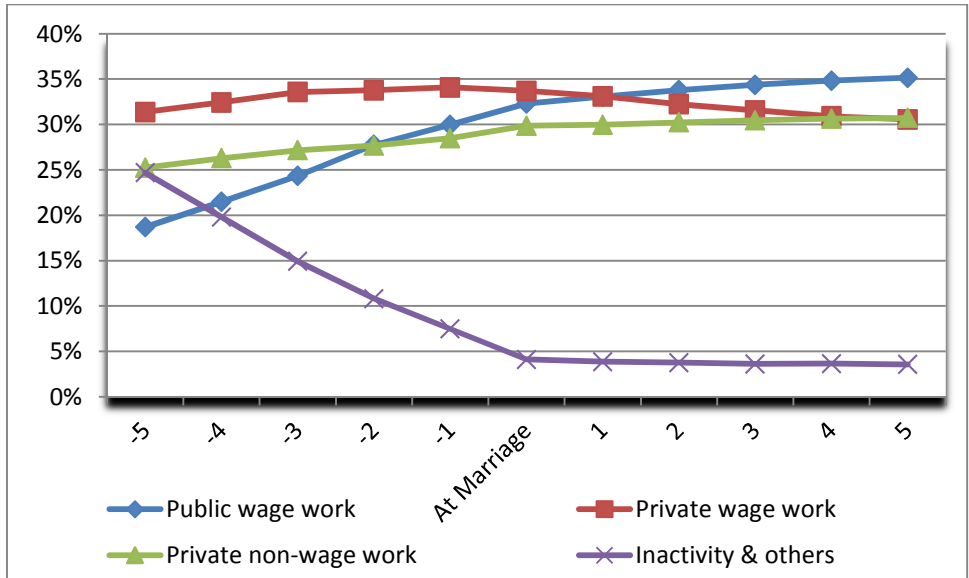

Source: Constructed by the author using the JLMPS dataset.
Note: Only the ever-married and ever-worked population is considered.

Figure A.13: Females' Employment Status by Age in Jordan for the 16-64 Population
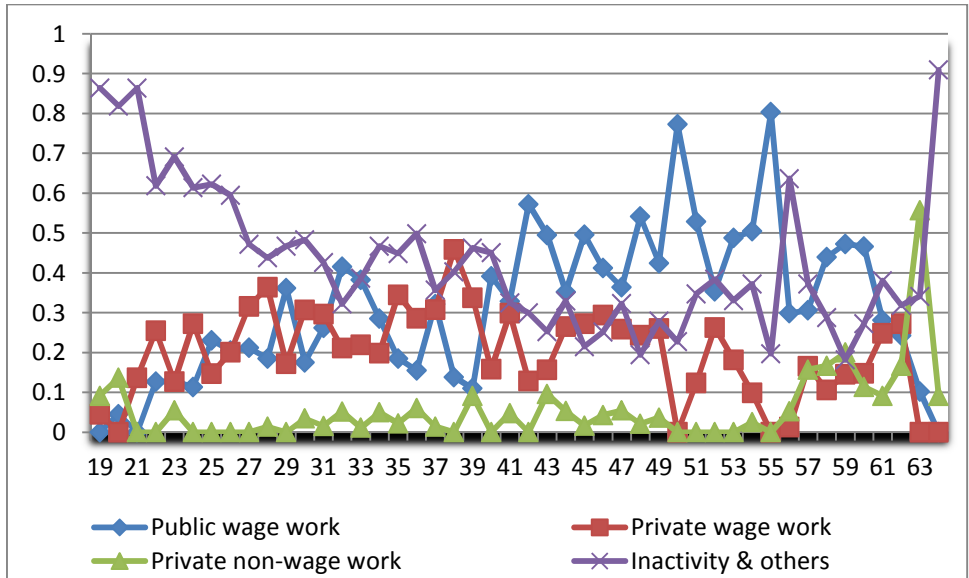
Figure A.14: Females' Employment Status by Age in Egypt for the 16-64 Population

Appendix B: Dynamic Analysis for Men for comparative issues

Figure A.15: Marriage and Labor Market Dynamics by Employment Sector
for Ever-Married Egyptian Males (no age restrictions)
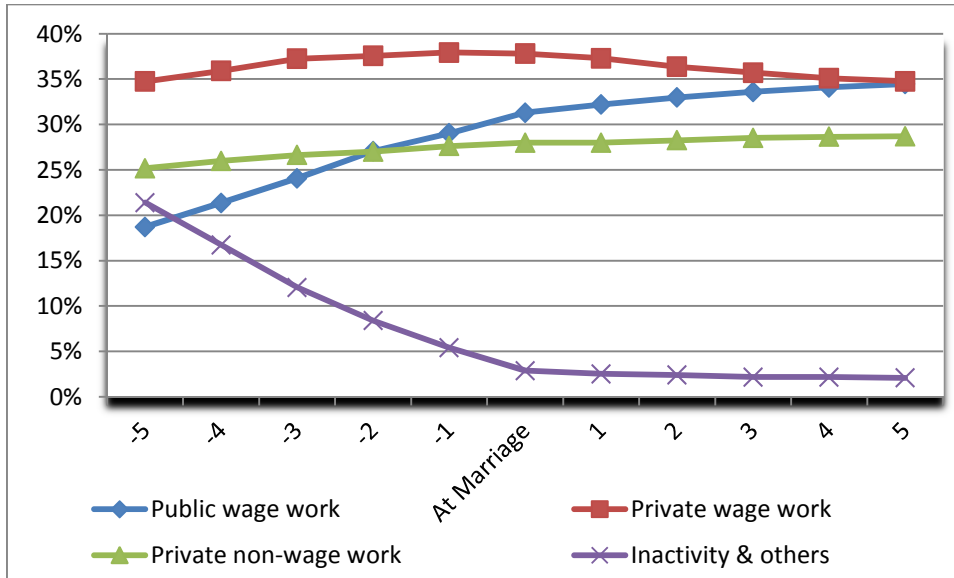
Figure A.16: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Jordanian Males (no age restrictions)
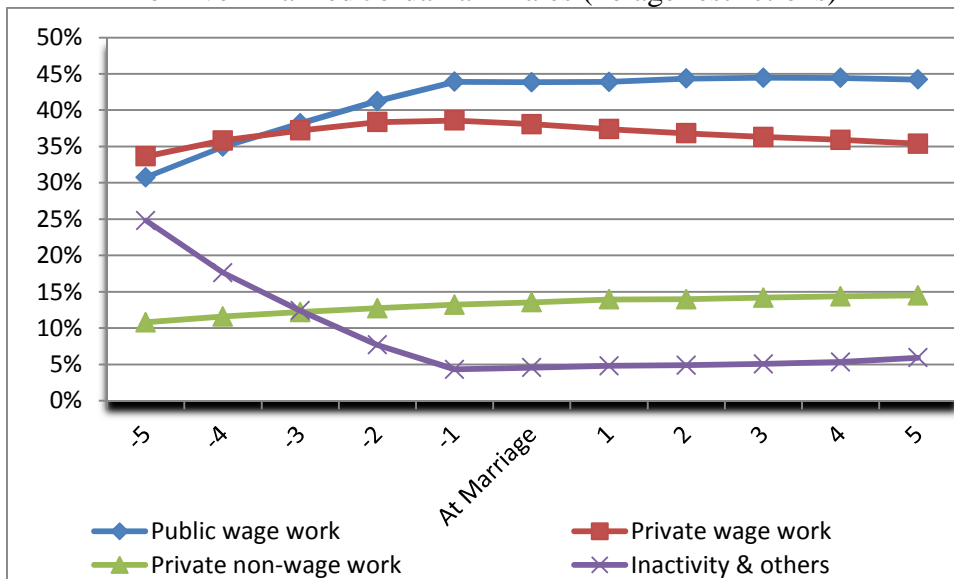
Figure A.17: Marriage and Labor Market Dynamics by Employment Sector for Below Secondary Educated, Ever-Married Egyptian Males (no age restrictions)

46

Figure A.18: Marriage and Labor Market Dynamics by Employment Sector for Below Secondary Educated, Ever-Married Jordanian Males (no age restrictions)
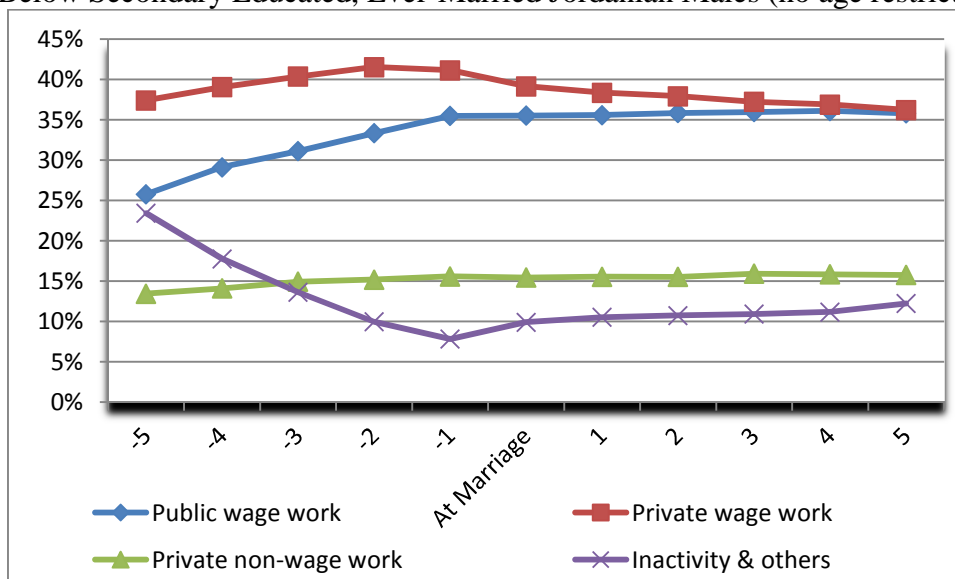
Figure A.19: Marriage and Labor Market Dynamics by Employment Sector for Secondary and Above Educated, Ever-Married Egyptian Males (no age restrictions)

Figure A.20: Marriage and Labor Market Dynamics by Employment Sector for Secondary and Above Educated, Ever-Married Jordanian Males (no age restrictions)

Figure A.21: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Egyptian Males aged 16-25 Years Old

Figure A.22: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Jordanian Males aged 16-25 Years Old
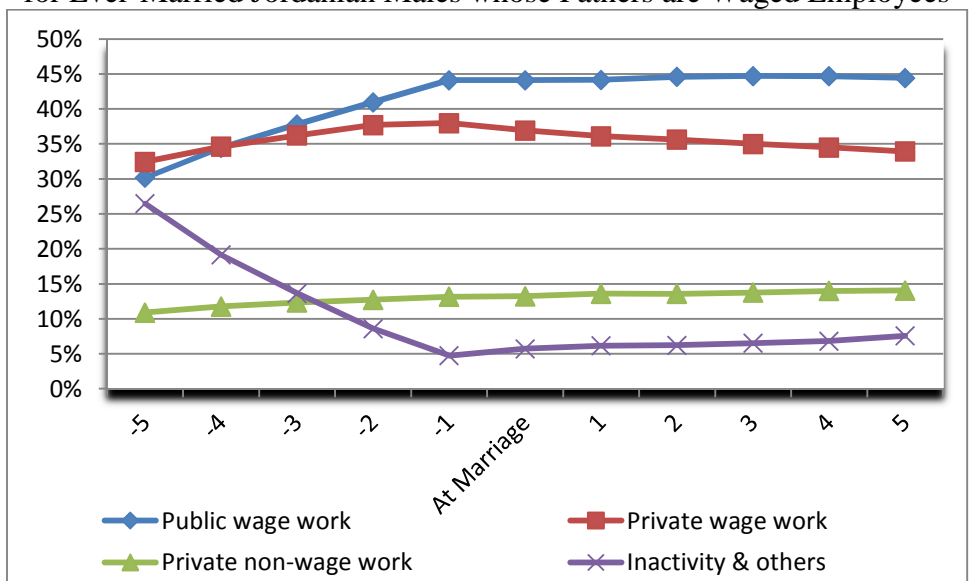
Figure A.23: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Egyptian Males aged 26-35 Years Old

49

Figure A.24: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Jordanian Males aged 26-35 Years Old

Figure A.25: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Egyptian Males aged 36-45 Years Old

50

Figure A.26: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Jordanian Males aged 36-45 Years Old

Figure A.27: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Egyptian Males aged 45 Years Old and Above

Figure A.28: Marriage and Labor Market Dynamics by Employment Sector For Ever-Married Jordanian Males aged 45 Years Old and Above

Figure A.29: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Egyptian Males whose Fathers are Waged Employees (no age restrictions)

Figure A.30: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Jordanian Males whose Fathers are Waged Employees

Figure A.31: Marriage and Labor Market Dynamics by Employment Sector for Ever-Married Egyptian Males whose Fathers are Inactive
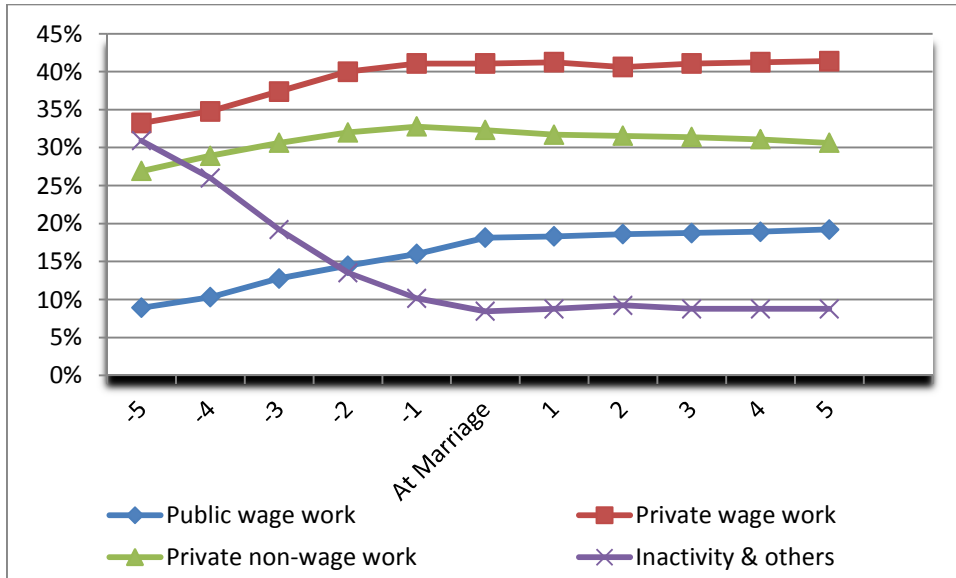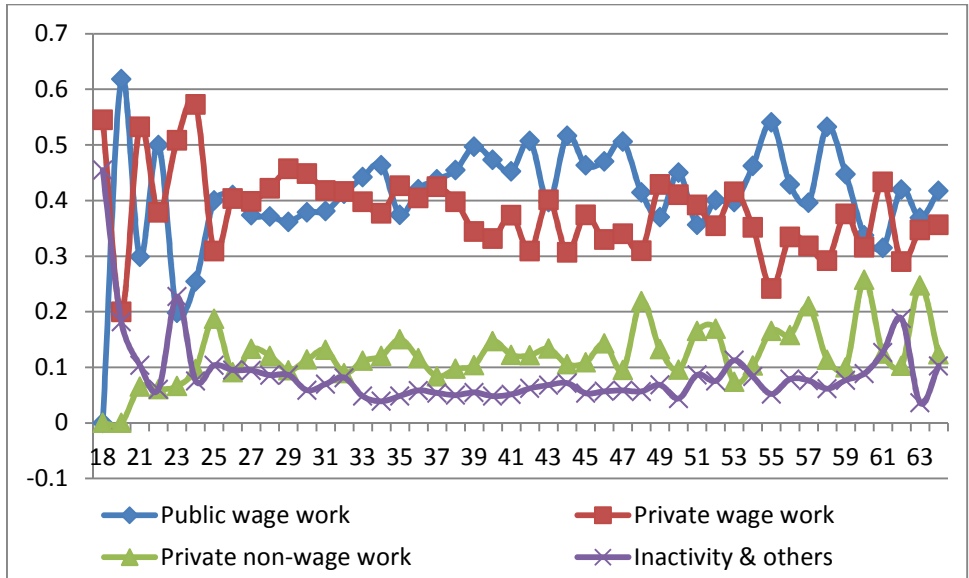
Source: Constructed by the author using the ELMPS dataset.
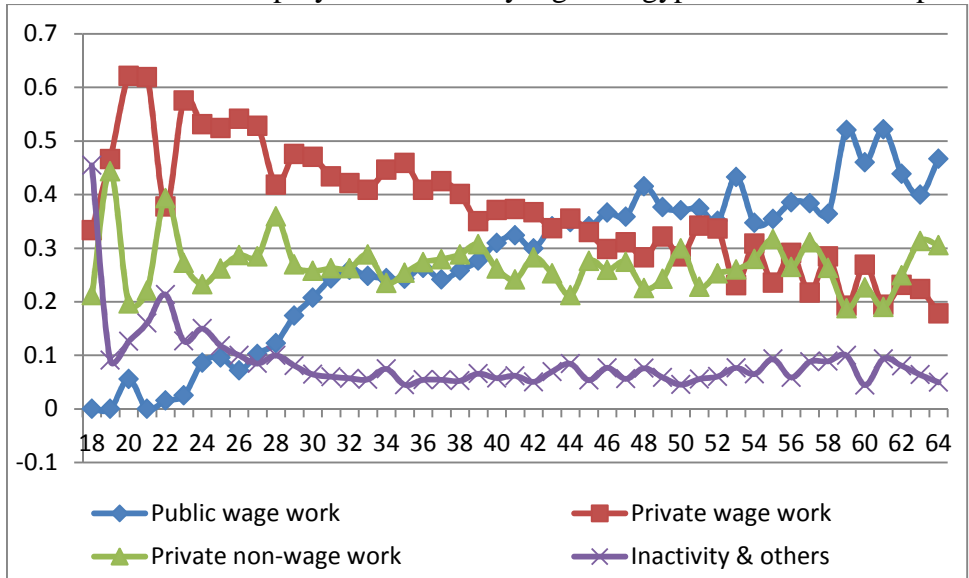**Note:** Only the ever-married and ever-worked population is considered.

Figure A.32: Marriage and Labor Market Dynamics by Employment Sector
for Ever-Married Jordanian Males whose Fathers are Inactive
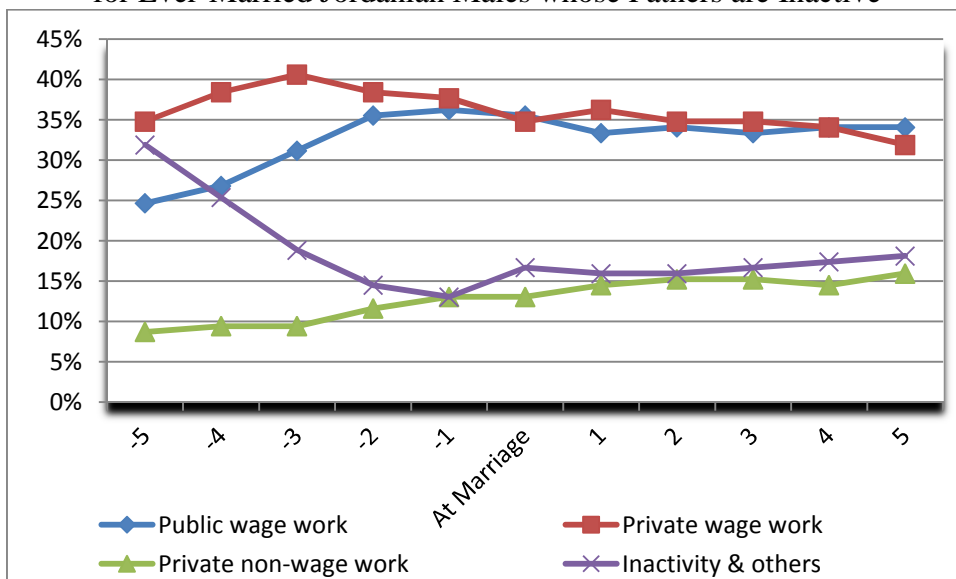
Source: Constructed by the author using the JLMPS dataset.
Note: Only the ever-married and ever-worked population is considered.

Figure A.33: Males' Employment Status by Age in Jordan for the 16-64 Population

Figure A.34: Males' Employment Status by Age in Egypt for the 16-64 Population