Childbearing or Working? ——Impact of Childbirth on Rural Women's Interruption of Off-farm Employment

Biying ZHOU*

Institute of Geographic Sciences and Natural Resources Research, University of Chinese Academy of Sciences, Beijing 100101, China

Abstract To assess the work interruption information and examine the correlation between childbirth and the off-farm employment interruption of rural women, this article collected 3 820 women's childbirth and employment information over the past 18 years (1998 -2015), using multivariate regression to explore the impact of female individual, family and employment characteristics on probability of employment interruption and duration of interruption. Results indicated that overall, 40% of women got interrupted after childbirth in rural areas and the average duration of interruption was about four years. Human capital factors, such as their work experience, first childbirth age and education experience, influence the probability of employment interruption, but these factors do not extend the duration of interruption for women who got interrupted. It is concluded that increasing the human capital of rural women is helpful to increasing their labor force participation rate after childbirth.

Key words Interruption of employment, Childbirth, Off-farm employment

1 Introduction

With the great achievements of China's economy, a large number of rural laborers from the land are freed to become an important force in promoting economic development[1-3]. Since the 1990s, off-farm employment rate of women has increased rapidly[1]. The emergence and evolution of the rural labor market has provided many job opportunities for women by narrowing the gender wage gap and other approaches[4], simultaneously increasing the proportion of off-farm labor participation[5-6], rural women have become an important part of the labor market[7-8]. As women increasingly become an important component of the labor market, their labor force participation plans have drawn much attention recently[9-11]. Empirical findings typically show strong negative associations between female fertility and their employment[12-13]. Some analysts have argued that the female reduce their desire for labor force participation in order to accommodate their desires of childbearing[14-16]. However we want to know whether this conclusion is equally applicable in rural China, many domestic scholars are also concerned about this issue. In the long run, they find Chinese female labor force participation rate is still at the top in the world, according to the 2005 One Thousandth of the Population Sample Survey data, 94.3% of full-time employed women had given birth to children[17]. We are very curious about whether women continue to work in the short term. Goldin and Mitchell[18] (2016), in their most recent working paper, found that the female labor force participation rate experiences a slight decline when they are in their 30s; they call this the "Sagging Middle". As rural incomes rise, women's employment decisions become a tradeoff between family-care and wage income[19]. They are more likely to stay at home, take care of the newborn and leave the labor market[20]. There is interruption among women in rural China after their childbirth[21], which impacts the entire labor market as the female increasingly become an important component of the labor market. We need to understand what factors make women choose to discontinue employment after childbearing.

In this paper, we attempt to describe the employment of women in the short term after childbirth, especially for off-farm employed women. It is necessary to examine in our countryside, whether there are differences between women who got interrupted or not, we also focus on how long would mother's employment interruption time be between different characteristics. We are more concerned about whether women will have a temporary exit from the labor market, and if so, how long they will quit.

To meet our goal, we have three specific objectives. First, we report on the work interruption of women due to childbearing in poor rural areas, at the same time, we are concerned about the duration of their interruption in the work interruption sub-sample. Second, we test the differences of interruption time after childbirth by individual information of the women and their fertility information, in order to compare the differences between the two groups of women. Third, we conduct econometric analyses to see whether the childbearing has effect on the interruption time. In order to better understand it, we examined what factors were associated with whether women returned to off-farm employment after childbirth.

2 Data and variable definition

2.1 Data The data for this paper are from four rounds of follow-up surveys of a nearly nationally representative sample led by the Center for Chinese Agriculture Policy, Chinese Academy of Sciences in Beijing. The four surveys were conducted respectively in 2005, 2008, 2012 and 2016. This paper just uses the last round of this survey.

The data were collected in a random manner, involving near-

Received: February 5, 2018 Accepted: April 6, 2018

* Corresponding author. E-mail: xidazhoubiying@126.com

ly nationally representative samples of 101 villages in five provinces of rural China during March and April 2016 (Public Investment and Rural Development Survey or PIRD). The provinces are Hebei, Jiangsu, Jilin, Shaanxi and Sichuan. To ensure broad coverage within each province, five counties were randomly selected from within each income quintile for the province, as measured by the gross value of industrial output. Four villages were randomly selected within each county.

For every household surveyed, an 18-year employment history form was completed for each household member and each child in the family. For each year between 1998 and 2015, the questionnaire tracked individuals' participation in farm and off-farm employment, the main type of off-farm work performed, the place of residence while working (within or outside the city), the location of off-farm employment, and whether or not they were self-employed or live with family members. The PRID also collected detailed information about each household member's off-farm work in 2015. By looking at the employment history of each individual, we are able to see changes in employment and leisure time for each individual in the household during our observation period. To our knowledge, there are no other studies that have collected similar detailed information of extended family numbers over time.

The main problem that we are concerned about is off-farm employed women's work interruption after childbirth. In order to correspond to the history of employment, we have retained samples of women who gave birth to children between 1998 and 2015, and a total of 2 782 eligible women were retained. For part of the women have more than two children in our observation period, there are 3 820 children were given birth to during the observation period. So we have a total of 3 820 samples to be observed that mother would stay at home for years or come back to work place after the childbirth.

2.2 Variable definition In this paper, we divided the main variables into five categories. The first category includes the dependent variables that we are most concerned about, employment interrupted and the number of gap year. The second category is individual characteristics of the women, the third category is fertility information of the women, the fourth category is employment information of the women, the last category is husband characteristics.

The data provide 3 820 sample mothers' employment history for 18 years from 1998 to 2015. The two dependent variables are examined, employment interrupted and number of gap year. Employment interrupted is defined as a dummy variable that takes the value of women whose employment is interrupted after giving birth. If a mother has been at home for at least one year after the birth of her child, then we defined that this mother's employment is interrupted. The number of gap year will depend on which year she comes back to work. If she comes back to work three years after her childbirth, then her work interruption time is three years. Even though she stays at home again, it will no longer affect the number of gap year.

Then let us describe the main independent variables of interest. The first interesting variable is skill. We defined skills by using a dummy that the women master at least one kind of skill. Another interesting variable is living with family. Maurer Fazio *et al.* (2011)[8] found in their paper that living with elder people will increase women's labor supply. Fortunately, in our data, we collected information of each woman living with her family every year during observation period. If she lives with her family then we define this variable to be 1. With regard to women's fertility information, we are most concerned about baby who was the first born, this is also a dummy. In the fourth category, we defined that we divide the women into three categories (working on farm; working in the secondary industry; working in the tertiary industry) according to their occupation before childbirth. In addition, we divided the full samples into subsamples of off-farm employment and on-farm employment. Because we examined the work interruption of women after childbirth, their fertility information becomes important. In our data, we collected every woman's fertility information in detail, such as the age when she give birth to her first child, the child's birth order, the child's gender and the number of children. While the focus is the interruption of women's off-farm employment after their childbirth, the other variables allow for control associated with demographic (age, marriages), socio-economic (education, occupation), socio-cultural characteristics and husband's characteristics.

3 Results

3.1 Descriptive statistics There is a general understanding of the work interruption of all women in the sample. Fig. 1 presents the proportion of women who got interrupted after childbirth, almost 40% of the women who had given birth to children got interruption after childbirth during 1998 – 2015. However, the women employed in off-farm work before childbirth more probably got interrupted, 52.06% women chose interruption after childbirth.

We have seen roughly half of women (40%) who choose to interrupt work after childbirth, how many years do these women choose to stay at home and bring up children? It is obvious to see that the average interruption time is 4.42 years in the sub-sample of women who have work interruption.

Fig. 1 The proportion of women who got interrupted after childbirth

In terms of different provinces, Sichuan has the shortest work interruption time, only 3.27 years; Jilin has the longest work interruption time, up to 5.07 years. Then Fig. 1 shows the change of

mothers' employment interruption time after childbirth in 1998 – 2015. Overall female work interruption time becomes shorter. If we only retain the women that got interrupted after childbirth and come back to the labor market sooner or later during the observation period, the average interruption time falls to 2.19 years. Despite this, the shape of mothers' employment interruption time profiles did not change substantially over 18-year period.

Table 1 Summary statistics about employment interruption across counties after childbirth

	Share of women whose employment got interrupted after childbirth			Conditional on being interrupted Number of years got interrupted		
	Obs.	%	Std. Dev	Obs.	Mean	Std. Dev
Total sample	3 820	40.63	0.49	1 552	4.42	4.32
Jiangsu	732	33.74	0.47	247	4.18	4.20
Sichuan	648	48.46	0.50	314	3.27	3.84
Shaanxi	918	53.05	0.50	487	4.95	4.28
Jilin	496	39.11	0.49	194	5.34	5.07
Hebei	1 026	30.21	0.46	310	4.36	4.17

Source: Author's survey.

Our data show that the differences between the female got interrupted after childbirth and female did not get interrupted are shown by individuals characteristics, fertility information, employment information and husband's characteristics. In terms of women's personal characteristics, women who choose to be interrupted are older and have lower levels of education. And 23% of women who choose to continue to work master more than one kind of skills, the proportion is much larger than the proportion of women who choose to break the employment. The results are similar in the sub-sample of off-farm employment, except that there was no difference in the proportion of women with at least one skill whether chose to interrupt. The proportion of women who choose to interrupt is 28% from the eastern region, only 20% from the central region, and the remaining 52% comes from western region. The proportion of women choosing work interruption in the western region is obviously higher even in off-farm employment sub-sample, this proportion does not change a lot. 94% of women who choose to continue to work live with their family members, but only 88% of women who choose to interrupt live with their families.

In terms of women's fertility information, working-interrupted women gave birth to their first child at 23.32 years, while the average age of women who continue to work when they gave birth to the first child is 23.59, and it is statistically significant. For the women got interrupted, 67% are just giving birth to first babies, and 50% of women's first child is a boy, 59% of women continue to work after first childbirth, and 47% of women first child is a boy. The average number of children was 1.66 for interrupted women, while the average number of children in continuing employment women was 1.79. Even in the sub-sample of non-agricultural employment, these results did not change much.

For employment information of the women, the percentage of work interruption women in the tertiary industry was 34%, higher than those in the primary and secondary industries. Self-employed women will return to work more quickly, and the cost of procreation may be higher. About 31% of women who were interrupted worked out of hometown before childbirth and only 19% of women continued employment, which were likely to have a better balance between work and child rearing. Only 6% of women having work interruption have maternity leave.

Whether or not women are interrupted after childbirth is affected not only by the characteristics of the individual, but also by the characteristics of the family, especially the husband. Women who got interrupted are generally younger, more skilled, and have a higher level of education, because of these conditions would help them to find the right job after interruption, the likelihood of their interruption increases. In Table 2, we narrowed down the sample to women with work interruption, women with different personalities, fertility information, employment information and husband's characteristics, the length of work interruption time (whether to have any differences). The interruption time of women with senior high school education level or above was 3.36 years, which was significantly lower than that of women with education level lower than senior high school, and the time for women to master at least one skill was significantly shortened. The education level and skills of husband mastery have a similar result. Women in the eastern region had shorter interruption time than women in the central and western regions. Women in the central region had work interruption for 4.36 years, which was not much different from that in the non-central regions. If a woman lives with her family members, her job will be interrupted for a longer period of time, 2.20 years longer than women who live without family members.

From the fertility information of women, if it is the birth of the first child, then the employment interruption time will be relatively long, and after the birth of son, the employment interruption time will be significantly longer compared with the birth of daughter, which may be related to rural boys' preferences. From the employment information, in the secondary industry and tertiary industries, women's employment interruption time is generally shorter than that of the women employed in agricultural industry, especially the secondary industry. While the self-employed women's work interruption time was only 1.92 years, significantly shorter than the mean. Women who go out to work are also less likely to have shorter interruption of employment than home-based women, which may have higher child-bearing costs due to migrant workers. If the women employed have a maternity leave system, her employment interruption time will be significantly shorter. Similarly, if husbands engage in off-farm employment or work outside the home, women's employment disruption will be relatively shorter.

Table 2 The *T*-test of the difference of female employment interruption time, sub-sample of women who got interrupted

Variables	Number of gap year Mean (Std.)	Number of gap year Mean (Std.)	*P*-value
Individual characteristics of the women			
Senior high school and above, 1 = yes	3.36 (3.69)	4.72 (4.43)	0.000***
Skills, 1 = yes	3.19 (3.27)	4.71 (4.49)	0.000***
East, 1 = yes	4.31 (4.64)	4.69 (4.18)	0.060**
Central, 1 = yes	4.36 (4.17)	4.44 (4.35)	0.398
Live with family, 1 = yes	4.69 (4.43)	2.49 (2.80)	0.000***
Fertility information of the women			
First child delivered, 1 = yes	4.63 (4.46)	3.98 (3.97)	0.002***
First child boy, 1 = yes	4.62 (4.55)	4.22 (4.06)	0.035**
Baby boy, 1 = yes	4.56 (4.51)	4.26 (4.09)	0.089*
Employment information of the women			
Secondary industry, 1 = yes	3.17 (3.18)	4.77 (4.53)	0.000***
Tertiary industry, 1 = yes	3.26 (3.14)	5.03 (4.71)	0.000***
Self-employed, 1 = yes	1.92 (1.88)	4.51 (4.35)	0.000***
Migrated, 1 = yes	3.29 (3.50)	4.93 (4.55)	0.000***
Has maternity leave, 1 = yes	3.01 (3.06)	4.51 (4.37)	0.001***
Husband characteristics			
Husband senior high school and above, 1 = yes	3.61 (4.01)	4.67 (4.39)	0.000***
Husband skills, 1 = yes	4.16 (3.97)	4.90 (4.86)	0.001***
Husband off-farm employment, 1 = yes	4.24 (4.22)	5.21 (4.79)	0.002***
Husband live with family, 1 = yes	4.69 (4.52)	3.66 (3.63)	0.000***
Husband migration, 1 = yes	3.73 (3.82)	4.85 (4.55)	0.000***

Note: The sample contains the women that have employment interruption gap after childbirth. Source: Authors' survey.

3.2 Employment interruption choice In Table 3, the basic logistic regression results are shown separately for full-sample and off-farm employment sub-sample. The dependent variable of the regression is "whether there is work interruption", the first and second columns are the regression results for full sample, the third and fourth columns report the regression results of the sub-sample of women who worked in off-farm sector prior to childbirth. From the first column, we can see that the older women, the possibility of interruption after childbirth would be lower. The possibility of women's work interruption was also significantly decreased if the women have a higher skill level, but the level of women's education did not affect their choice of work interruption from the whole sample; women in the Eastern and Central regions were significantly less likely to discontinue their employment. A possible explanation for this is that the opportunity cost of maternity leave is higher in the Eastern and Central regions than in the West, so the probability of interruption is also significantly lower. Another interesting finding is that whether women live with their family members does not have a significant effect on the probability of interruption, although it is symbolically consistent with our perceptions, but statistically insignificant.

From the fertility information, if the childbirth age is older, then the probability of interruption may rise, with odd ratio of 1.08 at 1% level significantly. The probability of interruption of the first child's birth is 1.28 times lower than that of other women, but the sex of children has no significant effect on whether or not got interrupted after childbirth. There is no significant difference in the probability of work interruption between the secondary industry and the tertiary industry, but the self-employed female is 4.39 times less likely to choose to interrupt their work than non-self-employed women. The probability of female migrant workers choosing to interrupt is 1.41 times higher, while the female with maternity leave employment system will reduce the possibility of 2.25 times.

The characteristics of the husband will also have an effect on the likelihood of women choosing to be disrupted. We found that if the husband has the skills, the possibility of employment interruption of the wife is more than 1.39 times higher than that of the husband without skills. However, her husband's education level has no significant effect. Her husband goes out to work, so his wife's possibility of interruption increases 2.12 times; and if the husband lives with his family, the probability of his wife's interruption is reduced by 1.60 times. The possible explanation is that the migrant-working husband is more likely to have a higher income by working outside the home, so that women are more likely to stay at home and raise children. Then we found it is interesting that if women live with their families, the likelihood of her work interruption does not change significantly, but if the husband lives with his family, the likelihood of dropping out of employment for his wife is noticeably declining, indicating that her husband can live together at home to reduce the burden of his wife and take care of the family, thus women would choose to come back to work sooner.

We look at the results of sub-sample of off-farm employment, and the results are not very different from those in the first and two columns, but the coefficient has been expanded. It is noteworthy that in the sub-sample of off-farm employment, we find that women in the tertiary industry are 1.93 times less likely to be interrupted than those in the secondary industry. While women migrate to

work, their possibility of interruption is no longer significant, and if her husband has off-farm employment, the possibility of interruption would decline 2.17 times, indicating that migrant working does not affect off-farm employed women, and her husband's off-farm employment will make them back to work faster. Another point worth noting is that the higher the level of education of the husband in the sub-sample, the lower the possibility of wife interruption of employment, and statistically significant.

Table 3 Multivariate analysis of correlation of the employment interruption choices

Dependent variable Employment interrupted (1 = yes, 0 = no)	Full-sample		Sub-sample: Women employed in off-farm work before childbirth	
	(1)	(2)	(3)	(4)
Individual characteristics of the women				
Age	-0.121***	-0.122***	-0.107***	-0.109***
	(0.008)	(0.008)	(0.011)	(0.011)
Marriages experience, times	0.490**	0.484**	0.341	0.316
times	(0.227)	(0.228)	(0.278)	(0.278)
Years of schooling	-0.000		-0.000	
	(0.001)		(0.001)	
Senior high school and above, 1 = yes		-0.090		-0.073
		(0.116)		(0.131)
Skills, 1 = yes	-0.397***	-0.383***	-0.768***	-0.734***
	(0.105)	(0.108)	(0.118)	(0.120)
East, 1 = yes	-0.561***	-0.561***	-0.775***	-0.754***
	(0.093)	(0.094)	(0.115)	(0.115)
Central, 1 = yes	-0.774***	-0.773***	-0.593***	-0.578***
	(0.100)	(0.100)	(0.132)	(0.132)
Live with family, 1 = yes	-0.166	-0.167	0.067	0.063
	(0.153)	(0.153)	(0.166)	(0.166)
Fertility information of the women				
Childbirth age	0.078***	0.079***	0.104***	0.108***
	(0.014)	(0.015)	(0.018)	(0.019)
First child delivered, 1 = yes	-0.245**	-0.245**	-0.400***	-0.399***
	(0.102)	(0.102)	(0.139)	(0.139)
First child boy, 1 = yes	0.047	0.044	0.003	-0.009
	(0.097)	(0.097)	(0.132)	(0.133)
Baby boy, 1 = yes	-0.061	-0.060	-0.038	-0.031
	(0.095)	(0.095)	(0.130)	(0.130)
Number of children	0.077	0.074	0.151	0.147
	(0.078)	(0.079)	(0.106)	(0.106)
Employment information of the women				
Secondary industry, 1 = yes	-0.157	-0.159		
	(0.120)	(0.120)		
Tertiary industry, 1 = yes	-0.067	-0.067	-0.661***	-0.662***
	(0.115)	(0.115)	(0.114)	(0.114)
Self-employed, 1 = yes	-1.479***	-1.475***	-1.660***	-1.654***
	(0.190)	(0.190)	(0.195)	(0.195)
Migrated, 1 = yes	0.345***	0.345***	-0.039	-0.041
	(0.125)	(0.125)	(0.144)	(0.144)
Maternity leave, 1 = yes	-0.813***	-0.796***	-0.572***	-0.536***
	(0.168)	(0.171)	(0.168)	(0.173)
Husband characteristics				
Husband senior high school and above, 1 = yes	-0.075		-0.279**	
	(0.099)		(0.115)	
Husband years of schooling		-0.003		-0.050**
		(0.017)		(0.021)
Husband skills, 1 = yes	0.331***	0.326***	0.424***	0.424***
	(0.084)	(0.084)	(0.108)	(0.108)

(To be continued)

(Continued)

Dependent variable Employment interrupted (1 = yes, 0 = no)	Full-sample		Sub-sample: Women employed in off-farm work before childbirth	
	(1)	(2)	(3)	(4)
Husband off-farm employment, 1 = yes	0.750***	0.753***	−0.774***	−0.766***
	(0.117)	(0.117)	(0.214)	(0.215)
Husband live with family, 1 = yes	−0.469***	−0.469***	−0.789***	−0.794***
	(0.114)	(0.114)	(0.141)	(0.141)
Husband migration, 1 = yes	−0.083	−0.080	−0.088	−0.082
	(0.114)	(0.114)	(0.142)	(0.142)
Constant	1.745***	1.780***	3.199***	3.592***
	(0.465)	(0.481)	(0.597)	(0.618)
Number of observations	3 764	3 764	2 224	2 224
R-Squared	0.158	0.158	0.274	0.276

Notes: Robust standard errors that account for clustering at the township level in parentheses; *** $P<0.01$, ** $P<0.05$, * $P<0.1$. Source: Authors' survey.

3.3 The number of gap year We have examined whether women have work interruption and returned to off-farm employment, now we have to look at whether the length of work interruption is related to personal characteristics, fertility information, employment information, and husbands' characteristics for sub-sample of women got interrupted after childbirth. According to our descriptive statistics, we know that rural women have average interruption for 4.42 years, so what are the differences in the characteristics of the women who have interrupted for a long time and those who have a short break time? If the women is older, the longer the interruption time will be, the greater the coefficient in the sub-sample of off-farm employment. When age increased by one year, employment interruption extended by 0.335 years. In the previous results, we found that the duration of schooling has no significant effect on the interruption time of employment. However, according to the distribution of years of schooling, we re-classify the level of education. We found that if women have at least high school education, the employment interruption time will be 10% significantly shorter than that of the women with lower education. One of the possible explanations is that as the rate of return to education increases, the higher the educational level of women, the higher the opportunity cost of work interruption, so it will shorten the interruption time, the results of off-farm employment sub-sample are also robust, and the significance has improved. Skilled women's interruption time was significantly shortened by nearly one year, but regional disparities were not significant in terms of work interruption time. It is noteworthy that, although living with family members had no effect on the interruption of employment, but there was a strong correlation with the duration of the interruption, we found that women who lived with their families had a longer interruption time of 1.3 years, the interruption time in the sub-sample will be longer.

For the fertility information, the younger the women giving birth to child, the less likely it is for them to choose to interrupt, however for women who have chosen to interrupt, the younger the women, the longer the duration of the interruption. Similarly, if women give birth to her first child, then the interruption time will extend 1.66 years, for off-farm employment sub-sample, the interruption time is 2.2 years. A possible explanation is that women who choose to discontinue their work are more likely to pay more attention to their children, so they will have longer breaks, and those who do not choose to discontinue will have a lower level of emphasis on their children. For every additional child, the interruption time is shortened by one year, possibly because if there is a large number of children, the emphasis on parenting will gradually decline.

For the employment information of women in the secondary industry and tertiary industries, compared to women in agricultural employment, the interruption time will be shortened. In the sub-sample of off-farm employment, women working in tertiary industry have interruption 1.68 years longer than women working in the secondary industry. Self-employed women's interruption time is shortened 2.4 years; in off-farm employment sub-sample, female migrant workers have work interruption time 1.6 years shorter than women working in hometown. However, the absence of a maternity leave system has no significant effect on the length of the interruption, which may be due to the sample size of women with maternity leave system is too small in the sub-sample of work interruption. From the husband's characteristics, the higher the level of education, the shorter the wife's interruption. We found out whether the off-farm employment of husbands has little effect on the interruption time, and whether the husband lives with his family also has little effect.

Table 4 Multivariate analysis of correlation of the number of gap year

Dependent variable: Number of gap year	Sub sample: Employment interrupted = 1		Sub-sample: Employment interrupted = 1& women who worked in off-farm sector prior to childbirth	
	(1)	(2)	(3)	(4)
Individual characteristics of the women				
Age	0.303***	0.298***	0.335***	0.329***
	(0.022)	(0.022)	(0.024)	(0.025)

(To be continued)

(Continued)

Dependent variable: Number of gap year	Sub sample: Employment interrupted = 1		Sub-sample: Employment interrupted = 1& women who worked in off-farm sector prior to childbirth	
	(1)	(2)	(3)	(4)
Marriages experience, times	−0.527	−0.585	−0.340	−0.430
times	(0.580)	(0.582)	(0.612)	(0.614)
Years of schooling	−0.003		−0.004	
	(0.003)		(0.003)	
Senior high school and above, 1 = yes		−0.500*		−0.667**
		(0.286)		(0.301)
Skills, 1 = yes	−0.945***	−0.841***	−0.895***	−0.728**
	(0.271)	(0.281)	(0.291)	(0.302)
East, 1 = yes	0.244	0.245	−0.212	−0.220
	(0.246)	(0.248)	(0.268)	(0.270)
Central, 1 = yes	0.231	0.222	0.066	0.061
	(0.264)	(0.265)	(0.300)	(0.301)
Live with family, 1 = yes	1.239***	1.189***	1.625***	1.570***
	(0.347)	(0.348)	(0.355)	(0.356)
Fertility information of the women				
Childbirth age	−0.089**	−0.084**	−0.094**	−0.085**
	(0.038)	(0.039)	(0.042)	(0.042)
First child delivered, 1 = yes	1.657***	1.647***	2.224***	2.217***
	(0.271)	(0.271)	(0.309)	(0.309)
First child boy, 1 = yes	−0.275	−0.286	−0.104	−0.126
	(0.257)	(0.257)	(0.294)	(0.294)
Baby boy, 1 = yes	0.302	0.292	0.446	0.444
	(0.252)	(0.253)	(0.288)	(0.288)
Number of children	−1.086***	−1.092***	−0.939***	−0.950***
	(0.218)	(0.219)	(0.248)	(0.248)
Employment information of the women				
Secondary industry, 1 = yes	−2.018***	−2.040***		
	(0.297)	(0.298)		
Tertiary industry, 1 = yes	−1.797***	−1.819***	−1.649***	−1.682***
	(0.273)	(0.274)	(0.256)	(0.256)
Self-employed, 1 = yes	−2.414***	−2.395***	−2.732***	−2.717***
	(0.605)	(0.605)	(0.609)	(0.609)
Migrated, 1 = yes	−0.236	−0.258	−1.621***	−1.658***
	(0.285)	(0.285)	(0.288)	(0.288)
Maternity leave, 1 = yes	−0.086	−0.059	0.163	0.220
	(0.457)	(0.460)	(0.457)	(0.459)
Husband characteristics				
Husband senior high school and above, 1 = yes	−0.668***		−0.722***	
	(0.247)		(0.267)	
Husband years of schooling		−0.053		−0.060
		(0.043)		(0.048)
Husband skills, 1 = yes	−0.002	−0.028	0.107	0.070
	(0.220)	(0.221)	(0.249)	(0.249)
Husband off-farm employment, 1 = yes	0.460	0.497	−1.008**	−0.962**
	(0.327)	(0.328)	(0.434)	(0.435)
Husband live with family, 1 = yes	0.144	0.157	0.059	0.060
	(0.262)	(0.262)	(0.286)	(0.286)
Husband migration, 1 = yes	−0.503*	−0.487*	−0.413	−0.415
	(0.259)	(0.259)	(0.287)	(0.286)
Constant	−1.872	−1.350	−2.201*	−1.583
	(1.181)	(1.220)	(1.261)	(1.304)
Number of observations	2232	2232	1227	1227
R-Squared	0.266	0.264	0.33	0.33

Notes: Robust standard errors that account for clustering at the township level in parentheses; *** $P<0.01$, ** $P<0.05$, * $P<0.1$. Source: Authors' survey.

4 Conclusions and discussions

Many articles have drawn a similar conclusion when discussing women's fertility and their employment supply. After the control of other factors, there are still as many as 40% of women in the sample having interruption of employment. And women's average time to drop out of employment was 4.42 years, for off-farm employment of women, their interruption time will be shortened 1 – 2 years, but a long period of employment disruption is still a worrying phenomenon.

As there are a large number of women who got interrupted each year because of childbirth and parenting, short-term labor shortages may occur. Although these women will eventually return to the labor market in the long run, only 30% of the female are still employed in off-farm sector after childbirth in the short term. These women who got interrupted after childbirth are almost skilled labor. It not only causes labor shortages, but also makes enterprises need to spend more costs to find alternative labor and train them.

Nowadays, from the perspective of the growth and development of the child, there are many scholars in the international community finding that the mother raises children at home in the first few years of childbirth, which has a profound impact on children's future growth and development of human capital accumulation. And the longer the time that mother spend on raising children at home in the first few years after childbirth, the higher the rate of return on their investment[22 – 23].

What it is the trade-off between the temporary shock of the labor market and the development of children's human capital accumulation.

We can see from the results of the regression, if the husband lives at home, the possibility of women choosing to interrupt will significantly decline. It may be a good choice that provides a better child care system, which helps women to reduce the burden of raising children, and thus faster return to jobs.

In addition, we found that women had a 2.25 times lower chance of interrupting work if they had a perfect maternity leave system before childbirth. It is precisely because these rural women are generally engaged in work which has no perfect maternity protection system. So they will leave because of childbirth, resulting in a lot of mobility of these jobs. For these women, to provide more complete maternity protection, such as retaining positions for 3 – 6 months, or providing maternity insurance, may effectively reduce the loss of the female labor.

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