working paper

series

A QUARTER CENTURY OF CHANGES IN LABOR FORCE PARTICIPATION

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Working Paper 973

November 2015

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Abstract

This paper examines the changes in the determinants of labor force participation over time, using the Egypt Labor Market Panel Survey (ELMPS) for the years 1998, 2006 and 2012. Controlling for individual and household characteristics, a multinomial logit model is estimated to analyze the determinants of participation by status and sector of employment. The empirical results show that the effect of parental education on the individual's decision of employment has weakened if not disappeared over time but the effect of the individual's own education has increased. For instance, in 2012, fathers' education has no effect on females' or males' employment decisions as used to be the case in 1998 and 2006. This result confirms the decreasing role of background characteristics that are out of the individual's control and the increasing role of the factors that individuals are able to change through their own decisions. According to Hendy (2015), female labor force participation in Egypt remains relatively low and has even decreased over the period from 2006 to 2012, confirming that the January 25th revolution has had a negative effect on women's status in the labor market. This is also confirmed in the present paper. The results of the multinomial logit model show that women have lower probability of employment in all sectors (government and private) relative to their males counterparts.

JEL Classification: D13, J16, J22.

Keywords: Gender, Determinants of labor force participation, Simulations, Egypt.

ملخص

تبحث هذه الورقة التغيرات التي طرأت على محددات المشاركة في القوى العاملة على مر الزمن، وذلك باستخدام المسح التتبعى لسوق العمل فى مصر (ELMPS) لسنة 1998 و 2006 و 2012. وبالسيطرة على الخصائص الفردية والأسرية، نقوم بتقدير نموذج متعدد الحدود لتحليل محددات المشاركة فيما يخص وضع العامل وقطاع العمل. أظهرت النتائج التجريبية أن المستوى التعليمي للآباء له تأثير على قرار الفرد في العمل ويضعف إذا لم يختف مع مرور الوقت ولكن ازداد تأثير التعليم على الفرد نفسه. على سبيل المثال، في عام 2012، مستوى تعليم الآباء ليس له تأثير على الإناث أو قرارات توظيف الذكور كما كانت عليه في عام 1998 وعام 2006. وهذه النتيجة تؤكد تضاؤل دور الخصائص الأساسية التي هي خارج سلطة الفرد والدور المتزايد من العوامل للأفراد القادرون على تغيير قراراتهم بأنفسهم. وفقا لهندي (2015)، لا تزال مشاركة المرأة في قوة العمل في مصر منخفضة نسبيا، وقد انخفضت حتى خلال الفترة 2006-2012 مؤكدا أن ثورة 25 يناير كان لها تأثير سلبي على وضع المرأة في سوق العمل. وهذا ما نؤكده أيضا هذه الورقة. نتائج نموذج متعدد الحدود تبين أن النساء لديهن احتمال انخفاض عمالة في جميع القطاعات (الحكومية والخاصة) بالنسبة لنظرائهم للذكور.

1. Introduction

Labor force participation of women is incredibly low in many parts of the world such as Egypt. Much research has been done to highlight why this is the case as well as what policies can be put in place to remedy the situation. It was found through a recent study covering a number of countries, which include Egypt, that a 5% increase in female labor force participation would actually result in a "cumulative 1.3% increase in GDP above the reference scenario" (Tsani et al., 2012). This finding shows how important it is to work at increasing female labor force participation in Egypt, especially considering the fact that the current percentage of women who are employed was around 20% in 2012 while male employment was at 77% (Hendy, 2015).

The sectors that women are primarily employed in largely differ when compared to those that men take part in. Women are largely employed in the government sector, with unpaid family work coming in second across time (Hendy, 2015). An important factor in need of consideration in Egypt is how marital status affects female labor force participation in terms of the percentage of women that remain employed and the differences in employment sectors. Assaad and El-Hamidi (2009) discovered that the factors that matter in women's employment are employment sector and women's marital status. According to their study, after marriage, women remained employed if they worked in the public sector, but if they were in the private sector at the time of marriage, they quit.

The need for an empirical analysis of this specific topic in the case of Egypt is necessary so as to assess the determinants that affect female labor force participation and whether they change over time. This research attempts to fill this gap through the following sections. Section 2 presents the data that was used in this paper while section 3 discusses the methodology and empirical analysis. This analysis is disaggregated by diverse factors that can affect women's decisions such as the educational level, the marital status and the sector of employment if employed. Using a probit and a multinomial logit model, this paper also empirically analyzes the determinants of both employment in the different economic sectors. The analysis distinguishes between the government employment, the private sector wage employment and the private sector non-wage employment. The latter category includes those employed, self-employed and unpaid workers. Section 4 provides simulations while section 5 concludes.

2. Data

The data employed in this paper is from the Egyptian Labor Market Panel Survey (ELMPS) for the years of 1998, 2006 and 2012. Through looking at the labor force, it is important to note that the standard definition of unemployed refers to those that are still looking for work. As a result, women that are discouraged and are not searching for work then do not count as unemployed but are rather not part of the labor force. It is the standard (search required) definition that will be employed in this paper. This paper also predominantly centers on the 1998-2012 period as well as the working age population, which involves 15-64 year olds.

3. Methodology and Empirical Analysis

This section analyzes the determinants of labor force participation and the changes over the years between 1998 and 2012. First, a probit model is estimated to examine the factors that determine the decision of employment. Second, a multinomial logit model allows for understanding how these factors change by economic sector. I control for a number of demographic variables such as the age, the educational level, the marital status and the area of residence (urban or rural area). I also control for the parental education as well as the parent's working status when the individual was of age 15.

Table 1 shows the results of a probit model that estimates the probability of employment for both males and females and for females separately for the years 1998, 2006 and 2012. The probability of the reference individual shows that there was a steady increase in the probability

of employment over time. The same is observed for females although there was a slight drop in 2006. The first two variables age and age squared are both highly significant across all years and among everyone and among females alone. Age is positively significant while age squared is negatively significant. When it comes to marital status, an interesting picture appears through the numbers. It's important to remember that in the case of marital status, being single is the reference variable. The currently married variable shows no significance in 1998 but becomes highly significant in 2006 and 2012. Interestingly enough, in 2012, it is negatively significant which means that being married in 2012 negatively affects the probability someone has at employment. When trying to compare with the female perspective, the same is observed, although in 2012 it was positively significant and not negatively significant. This is one of the cases in which the data reveals something unexpected as the expectation is generally that those who are single will have a higher probability at employment than those who are married. What tells an even more intriguing story is the divorced/widowed variable. In 1998 and 2006, there are instances of it being highly significant, while in 2012 this variable is only significant at the 10% level. All across the board, the significances are positive but the same is not observed for females. In 1998, the variable shows a high level of significance that turns into significance at the 10% level in 2006 and then at the 5% level in 2012. Although the significance level is going down then up, they are all negatively significant. Being divorced or widowed then negatively affects women's chances at trying for employment. Educational level tells an expected story. In the case of education, above secondary education is the reference variable and so the variables tested are for lower levels of education. As a result, it is not surprising that there is a high level of negative significance across all three years for both the whole sample and for females separately. The lower your level of education, the more it negatively influences your chances at employment. The female variable shows a high level of negative significance too, which isn't surprising when you consider how women make up such a small percentage of the labor market in the first place. In the case of regions, rural is the reference variable. Based on the data, there is a high level of negative significance for the urban location variable in the years 2006 and 2012. This is observed for all and for females separately. With father and mother's education, the reference variable is above secondary education.

When comparing between mother and father's education being below secondary, for the mother, it is highly significant for all three years and for all as well as for females. The variable for father's education level being below secondary shows significance in 1998 and 2006 but not in 2012. Father's educational level being at the secondary point shows some significance in that the mother's secondary education variable does not. In 1998, there was a high level of significance for all and for females alone, although for females the level of significance was at the 5% level and not the 1% level. In 2012, the variable shows a somewhat significant instance, but it is negatively so for females and not significant at all for the whole sample. The last two variables give a somewhat interesting conclusion to the table. Father working when 15 is only significant at the 10% level for the whole sample in 1998. Mother working when 15, on the other hand, is highly significant across all three years and for both the whole sample and for females. It should be noted that the significance level in 1998 for the whole sample was at the 5% level rather than the 1% level like the rest of the numbers show though. It is interesting that the comparison between having a mother who worked at 15 with having a father who worked at 15 shows that a working mother is far more influential in terms of the probability of employment, especially for daughters, than a working father is.

Tables 2 and 3 show the results of a multinomial model that estimates the probability of employment based on sector for the years 1998, 2006 and 2012. Table 2 shows these results for the whole sample while table 3 shows these results for females separately. The probability of the reference individual shows that there is a drop across time for those who are not working. Similarly, there is also a drop for females although the percentage went back up in 2012. In

terms of government wage work, there is a steady increase over time for both the whole sample and for females, although once again the percentage dropped in 2012. Private wage work also displays an increase over time for the whole sample and for females separately. The employer/self-employed/unpaid work sector displays a slight increase for females over time, while in the case of all, there was a drop in 2006 and then a rise in 2012. It is clear through the numbers that unsurprisingly, the highest percentage of women are not working. Age is highly significant across all three years for those not working and for those in the government sector. It is negatively significant for the not working sector while being positively significant for the government public wage sector. A similar occurrence is observed for women although the level of significance is at 5% in 1998 for both the not working sector and for the government public wage sector. Interestingly enough, there is a slight positive significance for women in terms of the private wage sector, specifically in 2006 and 2012, while that's not the case for the whole sample. Being married, with single being the reference variable again, has a negatively significant level in the not working sector in 1998 and 2012 for women but is positively significant in 2012 for all. In the government public wage sector, a high level of negative significance is observed in 2006 and 2012 for all but is positively significant in 1998 alone for females. Private wage work shows a high level of significance across all three years for all and in the years of 2006 and 2012 for females. Being divorced or widowed has a highly negative significance level on those in the not working sector while being positively significant for women in 2006 alone.

Once again, there is a high positive significance in the years of 2006 and 2012 in the private wage sector for all while being much less significant and negatively so in 2006 and 2012 for females. It becomes apparent that with the divorced/widowed variable, these results tend to be the opposite for women than they are for the whole sample. With educational level, above secondary education is the reference variable again. Interestingly enough, having an education level below secondary displays a high level of positive significance in the not working sector for the whole sample and for females separately. When considering the government public wage sector though, a more expected result is displayed. Across all three years and in both the case of the whole sample and females separately, there is a highly negative level of significance. In the case of the secondary education variable, the same is observed in both the not working and government public wage sectors. For private wage work in 2012, there is a positive significance as displayed by the data done on the whole sample. For women in 2006 and 2012, the private wage sector shows that education level being below secondary has a negatively significant effect on the probability of employment. For the employer/self-employed/unpaid work sector, education being below secondary has a highly significant level in 2006 and 2012 while the secondary education variable has a high level of negative significance in 1998. The urban location variable is significant at the 10% level in 1998 for the not working sector while being highly significant for the other two years. When comparing that with table 3, there is no significance for women in the not working sector. In the government public wage sector, residing in an urban location has a highly negative effect in the years of 2006 and 2012 only. The same is observed in table 3 but the levels of significance are lower. A similar pattern is observed in the private wage sector as once again, it is only the years 2006 and 2012 that are highly significant, albeit in a positive regard this time.

The results are the same for women. Interestingly enough, the employers/self-employed/unpaid work sector has a high level of negative significance across all three years for the urban location variable while it is only significant at the 10% level in 2012 for females. Parental education's reference is above secondary education in these tables too. Father's education level being below secondary has a highly negative significant effect over time in the not working sector and to a lesser degree in 2012 in the government public wage sector. There is a steady increase in significance over time in terms of the private wage sector with a similar instance observed in

the employers/self-employed/unpaid work sector. Table 3 tells a different story of the levels of significance for women though. This same variable is only highly negatively significant for the not working sector in 2006. In 2006 in the government public wage sector, it is positively significant at the 5% level while being negatively significant at the 10% level in 2012. For father's education being at the secondary level, there is a high level of negative significance in 1998 in the not working sector that is then only negatively significant at the 10% level in 2006. For the government public wage sector, there is another instance of a positive level of significance at the 10% point but that is all. This variable is not significant at all as displayed across all sectors and over time in table 3. In terms of mother's education, there is a high level of negative significance in terms of the mother's education level being below secondary variable. This is solely the case in the not working sector. A similar instance is observed in the case of females although the high levels of negative significance are observed for only 1998 and 2012. In the private wage sector, this variable is significant at the 5% level across all three years as observed in table 2 while only significant at the 5% level in 1998 and 2012 in the government public wage sector for females. For the last sector, this variable is highly significant in the years of 2006 and 2012 but not significant at all in table 3. The next variable, mother's education level being at the secondary level is not significant at all in table 2 but is significant at the 10% level in table 3 in three instances.

The first is in 2012 for the not working sector but this is significance is negative. The other two instances are in 2006 and 2012 in the government public wage sector. Mother working when 15 is once again an interesting variable to study. In table 2, for the not working sector, there is a highly negative level of significance for this variable. The same is observed in table 3. Inversely, the government public wage sector is also highly significant across all three years but this significance is positive. The same is true for females as displayed in table 3. The private wage work and the employers/self-employed/unpaid work sectors both display a positive significance level at 10% for the years of 2012. This is not the case in table 2 though. On the other hand, the father working when 15 doesn't often display such levels of significance. There is a negative significance at the 10% level in 1998 for the not working sector in table 2 and at the 5% level in table 3. This variable is positively significant for females at the 5% level in 1998 for the government public wage sector as well. The high levels of significance for this variable exist across specifically 2006 and 2012 for the employers/self-employed/unpaid work sector surprisingly enough. In 1998, it is significant at a 10% level too but this level of significance is only observed in table 3 for 2006. For employers/self-employed/unpaid work, there doesn't appear to be enough data on women as most of the numbers are so small and there is only some significance in a few of the variables in 2012 mainly. Education level being below secondary is significant at the 10% level as well as urban location although urban location is negatively significant. The only other variable left which is also significant at the 10% level is mother working when 15. Father working when 15 is significant at the 10% level in 2006 though but that's all that can be said about this sector for women.

4. Simulations

This section of the paper illustrates some simulations based off both the probit model and the multinomial logit models. Figure 1 shows the probability of employment for the reference individual and for the reference female. The reference individual is identified as a single man or woman who has an above secondary education, with both parents having an above secondary education as well. He/she also has non-working parents when 15 and lives in a rural area. As shown in Figure 1, someone who has the characteristics of the reference individual has an increasing probability of employment over the period between 1998 and 20012. The same result is observed for the reference female.

Figure 2 shows that for the year of 2012, there has been even more of an increase compared to previous years. A woman who is 37 years old or more has more chances of working in the labor market in 2012 than in 1998 or 2006.

In the case of marital status as observed in Figure 3, there has been an increase in the probability of employment between 1998 and 2006 for currently married women as well as for divorce/widowed ones. This same probability has then decreased for the currently married women over the period from 2006 to 2012, but it remained the same for divorced and widowed women.

It is to be expected that something such as education has an important effect on one's probability of employment. As illustrated in Figure 4, women with a below secondary education have lower probabilities across all three years when compared with those with a secondary education or with the reference individual (e.g., an individual with an above secondary education). Figure 4 also shows that for all educational levels, the probability of women's employment has increased between 1998 and 2006 then decreased over the 2006-2012 period.

Parental education tells a somewhat different story. Figure 5 shows that having parents with a below secondary education displays a higher probability of employment than those whose parents have a secondary education. Interestingly, women whose mothers have a below than secondary education have seen a drop in their probability of employment with 20 percent less chances of being employed in 2012 compared to 1998.

Figure 6 shows that women with working parents have higher probabilities of working themselves. This result is valid for all three years of the survey. Figure 6 also demonstrates that the mothers' working status matters more that fathers'. In case of father working when 15, there hasn't been too much change over time.

Figure 7 shows what the probabilities for someone who is least likely to work would be over time compared with someone most likely to work. The least likely to work woman is someone who is married, has below secondary education, lives in a rural area and has not-working parents with below secondary education. A woman who is most likely to work is one who is single, has an above secondary education, lives in an urban area, and has working parents with an above secondary education.

It's unsurprising that for a woman who is least likely to work, the probability of employment is low although it increased a lot in 2006 and dropped back down in 2012. For those most likely to work the opposite occurs where there was a drop in the probability of employment in 2006 instead of a rise. For a woman who has all the "good" characteristics, she only has around a 70 percent chance of being employed in both 1998 and 2012. This probability is even lower for 2006, reaching around 65 percent.

Figures 8-11 show the simulations based on the multinomial logit model. Figure 8 shows that across ages, there is a drop in the probability of non-employment that steadily rises again in older age. The year of 1998 displays the largest probabilities of women not working, but this has steadily decreased in 2006 and even more so in 2012.

Figure 9 tells an opposite story for the government public wage employment. Over time, the probability of women working in the government sector has increased from 1998 to 2012 but an expected breakdown of the changes based on age is displayed. Figures 10 shows the probability of working in the private wage employment. The probability of working in the private sector has increased between 1998 and 2012 for women of all ages.

Figure 11 shows the probability of employment by marital status and sector. Divorced or widowed women seem to have higher probabilities of non-employment compared to their

currently married counterparts for all years. For all marital statuses, the probability of non-employment has decreased between 1998 and 2006 then increased again in 2012. The probabilities for those who are currently married are the highest in the government sector. Although there is an increase in the probability of employment in the government sector from 1998 to 2006, there is a drop in 2012 across all marital statuses. The opposite is observed in the private sector, with the probability of employment for women who are currently married being the highest across all three years. There is an increase over time for the self-employed sector too, but the numbers remain incredibly small.

Figure 12 shows that for those with a secondary education or below, the probabilities of employment are low. This is not surprising as it will often be people with a better educational level who have a better chance at employment. There is a decrease over time in the probabilities of those not involved in the labor market. Unsurprisingly, the reference category shows the highest probabilities across time and in the other sectors. There was a drop from 2006 to 2012 in the government sector. No one with a below secondary education seems to have a chance at employment in the government sector but their chances are slightly better in the private sector. Parental education tells a somewhat similar story. The probability of those in the not working sector increased in 2012 even though it had dropped in 2006 while the inverse is true for the government sector where there was actually a drop in 2012.

Figure 14 shows that the probability of employment in the government sector increased in 2006 for both mother working and father working although mother working is still higher. There was a subsequent drop in 2012. The private sector notes a steady increase in probabilities over time though.

Finally, figure 15 is quite possibly the most interesting figure. Those least likely to work have the highest probabilities to be part of the not working sector, which isn't surprising. The same can be said of those who are most likely to work as their probabilities are among the highest specifically in the government sector.

Over time though, there is a decrease in probabilities that paints an interesting picture showing that even those who possess all the good characteristics and could work are not working. This is also best observed in the way in which the probabilities for those most likely to work are also increasing over time in the not working sector. Although these women have all the good characteristics and are more than capable of obtaining employment, in recent years, there has only been increase in the probabilities of them not working instead of working. This is something unexpected and quite surprising as it seems there is definitely something that lowers the chances of women joining the labor market despite having the skills, education, and tools necessary to succeed.

5. Conclusion

This paper discussed the empirical aspect of female labor force participation by looking at the determinants and assessing how they changed over the 1998-2012 period. Through using the ELMPS and employing probit and multinomial models, some interesting discoveries were made in terms of the determinants of female labor force participation. Labor force participation of women in Egypt appears to have decreased over time with marriage being a primary driver of the lack of improvement in female labor force participation.

The simulations illustrate the probability of employment of females depending on age, marital status, educational level, parent's educational level and whether parents were working at age 15 or not, also looking at how different sectors affect the probability of employment of women and how this differs based on marital status. Furthermore, the figures highlighting individuals who are most likely and least likely to work are especially interesting as they show that even for those who have all the characteristics that make them most eligible to work, there remain

factors keeping them from working. The traditional society of Egypt and its cultural norms appear to negatively affect female labor force participation as women are largely expected to do house work while men are regarded as the main breadwinners. As a result, even with female educational level being on the rise, labor force participation of women has not seen similar levels of improvement. Steps must be taken to increase female labor force participation as doing so will yield countless positive effects both on the economic stance of Egypt and the social sphere too.

References

Assaad, Ragui and Fatma El Hamidi (2009), Women in the Egyptian Labor Market: An Analysis of Developments, 1988–2006. In *The Egyptian Labor Market Revisited*, ed. Ragui Assaad, 117–56. Cairo: American University in Cairo Press.

Hendy, Rana (2015). "Women's Participation in the Egyptian Labor Market: 1998-2012." *The Egyptian Labor Market in a Era of Revolution*. Oxford University Press.

Tsani, Stella, Leonidas Paroussos, Costas Fragiadakis, Ioannis Charalambidis, and Pantelis Capros (2012), Female Labour Force Participation and Economic Development in Southern Mediterranean Countries: What Scenarios for 2030? MEDPRO, Technical Report No. 19, CEPS, Brussels.

Figure 1: Probability of Employment, Age 15-64, for 1998, 2006 and 2012
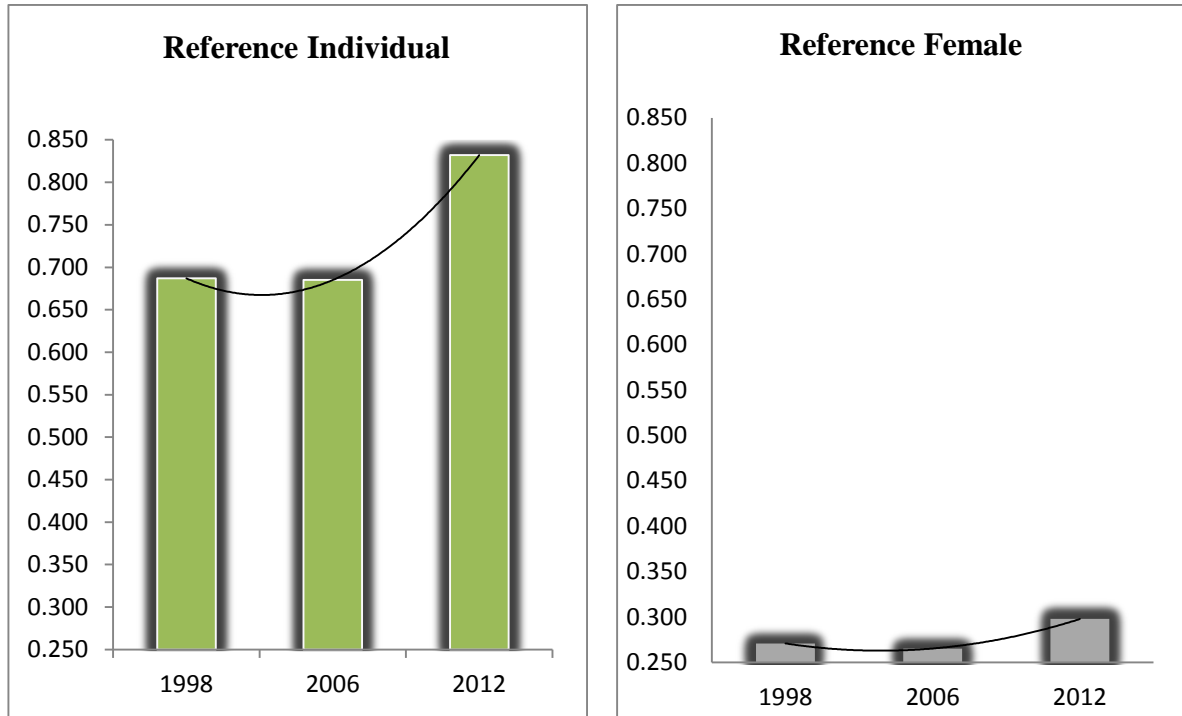
Note: The reference individual is a single who has an above secondary education, with both parents having an above secondary education, with non-working parents when 15 and who lives in a rural area.

Figure 2: Probability of Employment by Age for Females, Age 15-64, for 1998, 2006 and 2012
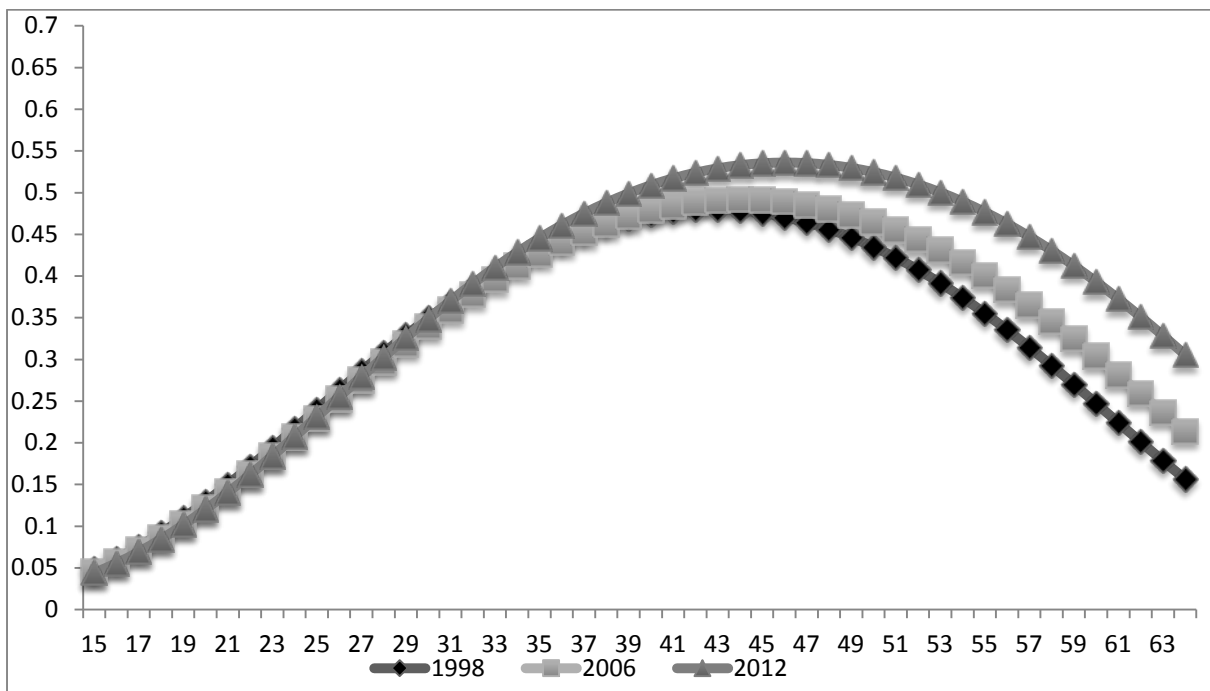
Figure 3: Probability of Employment for females by marital status, Ages 15-64, for 1998, 2006 and 2012
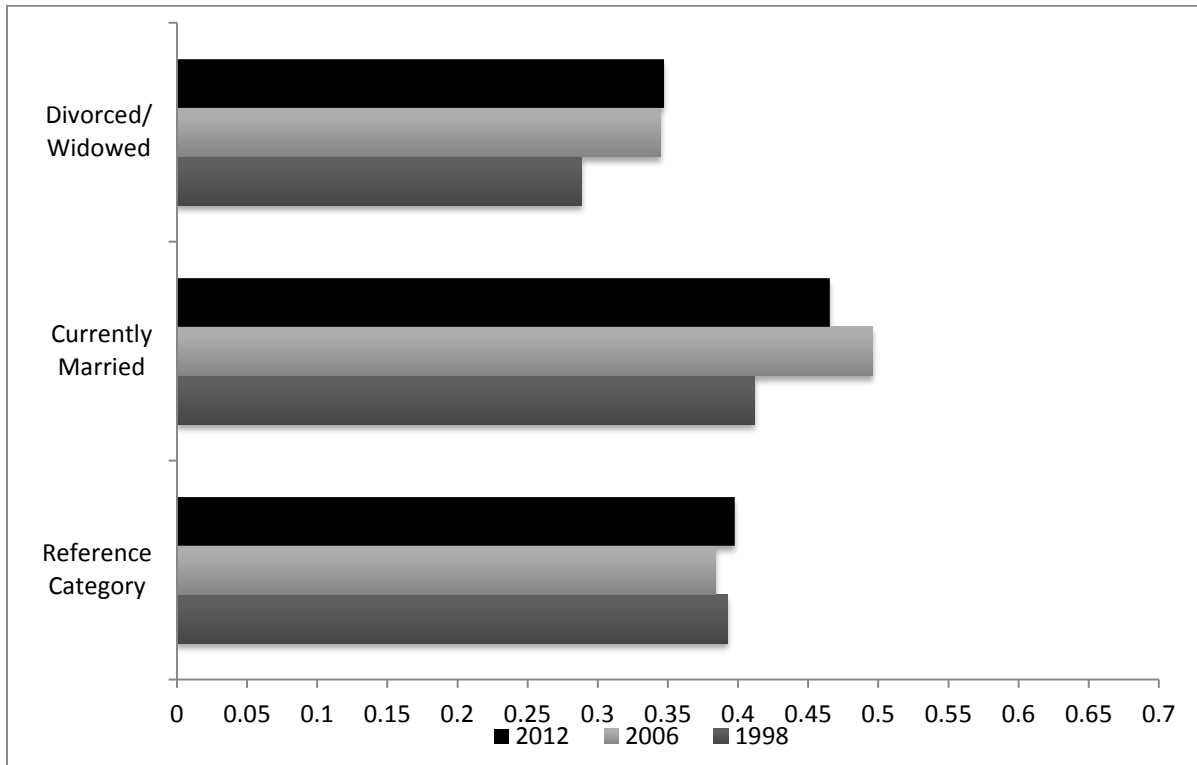
Note: The reference individual is a single who has an above secondary education, with both parents having an above secondary education, with non-working parents when 15 and who lives in a rural area.

Figure 4: Probability of Employment for Females by Educational Level, Ages 15-64, for 1998, 2006 and 2012

Note: The reference individual is a single who has an above secondary education, with both parents having an above secondary education, with non-working parents when 15 and who lives in a rural area.

Figure 5: Probability of Employment for Females by Parental Educational Level, Ages 15-64, for 1998, 2006 and 2012

Note: The reference individual is a single who has an above secondary education, with both parents having an above secondary education, with non-working parents when 15 and who lives in a rural area.

Figure 6: Probability of Employment for Females by Parent's Working When 15, Ages 15-64, for 1998, 2006 and 2012

Note: The reference individual is a single who has an above secondary education, with both parents having an above secondary education, with non-working parents when 15 and who lives in a rural area.

Figure 7: Probability of Employment for Females by Least Likely and Most Likely to Work, Ages 15-64, for 1998, 2006 and 2012
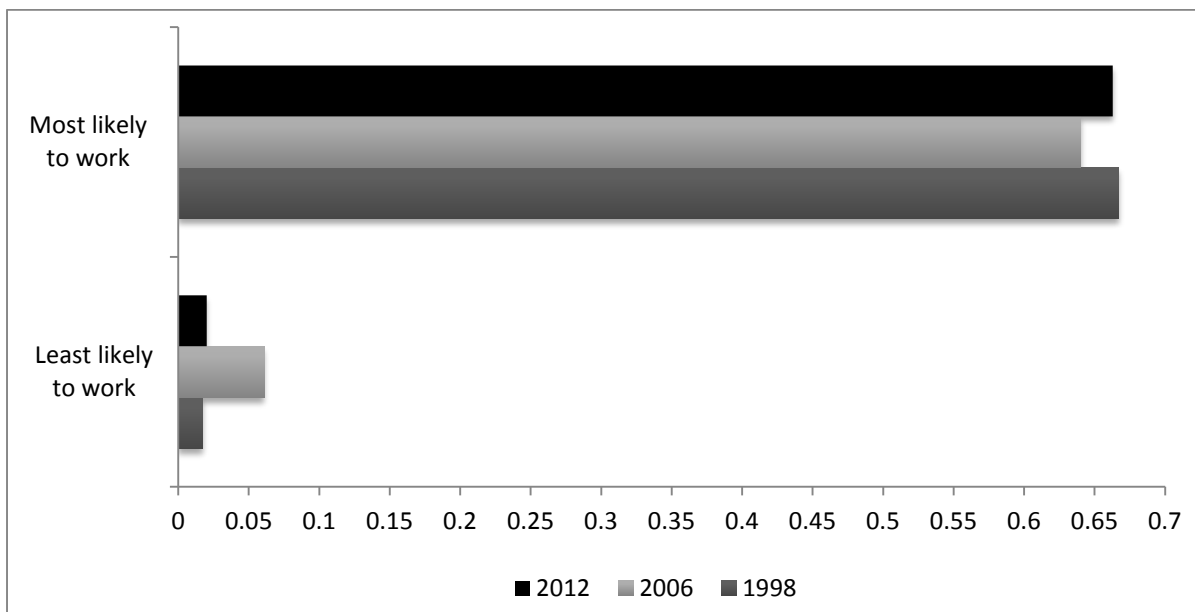
Note: i. Someone who is least likely to work is a woman who is married, has below secondary education, lives in a rural area and has non-working parents with below secondary education. ii. Someone who is most likely to work is a woman who is single, has an above secondary education, lives in an urban area, and has working parents with an above secondary education.

Figure 8: Probability of Non-Employment by Age for Females for 1998, 2006 and 2012
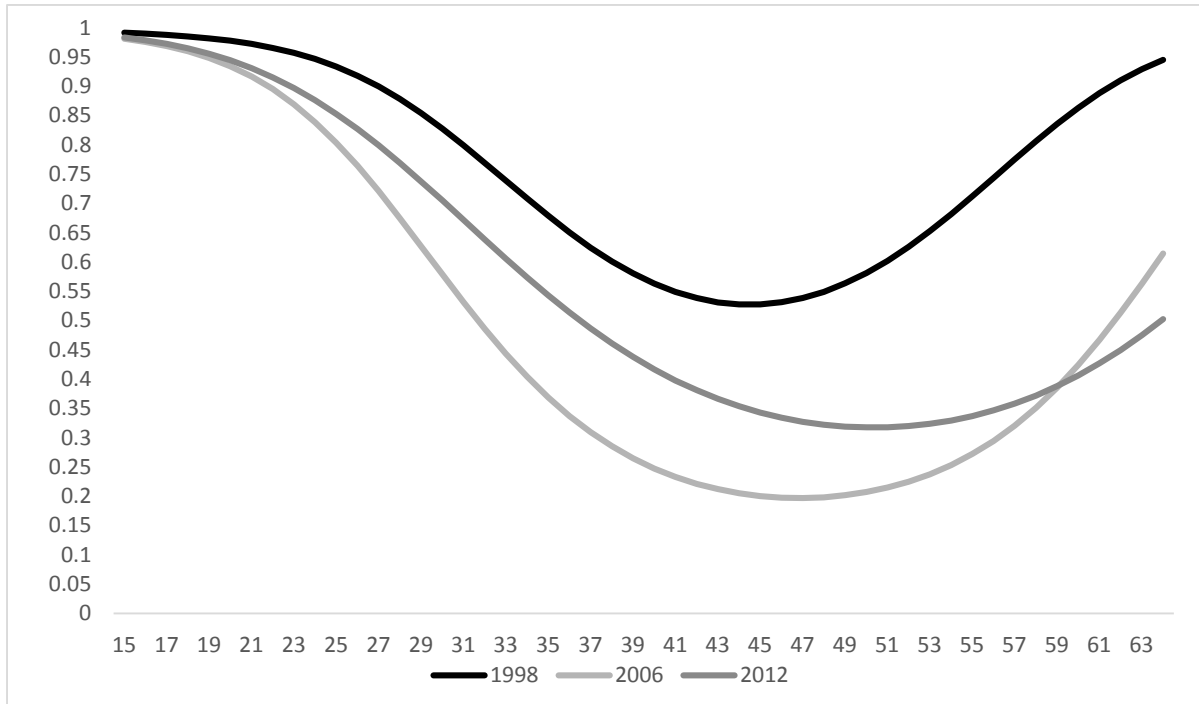
Figure 9: Probability of Employment by Age for the Government Public Wage Sector for Females for 1998, 2006 and 2012
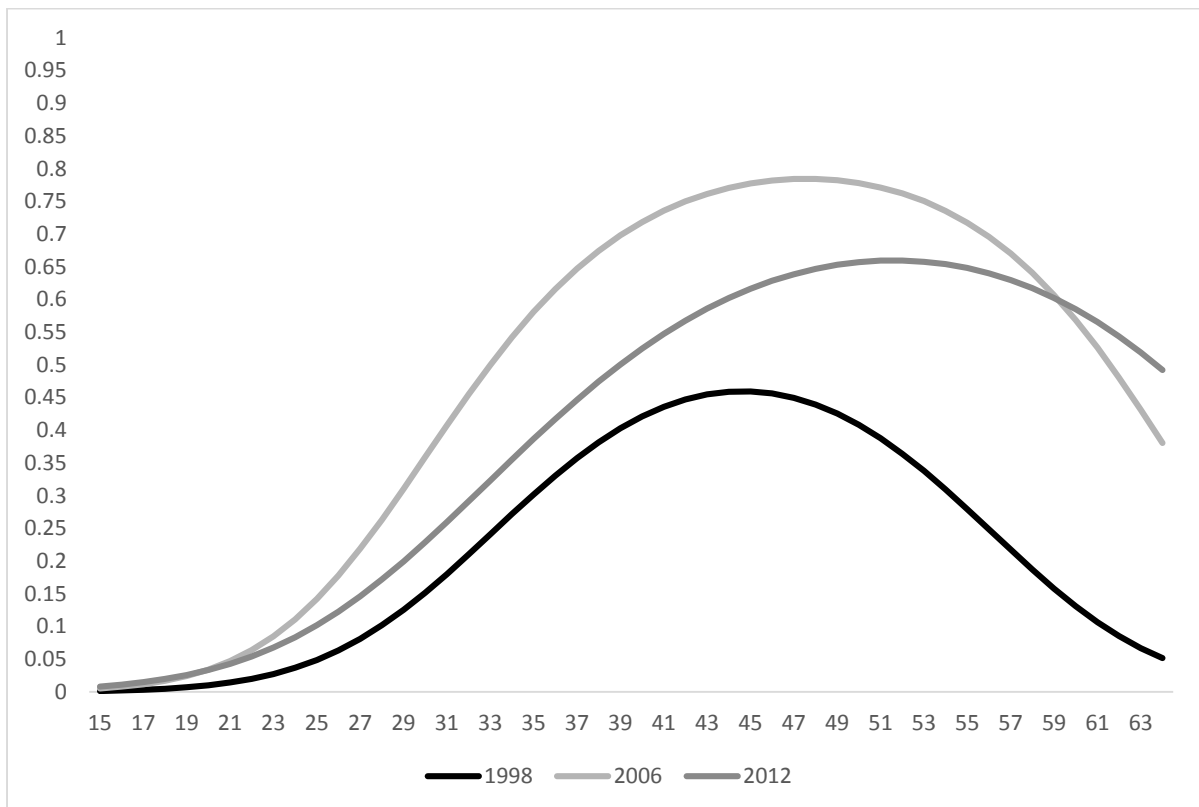
Figure 10: Probability of Employment by Age for the Private Wage Work Sector for Females for 1998, 2006 and 2012
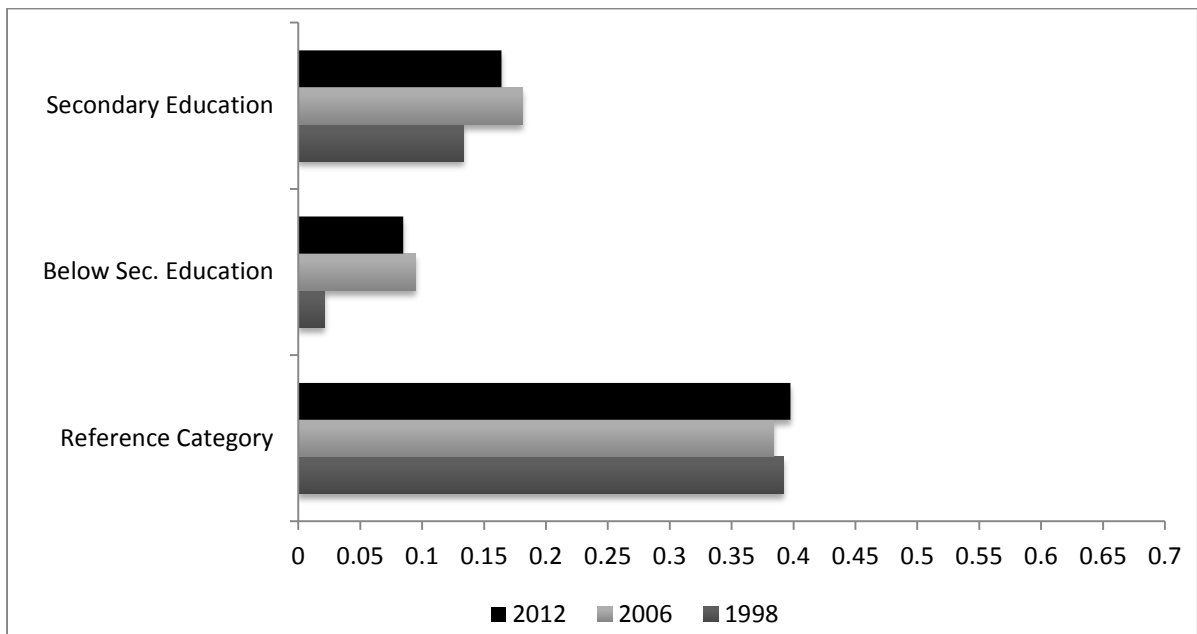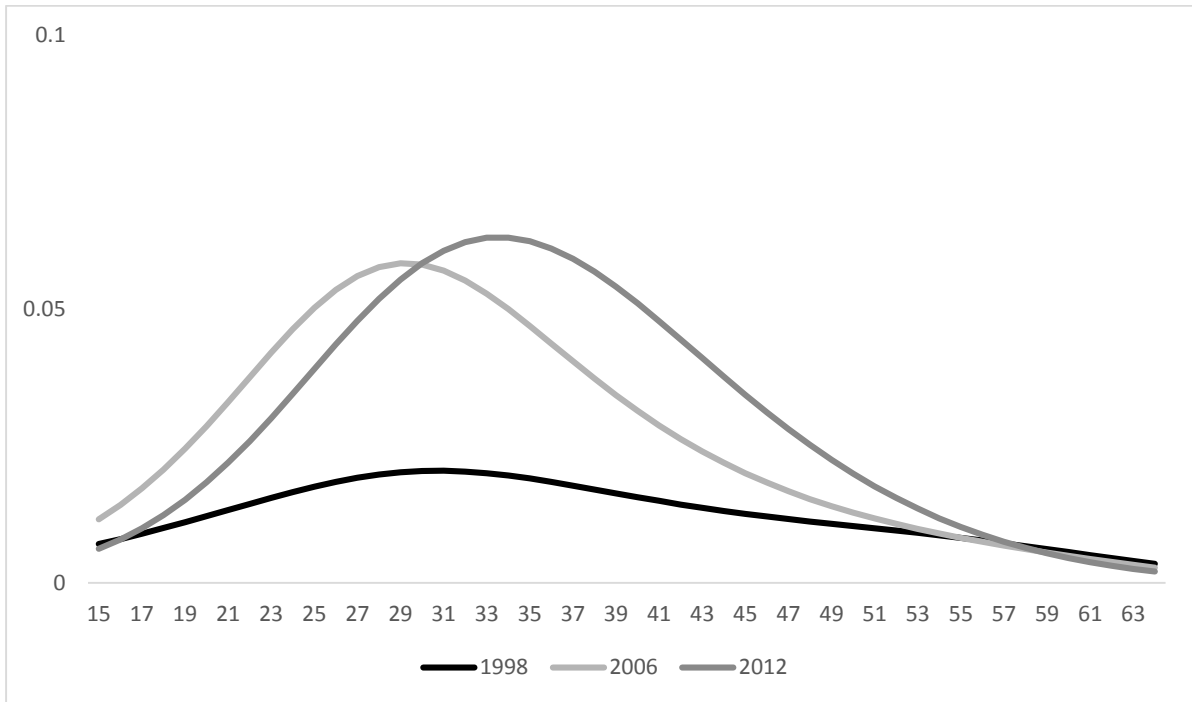

Figure 11: Probability of Employment by Sector and Marital Status for Females for 1998, 2006 and 2012
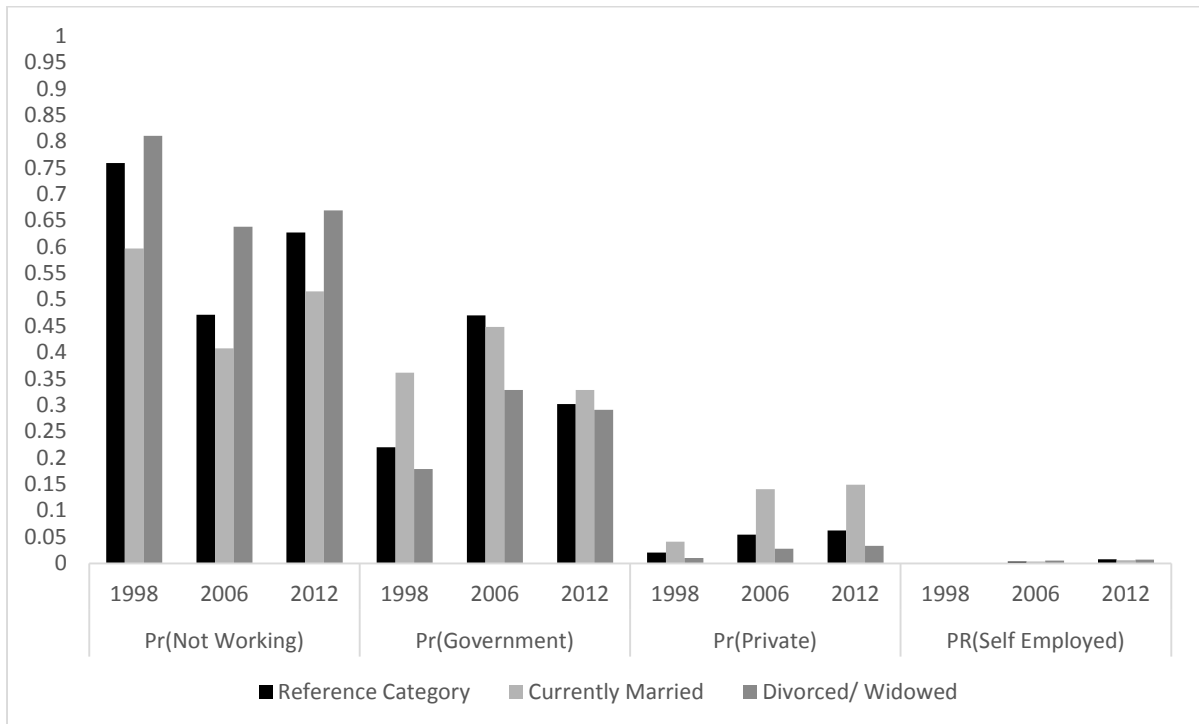
Note: The reference individual is a single who has an above secondary education, with both parents having an above secondary education, with non-working parents when 15 and who lives in a rural area.

Figure 12: Probability of Employment by Sector and Educational Level for Females for 1998, 2006 and 2012
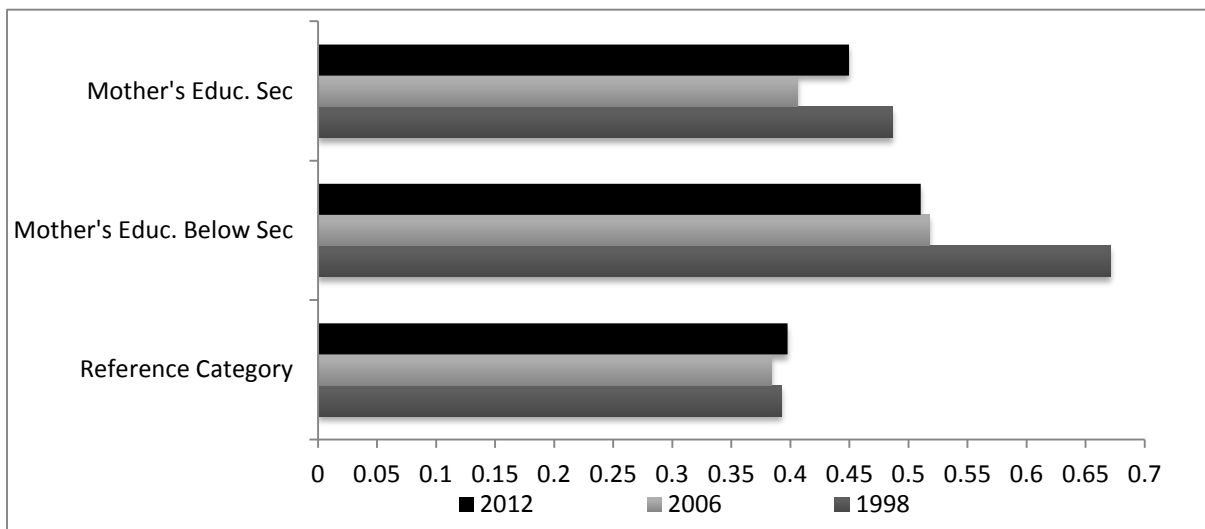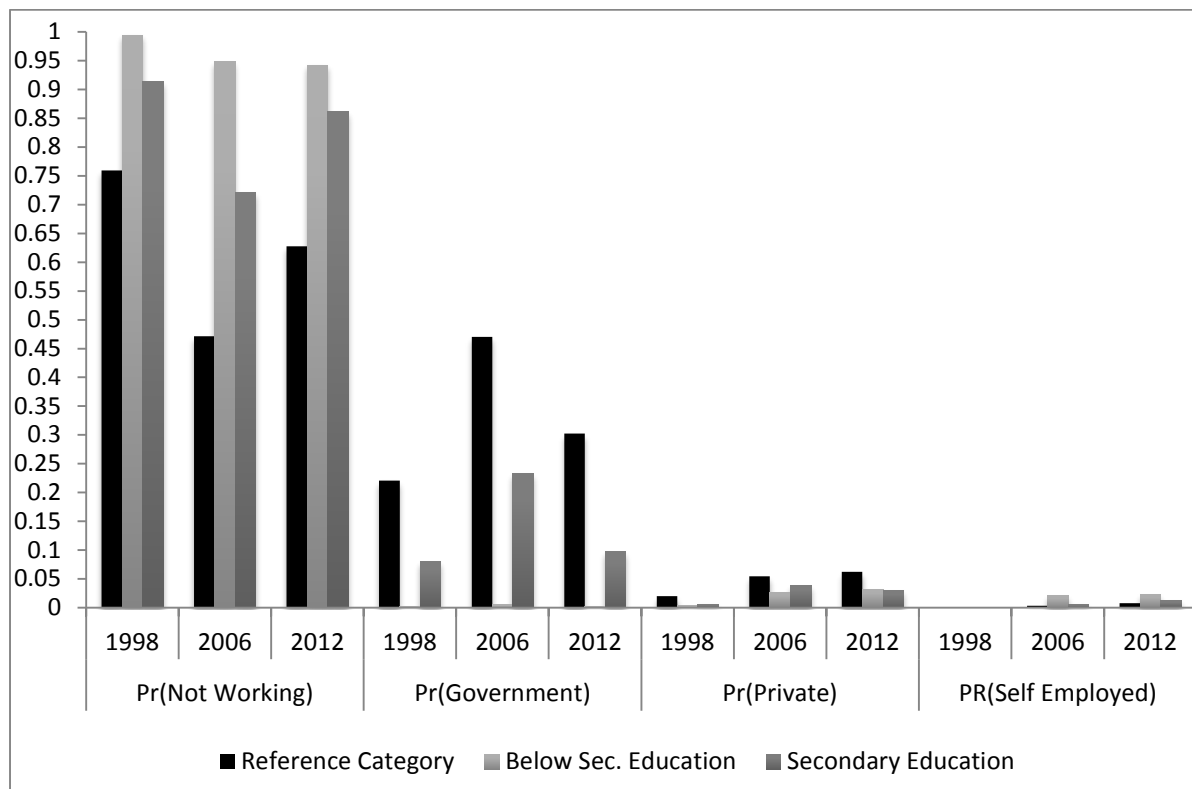

Note: The reference individual is a single who has an above secondary education, with both parents having an above secondary education, with non-working parents when 15 and who lives in a rural area.

Figure 13: Probability of Employment by Sector and Parental Educational Level for Females for 1998, 2006 and 2012
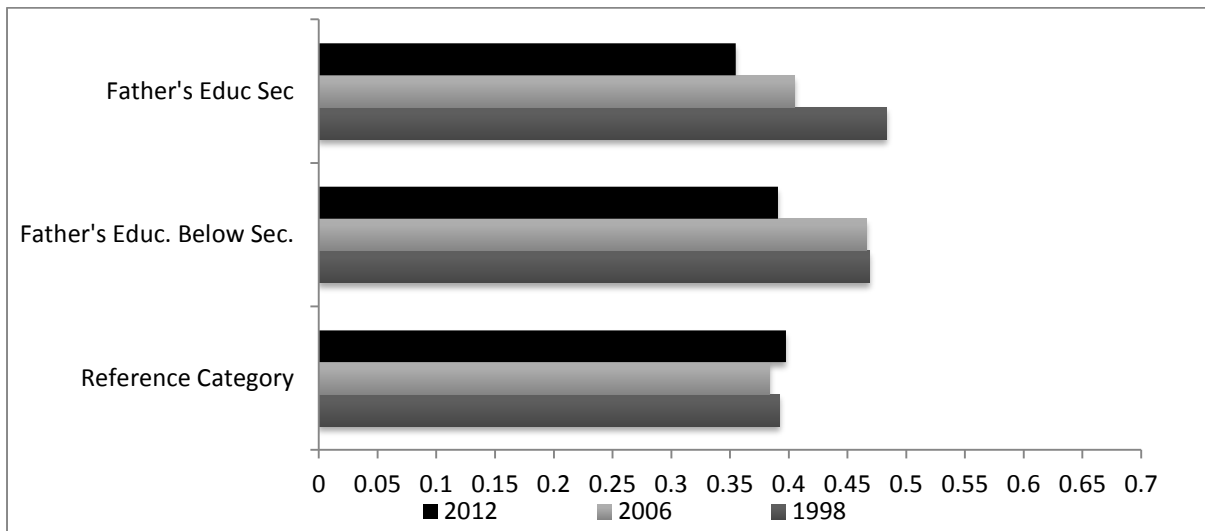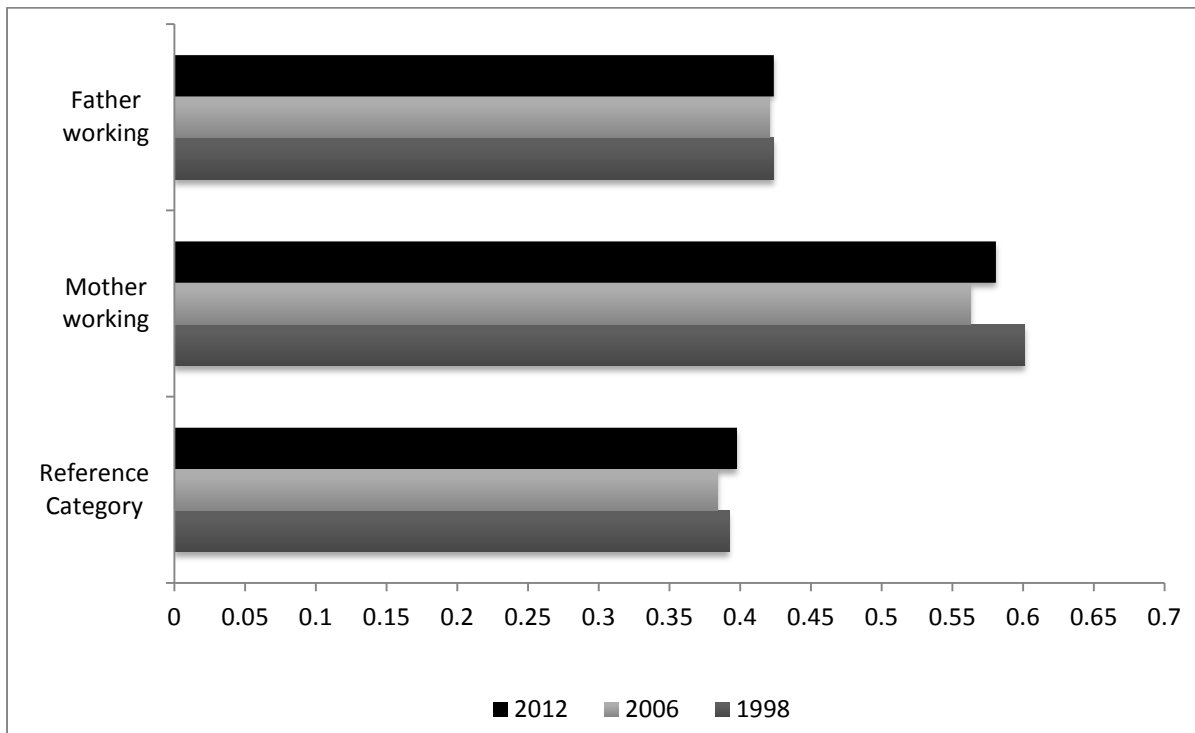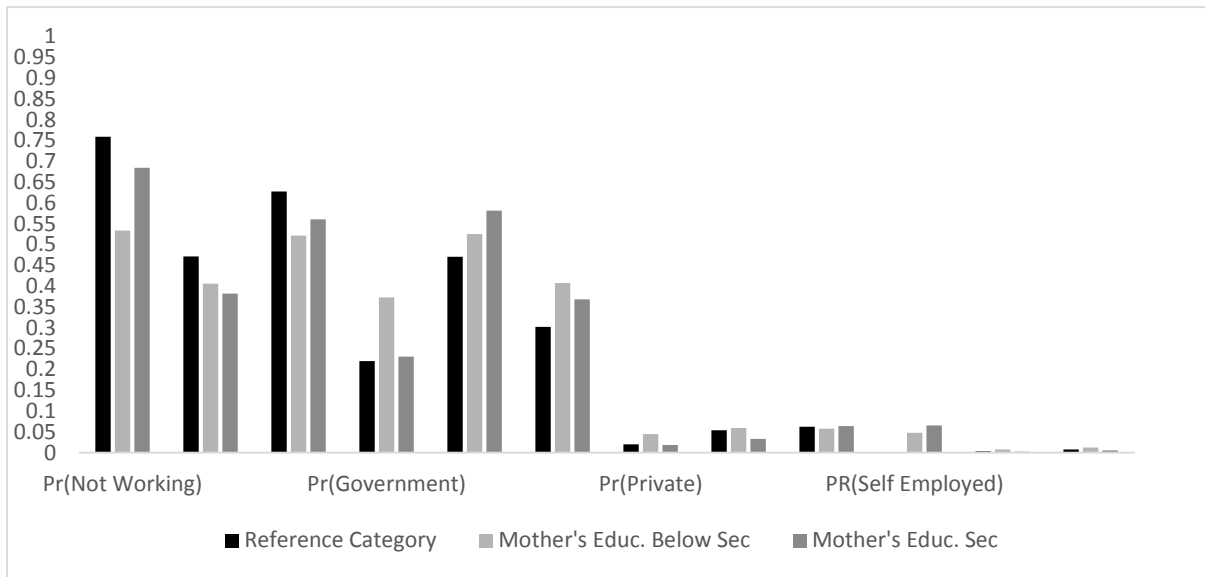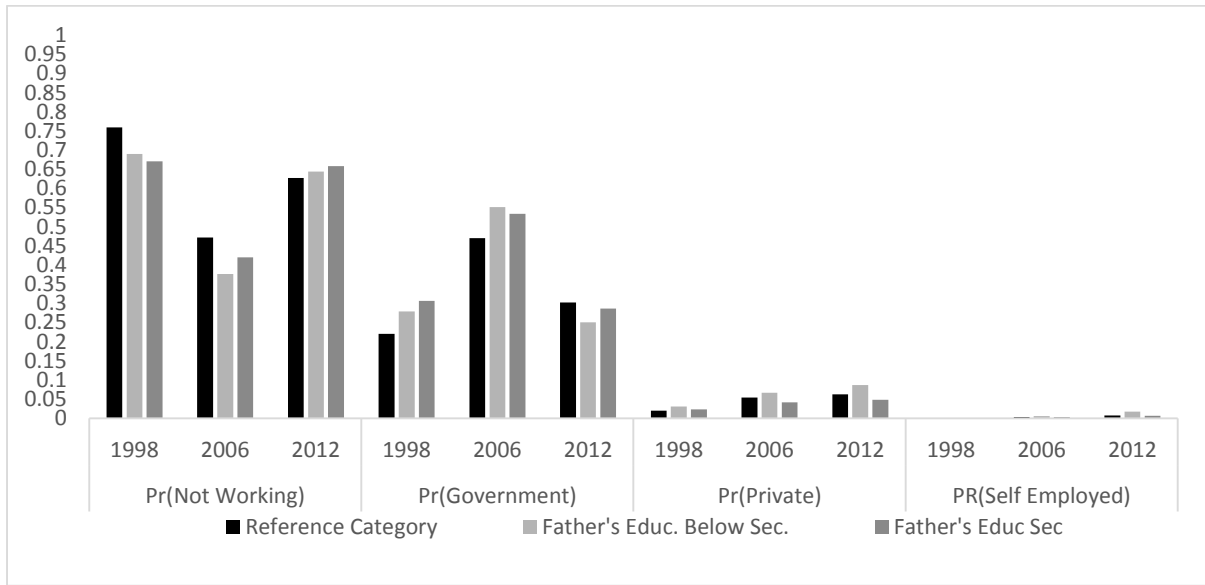

Note: The reference individual is a single who has an above secondary education, with both parents having an above secondary education, with non-working parents when 15 and who lives in a rural area.

Figure 14: Probability of Employment by Sector and Parent's Working When 15 for Females for 1998, 2006 and 2012
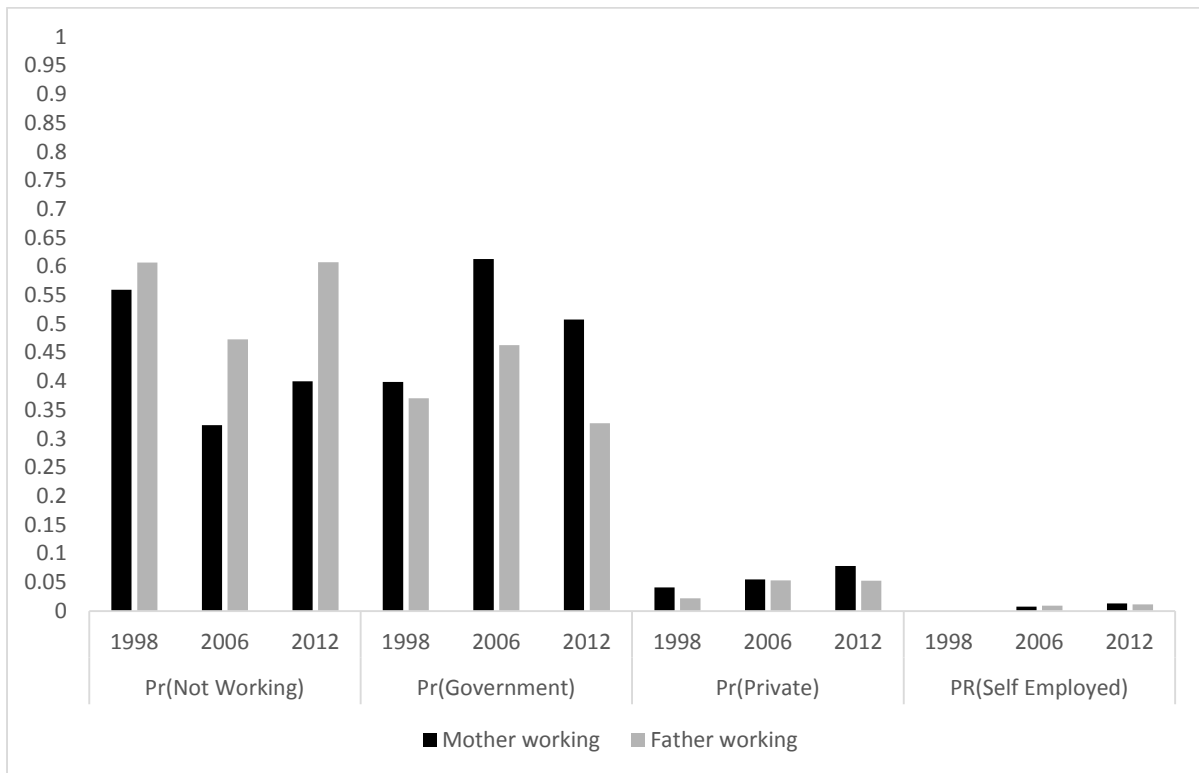
Figure 15: Probability of Employment by Sector and by Least Likely and Most Likely to Work for Females, Ages 15-64, for 1998, 2006 and 2012
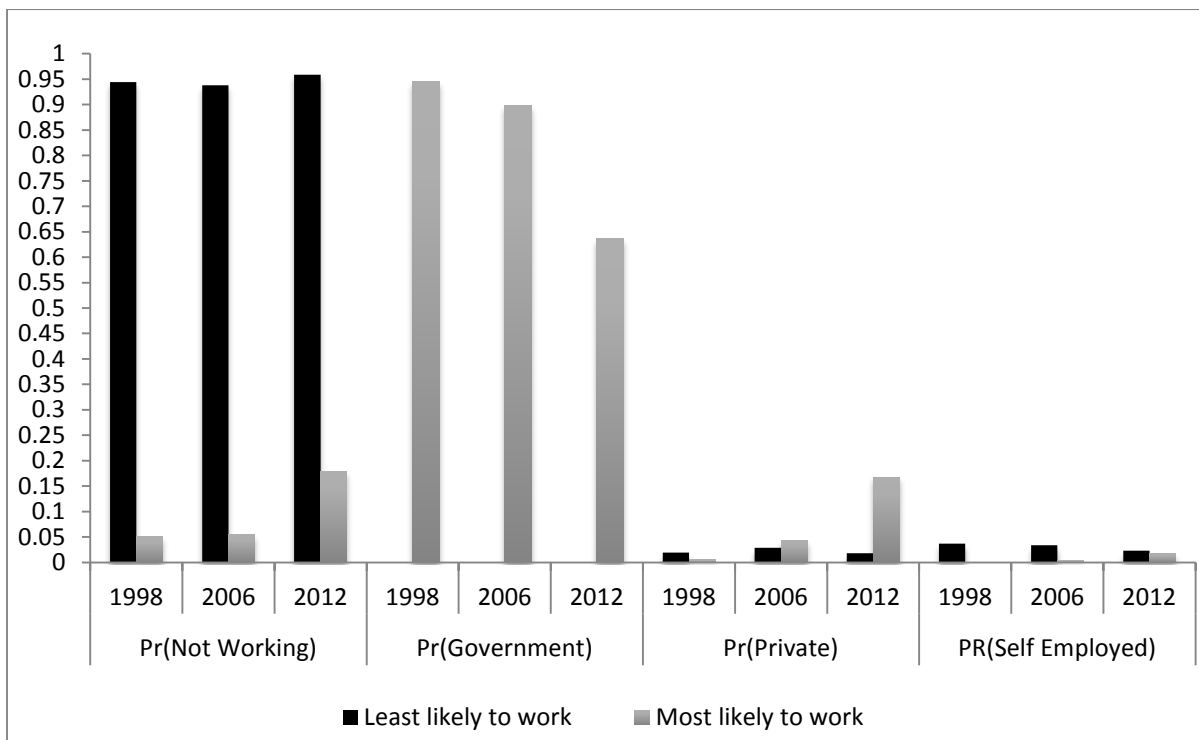
Note: Someone who is least likely to work is a woman who is married, has below secondary education, and has parents with below secondary education.

Table 1: Results of the Probit Regressions (Marginal Effects), Age 15 to 64, for Years 1998, 2006 and 2012

Dependent Var.: Employed with market definition (ref 1-week)	All			Female		
	1998	2006	2012	1998	2006	2012
	dy/dx/se	dy/dx/se	dy/dx/se	dy/dx/se	dy/dx/se	dy/dx/se
Probability for the Reference Individual	**0.687**	**0.685**	**0.832**	**0.271**	**0.265**	**0.298**
Age	0.082***	0.085***	0.065***	0.060***	0.057***	0.059***
	(0.005)	(0.004)	(0.005)	(0.008)	(0.006)	(0.005)
Age Squared	-0.099***	-0.102***	-0.078***	-0.070***	-0.064***	-0.064***
	(0.006)	(0.005)	(0.006)	(0.010)	(0.007)	(0.006)
Marital Status (Singles omitted)	ref.	ref.	ref.	ref.	ref.	ref.
Currently Married	-0.007	0.041***	-0.034***	0.017	0.100***	0.062***
	(0.018)	(0.014)	(0.010)	(0.030)	(0.022)	(0.0212)
Divorced/Widowed	0.049***	0.067***	0.017*	-0.085***	-0.033*	-0.045**
	(0.018)	(0.014)	(0.010)	(0.026)	(0.017)	(0.017)
Educational Level (Above Sec. omitted)	ref.	ref.	ref.	ref.	ref.	ref.
Educ. Below Secondary	-0.407***	-0.262***	-0.270***	-0.262***	-0.215***	-0.248***
	(0.015)	(0.013)	(0.015)	(0.062)	(0.032)	(0.030)
Educ. Secondary	-0.291***	-0.175***	-0.193***	-0.197***	-0.158***	-0.192***
	(0.017)	(0.013)	(0.014)	(0.040)	(0.022)	(0.022)
Female	-0.589***	-0.576***	-0.703***	/	/	/
	(0.023)	(0.017)	(0.006)	/	/	/
Urban Location	-0.016	-0.075***	-0.025***	-0.021	-0.077***	-0.038***
	(0.010)	(0.008)	(0.005)	(0.015)	(0.013)	(0.010)
Father's Education (Above Sec. omitted)	ref.	ref.	ref.	ref.	ref.	ref.
Father Educ. Below Secondary	0.111***	0.107***	0.046	0.069**	0.073***	-0.006
	(0.020)	(0.016)	(0.010)	(0.033)	(0.025)	(0.021)
Father Educ. Secondary	0.075***	0.022	-0.020	0.082**	0.018	-0.038*
	(0.022)	(0.019)	(0.012)	(0.037)	(0.025)	(0.021)
Mother's Education (Above Sec. omitted)	ref.	ref.	ref.	ref.	ref.	ref.
Mother Educ. Below Sec	0.150***	0.129***	0.086***	0.272***	0.122***	0.105***
	(0.035)	(0.025)	(0.016)	(0.056)	(0.036)	(0.032)
Mother Educ. Secondary	0.008	-0.003	0.016	0.084	0.019	0.048
	(0.038)	(0.026)	(0.015)	(0.057)	(0.034)	(0.030)
Mother working when 15	0.053**	0.085***	0.063***	0.197***	0.165***	0.175***
	(0.023)	(0.014)	(0.010)	(0.039)	(0.20)	(0.020)
Father working when 15	0.043*	0.032	0.009	0.027	0.032	0.024
	(0.023)	(0.020)	(0.012)	(0.040)	(0.030)	(0.029)
Constant	**-3.582***	**-3.731***	**-3.705***	**-3.876***	**-3.849***	**-3.857***
	(0.159)	(0.124)	(0.114)	(0.287)	(0.193)	(0.180)
P-value (model)	0.000	0.000	0.000	0.000	0.000	0.000
N (Observations)	14632	23696	29766	7312	11940	15134
Log likelihood	-6084.989	-10336.23	-11540.86	-2564.331	-5522.416	-5923.931

Notes:

i. These are the marginal effects of a probit model done on both males and females while accounting for females separately.

ii. Calculations are for a reference individual with means for the continuous variables and zeros for dummy variables.

iii. Age and Age squared are continuous variables.

iv. The reference for individuals' and parental educational level is the above secondary education.

v. Rural is the reference for Regions.

vi. Being single is the reference for the marital status.

vii. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 2: Results of the Multinomial Logit Regressions (Marginal Effects), Age 15 to 64, for Years 1998, 2006 and 2012

	Not Working			Government Public Wage Work			Private Wage Work			Employers/Self Employed/Unpaid		
	1998 dy/dx (se)	2006 dy/dx (se)	2012 dy/dx (se)	1998 dy/dx (se)	2006 dy/dx (se)	2012 dy/dx (se)	1998 dy/dx (se)	2006 dy/dx (se)	2012 dy/dx (se)	1998 dy/dx (se)	2006 dy/dx (se)	2012 dy/dx (se)
Probability for the Reference Individual	**0.407**	**0.377**	**0.223**	**0.336**	**0.419**	**0.491**	**0.113**	**0.139**	**0.191**	**0.145**	**0.065**	**0.095**
Age	-0.131***	-0.142***	-0.103***	0.118***	0.135***	0.104***	0.006	0.008	0.004	0.007	-0.001	-0.005**
	(0.008)	(0.007)	(0.009)	(0.014)	(0.008)	(0.006)	(0.005)	(0.006)	(0.005)	(0.007)	(0.002)	(0.002)
Age Squared	0.153***	0.165***	0.120***	-0.131***	-0.144***	-0.105***	-0.014**	-0.021***	-0.020***	-0.008	0.001	0.005*
	(0.009)	(0.008)	(0.011)	(0.015)	(0.009)	(0.008)	(0.007)	(0.008)	(0.007)	(0.007)	(0.003)	(0.003)
Female	0.517***	0.525***	0.647***	-0.277***	-0.339***	-0.380***	-0.107***	-0.131***	-0.185***	-0.133***	-0.055***	-0.082***
	(0.042)	(0.030)	(0.012)	(0.052)	(0.045)	(0.036)	(0.028)	(0.025)	(0.029)	(0.040)	(0.014)	(0.018)
Marital Status (Singles omitted)	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Currently Married	-0.046	-0.040	0.039**	0.036	-0.074**	-0.135***	0.040**	0.116***	0.110***	-0.03	-0.002	-0.014
	(0.029)	(0.027)	(0.018)	(0.042)	(0.038)	(0.037)	(0.016)	(0.020)	(0.022)	(0.019)	(0.006)	(0.010)
Divorced/Widowed	-0.101***	-0.085***	-0.051***	0.096***	-0.007	-0.031	0.0244	0.085***	0.099***	-0.019	0.008	-0.016*
	(0.027)	(0.024)	(0.017)	(0.037)	(0.033)	(0.034)	(0.018)	(0.020)	(0.023)	(0.019)	(0.006)	(0.010)
Educational Level (Above Sec. omitted)	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Educ. Below Secondary	0.356***	0.334***	0.333***	-0.311***	-0.381***	-0.440***	-0.019	0.009	0.050**	-0.026	0.038***	0.057***
	(0.040)	(0.037)	(0.029)	(0.061)	(0.054)	(0.044)	(0.014)	(0.016)	(0.022)	(0.019)	(0.012)	(0.016)
Educ. Secondary	0.276***	0.207***	0.238***	-0.181***	-0.202***	-0.246***	-0.045***	-0.0115	-0.002	-0.049***	0.006	0.009
	(0.021)	(0.017)	(0.017)	(0.031)	(0.022)	(0.018)	(0.014)	(0.011)	(0.013)	(0.019)	(0.006)	(0.008)
Urban Location	0.023*	0.068***	0.038***	0.002	-0.062***	-0.043***	0.01	0.022***	0.031***	-0.035***	-0.027***	-0.026***
	(0.014)	(0.011)	(0.008)	(0.014)	(0.013)	(0.011)	(0.006)	(0.006)	(0.007)	(0.012)	(0.007)	(0.006)
Father's Education (Above Sec. omitted)	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Father Educ. Below Secondary	-0.144***	-0.121***	-0.048***	0.015	0.036	-0.052**	0.036*	0.044**	0.056***	0.093**	0.041***	0.044***
	(0.027)	(0.021)	(0.014)	(0.031)	(0.025)	(0.022)	(0.020)	(0.017)	(0.017)	(0.037)	(0.015)	(0.016)
Father Educ. Secondary	-0.085***	-0.039*	0.014	0.054*	0.035	-0.001	0.020	-0.01	-0.014	0.011	0.014	0.001
	(0.028)	(0.023)	(0.016)	(0.032)	(0.027)	(0.023)	(0.019)	(0.013)	(0.014)	(0.027)	(0.012)	(0.011)
Mother's Education (Above Sec. omitted)	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Mother Educ. Below Sec	-0.154***	-0.119***	-0.092***	0.081	0.024	-0.003	0.069**	0.046**	0.054**	0.004	0.050***	0.041**
	(0.045)	(0.033)	(0.022)	(0.051)	(0.039)	(0.035)	(0.030)	(0.021)	(0.023)	(0.039)	(0.018)	(0.020)
Mother Educ. Secondary	0.01	-0.020	-0.026	-0.081	0.041	0.026	0.022	-0.027	-0.013	0.049	0.006	0.014
	(0.050)	(0.033)	(0.020)	(0.050)	(0.039)	(0.032)	(0.028)	(0.018)	(0.020)	(0.045)	(0.015)	(0.018)
Mother working when 15	-0.080**	-0.112***	-0.089***	0.104***	0.099***	0.095***	0.009	0.003	-0.004	-0.033	0.01	-0.002
	(0.032)	(0.020)	(0.015)	(0.037)	(0.024)	(0.022)	(0.015)	(0.011)	(0.012)	(0.022)	(0.006)	(0.008)
Father working when 15	-0.057*	-0.035	-0.009	0.019	0.01	-0.017	-0.008	-0.02	-0.021	0.045*	0.045***	0.047***
	(0.032)	(0.032)	(0.018)	(0.038)	(0.041)	(0.031)	(0.013)	(0.014)	(0.015)	(0.025)	(0.013)	(0.013)

Notes: i. These are the marginal effects of a multinomial model done on both males and females. ii. Calculations are for a reference individual with means for the continuous variables and zeros for dummy variables. iii. Age and Age squared are continuous variables. iv. The reference for individuals' and parental educational level is the above secondary education. v. Rural is the reference for Regions. vi. Being single is the reference for the marital status. vii. *** p<0.01, ** p<0.05, * p<0.1

Table 3: Results of the Multinomial Logit Regressions (Marginal Effects), Females Aged 15 to 64, for Years 1998, 2006 and 2012

	Not Working			Government Public Wage Work			Private Wage Work			Employers/Self Employed/Unpaid		
	1998 dy/dx (se)	2006 dy/dx (se)	2012 dy/dx (se)	1998 dy/dx (se)	2006 dy/dx (se)	2012 dy/dx (se)	1998 dy/dx (se)	2006 dy/dx (se)	2012 dy/dx (se)	1998 dy/dx (se)	2006 dy/dx (se)	2012 dy/dx (se)
Probability for the Reference Individual	**0.901**	**0.714**	**0.757**	**0.084**	**0.247**	**0.205**	**0.015**	**0.035**	**0.032**	**0.000**	**0.004**	**0.006**
Age	-0.052**	-0.116***	-0.079***	0.050**	0.109***	0.068***	0.002	0.007*	0.020**	0.000	0.000	0.001
	(0.022)	(0.020)	(0.013)	(0.022)	(0.022)	(0.013)	(0.002)	(0.004)	(0.004)	(0.000)	(0.000)	(0.001)
Age Squared	0.059**	0.126***	0.081***	-0.056**	-0.115***	-0.066***	-0.003	-0.011**	-0.013**	-0.000	-0.000	-0.001
	(0.0025)	(0.022)	(0.013)	(0.025)	(0.024)	(0.013)	(0.002)	(0.005)	(0.008)	(0.000)	(0.000)	(0.001)
Marital Status (Singles omitted)	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Currently Married	-0.093**	-0.062	-0.085**	0.073**	0.002	0.036	0.019	0.061***	0.050***	-0.000	-0.000	-0.001
	(0.037)	(0.043)	(0.034)	(0.036)	(0.042)	(0.033)	(0.013)	(0.023)	(0.017)	(0.000)	(0.001)	(0.001)
Divorced/Widowed	0.026	0.117***	0.029	-0.018	-0.098**	-0.013	-0.008	-0.02*	-0.015*	-0.000	0.001	-0.001
	(0.020)	(0.039)	(0.026)	(0.019)	(0.040)	(0.026)	(0.006)	(0.011)	(0.008)	(0.000)	(0.001)	(0.001)
Educational Level (Above Sec. omitted)	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Educ. Below Secondary	0.096**	0.259***	0.212***	-0.084**	-0.245***	-0.204***	-0.012	-0.024**	-0.018**	0.000	0.01	0.010*
	(0.042)	(0.071)	(0.051)	(0.041)	(0.074)	(0.052)	(0.008)	(0.011)	(0.007)	(0.000)	(0.006)	(0.006)
Educ. Secondary	0.068**	0.162***	0.163***	-0.057**	-0.149***	-0.147***	-0.011	-0.015**	-0.018**	-0.000	0.001	0.003
	(0.028)	(0.038)	(0.035)	(0.027)	(0.040)	(0.035)	(0.007)	(0.007)	(0.007)	(0.000)	(0.001)	(0.002)
Urban Location	-0.008	0.017	0.012	0.002	-0.035*	-0.033**	0.007	0.02**	0.025***	-0.000	-0.002	-0.004*
	(0.011)	(0.020)	(0.016)	(0.010)	(0.019)	(0.014)	(0.005)	(0.008)	(0.009)	(0.000)	(0.001)	(0.002)
Father's Education (Above Sec. omitted)	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Father Educ. Below Secondary	-0.037	-0.086***	0.016	0.028	0.071**	-0.014*	0.009	0.012	0.012	0.000	0.003	0.008
	(0.023)	(0.032)	(0.021)	(0.021)	(0.033)	(0.020)	(0.009)	(0.011)	(0.010)	(0.000)	(0.003)	(0.006)
Father Educ. Secondary	-0.045	-0.042	0.023	0.042	0.049	0.088	0.003	-0.006	-0.007	0.000	0.000	-0.001
	(0.028)	(0.034)	(0.021)	(0.028)	(0.034)	(0.036)	(0.006)	(0.007)	(0.006)	(0.000)	(0.002)	(0.002)
Mother's Education (Above Sec. omitted)	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.	ref.
Mother Educ. Below Sec	-0.150***	-0.058	-0.091**	0.084**	0.047	0.054**	0.024	0.006	-0.001	0.042	0.005	0.004
	(0.055)	(0.046)	(0.036)	(0.043)	(0.047)	(0.036)	(0.016)	(0.011)	(0.009)	(0.028)	(0.004)	(0.005)
Mother Educ. Secondary	-0.057	-0.077	-0.056*	0.008	0.089*	0.054*	-0.001	-0.012	0.002	0.05	-0.001	-0.001
	(0.044)	(0.048)	(0.032)	(0.027)	(0.048)	(0.031)	(0.007)	(0.020)	(0.008)	(0.037)	(0.002)	(0.003)
Mother working when 15	-0.116***	-0.141***	-0.207***	0.096**	0.129***	0.187***	0.02	0.006	0.014*	0.000	0.005	0.006*
	(0.045)	(0.035)	(0.031)	(0.045)	(0.038)	(0.034)	(0.013)	(0.007)	(0.008)	(0.000)	(0.035)	(0.004)
Father working when 15	-0.081**	-0.001	-0.018	0.077**	-0.005	0.019	0.004	-0.001	-0.004	-0.000	0.006*	0.003
	(0.039)	(0.051)	(0.037)	(0.039)	(0.052)	(0.038)	(0.006)	(0.008)	(0.007)	(0.000)	(0.003)	(0.002)

Notes: i. These are the marginal effects of a multinomial model done for females separately. ii. Calculations are for a reference individual with means for the continuous variables and zeros for dummy variables. iii. Age and Age squared are continuous variables. iv. The reference for individuals' and parental educational level is the above secondary education. v. Rural is the reference for Regions. vi. Being single is the reference for the marital status. vii. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Appendix

Table 4: Results of the Probit Regressions, Ages 15 to 64, Years 1998, 2006 and 2012

Dependent Var.: Employed with market definition (ref 1-week)	All			Female		
	1998	2006	2012	1998	2006	2012
	b/se	b/se	b/se	b/se	b/se	b/se
Age	0.231***	0.238***	0.260***	0.179***	0.173***	0.171***
	(0.007)	(0.006)	(0.006)	(0.012)	(0.008)	(0.008)
Age Squared	-0.279***	-0.286***	-0.311***	-0.210***	-0.196***	-0.186***
	(0.009)	(0.007)	(0.007)	(0.015)	(0.010)	(0.010)
Marital Status (Singles omitted)	ref.	ref.	ref.	ref.	ref.	ref.
Currently Married	-0.021	0.118***	-0.127***	0.051	0.284***	0.173***
	(0.049)	(0.039)	(0.039)	(0.089)	(0.064)	(0.062)
Divorced/Widowed	0.144***	0.199***	0.071*	-0.284***	-0.104*	-0.134***
	(0.052)	(0.039)	(0.038)	(0.072)	(0.053)	(0.049)
Educational Level (Above Sec. omitted)	ref.	ref.	ref.	ref.	ref.	ref.
Educ. Below Secondary	-1.071***	-0.677***	-0.806***	-1.753***	-1.019***	-1.115***
	(0.042)	(0.033)	(0.030)	(0.060)	(0.044)	(0.040)
Educ. Secondary	-0.752***	-0.457***	-0.607***	-0.837***	-0.616***	-0.719***
	(0.044)	(0.032)	(0.029)	(0.060)	(0.043)	(0.038)
Female	-1.782***	-1.716***	-2.094***	/	/	/
	(0.029)	(0.022)	(0.021)	/	/	/
Urban Location	-0.046	-0.202***	-0.101***	-0.064	-0.256***	-0.112***
	(0.028)	(0.021)	(0.020)	(0.045)	(0.030)	(0.028)
Father's Education (Above Sec. omitted)	ref.	ref.	ref.	ref.	ref.	ref.
Father Educ. Below Secondary	0.348***	0.330***	0.201***	0.196**	0.211***	-0.017
	(0.061)	(0.049)	(0.044)	(0.088)	(0.067)	(0.060)
Father Educ. Secondary	0.225***	0.062	-0.076	0.232**	0.054	-0.113*
	(0.068)	(0.053)	(0.047)	(0.098)	(0.074)	(0.064)
Mother's Education (Above Sec. omitted)	ref.	ref.	ref.	ref.	ref.	ref.
Mother Educ. Below Sec	0.495***	0.410***	0.427***	0.717***	0.340***	0.286***
	(0.102)	(0.073)	(0.065)	(0.155)	(0.102)	(0.089)
Mother Educ. Secondary	0.021	-0.009	0.066	0.239	0.058	0.133
	(0.108)	(0.073)	(0.063)	(0.161)	(0.103)	(0.085)
Mother working when 15	0.155**	0.258***	0.294***	0.529***	0.453***	0.463***
	(0.067)	(0.038)	(0.037)	(0.104)	(0.052)	(0.052)
Father working when 15	0.124*	0.092	0.036	0.080	0.096	0.067
	(0.066)	(0.057)	(0.048)	(0.121)	(0.092)	(0.082)
Constant	**-3.582***	**-3.731***	**-3.705***	**-3.876***	**-3.849***	**-3.857***
	(0.159)	(0.124)	(0.114)	(0.287)	(0.193)	(0.180)
P-value (model)	0.000	0.000	0.000	0.000	0.000	0.000
N (Observations)	14632	23696	29766	7312	11940	15134
Log likelihood	-6084.989	-10336.23	-11540.86	-2564.331	-5522.416	-5923.931
Pseudo R-squared	**0.3902**	**0.3698**	**0.4389**	**0.2411**	**0.1205**	**0.1522**

Notes:

i. These are the probit model regressions done on males and females while accounting for females separately.

ii. Calculations are for a reference individual with means for the continuous variables and zeros for dummy variables.

iii. Age and Age squared are continuous variables.

iv. The reference for individuals' and parental educational level is the above secondary education.

v. Rural is the reference for Regions.

vi. Being single is the reference for the marital status.

vii. *** p<0.01, ** p<0.05, * p<0.1

Table 5: Results of the Multinomial Logit Regressions, Ages 15 to 64, Years 1998, 2006 and 2012

	All			Female		
	1998 b/se	**2006** b/se	**2012** b/se	**1998** b/se	**2006** b/se	**2012** b/se
Government Public Wage Work						
Age	0.671***	0.699***	0.675***	0.655***	0.605***	0.436***
	(0.022)	(0.018)	(0.016)	(0.039)	(0.029)	(0.025)
Age Squared	-0.768***	-0.783***	-0.753***	-0.734***	-0.643***	-0.429***
	(0.026)	(0.021)	(0.020)	(0.048)	(0.036)	(0.031)
Female	-2.563***	-2.525***	-2.844***	/	/	/
	(0.071)	(0.057)	(0.054)	/	/	/
Marital Status (Singles omitted)	ref.	ref.	ref.	ref.	ref.	ref.
Currently Married	0.224	-0.083	-0.483***	0.735***	0.097	0.281
	(0.186)	(0.153)	(0.148)	(0.280)	(0.225)	(0.194)
Divorced/Widowed	0.535***	0.242*	0.196	-0.273	-0.661***	-0.102
	(0.162)	(0.132)	(0.126)	(0.233)	(0.189)	(0.160)
Educational Level (Above Sec. omitted)	ref.	ref.	ref.	ref.	ref.	ref.
Educ. Below Secondary	-3.216***	-3.026***	-3.188***	-5.263***	-5.267***	-5.043***
	(0.092)	(0.077)	(0.072)	(0.187)	(0.182)	(0.165)
Educ. Secondary	-1.295***	-1.096***	-1.421***	-1.193***	-1.125***	-1.454***
	(0.088)	(0.068)	(0.060)	(0.114)	(0.090)	(0.078)
Urban Location	-0.049	-0.326***	-0.250***	0.028	-0.176*	-0.193**
	(0.068)	(0.054)	(0.048)	(0.134)	(0.095)	(0.076)
Father's Education (Above Sec. omitted)	ref.	ref.	ref.	ref.	ref.	ref.
Father Educ. Below Secondary	0.482***	0.469***	0.130	0.331*	0.382***	-0.212*
	(0.131)	(0.108)	(0.096)	(0.177)	(0.145)	(0.122)
Father Educ. Secondary	0.385***	0.189	-0.060	0.454**	0.241	-0.102
	(0.146)	(0.121)	(0.103)	(0.196)	(0.160)	(0.130)
Mother's Education (Above Sec. omitted)	ref.	ref.	ref.	ref.	ref.	ref.
Mother Educ. Below Sec	0.690***	0.436**	0.529***	0.877***	0.260	0.484**
	(0.237)	(0.172)	(0.150)	(0.336)	(0.242)	(0.191)
Mother Educ. Secondary	-0.300	0.149	0.176	0.151	0.421*	0.311*
	(0.249)	(0.172)	(0.142)	(0.340)	(0.230)	(0.174)
Mother working when 15	0.489***	0.566***	0.682***	0.899***	0.640***	0.968***
	(0.168)	(0.105)	(0.094)	(0.263)	(0.164)	(0.133)
Father working when 15	0.208	0.122	0.005	0.744*	-0.020	0.111
	(0.180)	(0.176)	(0.135)	(0.382)	(0.281)	(0.231)
Constant	**-12.581***	**-12.996***	**-12.075***	**-14.725***	**-12.827***	**-10.340***
	(0.513)	(0.427)	(0.381)	(0.908)	(0.669)	(0.563)
Private Wage Work						
Age	0.376***	0.437***	0.484***	0.209***	0.357***	0.409***
	(0.019)	(0.016)	(0.014)	(0.046)	(0.035)	(0.038)
Age Squared	-0.501***	-0.592***	-0.646***	-0.281***	-0.476***	-0.528***
	(0.025)	(0.021)	(0.018)	(0.065)	(0.051)	(0.052)
Female	-3.738***	-3.720***	-4.708***	/	/	/
	(0.087)	(0.062)	(0.063)	/	/	/
Marital Status (Singles omitted)	ref.	ref.	ref.	ref.	ref.	ref.
Currently Married	0.423***	0.720***	0.290***	0.950***	1.096***	1.065***
	(0.124)	(0.108)	(0.101)	(0.348)	(0.273)	(0.241)
Divorced/Widowed	0.481***	0.732***	0.676***	-0.763**	-0.977***	-0.704***
	(0.154)	(0.124)	(0.115)	(0.326)	(0.258)	(0.230)
Educational Level (Above Sec. omitted)	ref.	ref.	ref.	ref.	ref.	ref.
Educ. Below Secondary	-0.814***	-0.575***	-0.681***	-1.930***	-1.428***	-1.076***
	(0.104)	(0.076)	(0.069)	(0.210)	(0.153)	(0.149)
Educ. Secondary	-1.034***	-0.525***	-0.736***	-1.404***	-0.767***	-1.062***
	(0.108)	(0.074)	(0.065)	(0.209)	(0.135)	(0.139)
Urban Location	0.029	-0.021	-0.009	0.385**	0.426***	0.571***
	(0.064)	(0.048)	(0.043)	(0.180)	(0.118)	(0.115)
Father's Education (Above Sec. omitted)	ref.	ref.	ref.	ref.	ref.	ref.
Father Educ. Below Secondary	0.715***	0.662***	0.501***	0.519*	0.428*	0.302
	(0.152)	(0.113)	(0.099)	(0.311)	(0.218)	(0.220)
Father Educ. Secondary	0.395**	0.032	-0.136	0.258	-0.143	-0.299
	(0.170)	(0.126)	(0.105)	(0.355)	(0.244)	(0.234)
Mother's Education (Above Sec. omitted)	ref.	ref.	ref.	ref.	ref.	ref.
Mother Educ. Below Sec	0.948***	0.667***	0.783***	1.153**	0.244	0.106

	All			**Female**		
	1998 b/se	**2006** b/se	**2012** b/se	**1998** b/se	**2006** b/se	**2012** b/se
	(0.253)	(0.165)	(0.145)	(0.494)	(0.304)	(0.291)
Mother Educ. Secondary	0.156	-0.159	0.053	0.016	-0.285	0.137
	(0.269)	(0.169)	(0.141)	(0.531)	(0.299)	(0.257)
Mother working when 15	0.293*	0.375***	0.484***	1.012***	0.387**	0.678***
	(0.151)	(0.087)	(0.080)	(0.308)	(0.182)	(0.179)
Father working when 15	0.079	-0.057	-0.078	0.318	-0.017	-0.129
	(0.137)	(0.115)	(0.095)	(0.362)	(0.237)	(0.226)
Constant	**-7.302*****	**-7.878*****	**-8.008*****	**-7.439*****	**-8.714*****	**-10.007*****
	(0.387)	(0.299)	(0.265)	(0.997)	(0.699)	(0.708)
Employers/Self Employed/Unpaid Work						
Age	0.369***	0.354***	0.414***	0.235***	0.194***	0.229***
	(0.019)	(0.013)	(0.013)	(0.037)	(0.018)	(0.020)
Age Squared	-0.434***	-0.423***	-0.488***	-0.290***	-0.230***	-0.261***
	(0.023)	(0.016)	(0.016)	(0.048)	(0.023)	(0.026)
Female	-3.368***	-2.748***	-3.413***	/	/	/
	(0.083)	(0.050)	(0.053)	/	/	/
Marital Status (Singles omitted)	ref.	ref.	ref.	ref.	ref.	ref.
Currently Married	-0.112	0.087	-0.328***	-0.494*	0.021	-0.082
	(0.132)	(0.089)	(0.096)	(0.280)	(0.153)	(0.180)
Divorced/Widowed	0.141	0.368***	0.071	-0.515***	0.067	-0.152
	(0.141)	(0.088)	(0.093)	(0.193)	(0.115)	(0.119)
Educational Level (Above Sec. omitted)	ref.	ref.	ref.	ref.	ref.	ref.
Educ. Below Secondary	-0.830***	-0.183**	-0.439***	-0.060	1.025***	0.675***
	(0.112)	(0.080)	(0.075)	(0.321)	(0.208)	(0.186)
Educ. Secondary	-0.934***	-0.348***	-0.632***	-0.727*	0.110	0.177
	(0.121)	(0.082)	(0.075)	(0.379)	(0.220)	(0.194)
Urban Location	-0.336***	-0.699***	-0.478***	-0.662***	-1.023***	-0.827***
	(0.067)	(0.045)	(0.046)	(0.133)	(0.075)	(0.086)
Father's Education (Above Sec. omitted)	ref.	ref.	ref.	ref.	ref.	ref.
Father Educ. Below Secondary	0.932***	0.875***	0.628***	0.998*	0.661**	0.813**
	(0.192)	(0.139)	(0.127)	(0.561)	(0.325)	(0.351)
Father Educ. Secondary	0.308	0.306**	-0.046	0.584	0.158	-0.129
	(0.217)	(0.154)	(0.139)	(0.615)	(0.368)	(0.404)
Mother's Education (Above Sec. omitted)	ref.	ref.	ref.	ref.	ref.	ref.
Mother Educ. Below Sec	0.498	0.950***	0.893***	14.390	0.950*	0.653
	(0.321)	(0.222)	(0.204)	(698.132)	(0.521)	(0.532)
Mother Educ. Secondary	0.268	0.143	0.261	14.463	-0.148	-0.145
	(0.340)	(0.236)	(0.206)	(698.132)	(0.594)	(0.583)
Mother working when 15	-0.036	0.494***	0.482***	1.053***	1.119***	0.980***
	(0.193)	(0.086)	(0.091)	(0.344)	(0.117)	(0.142)
Father working when 15	0.425**	0.624***	0.446***	-0.421	0.970***	0.452
	(0.184)	(0.152)	(0.127)	(0.362)	(0.370)	(0.280)
Constant	**-7.677*****	**-8.060*****	**-8.417*****	**-21.379**	**-8.739*****	**-9.080*****
	(0.450)	(0.322)	(0.305)	(698.132)	(0.687)	(0.655)
P-value (model)	0.000	0.000	0.000	0.000	0.000	0.000
N(Observations)	14629	23690	29744	7310	11937	15133
Log likelihood	-11327.72	-20017.6	-23339.26	-3113.309	-6689.768	-7345.886
Pseudo R-squared	**0.3204**	**0.3058**	**0.3432**	**0.3104**	**0.2527**	**0.2349**

Notes:

i. These are the multinomial model regressions done on males and females while accounting for females separately.

ii. Calculations are for a reference individual with means for the continuous variables and zeros for dummy variables.

iii. Age and Age squared are continuous variables.

iv. The reference for individuals' and parental educational level is the above secondary education.

v. Rural is the reference for Regions.

vi. Being single is the reference for the marital status.

vii. *** p<0.01, ** p<0.05, * p<0.1