



Information Acquisition and Occupational Mobility of New Generation Migrant Workers

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Abstract: Free labor flow is the optimization allocation process of human resources, and is the fundamental condition for promoting the development of society. New generation migrant workers have the low stability of employment in the cities, their occupational mobility is frequent, if a large number of migrant workers are only at the same level of occupational mobility it will against their citizenization. This paper analyzed the impact of occupational information on occupational mobility by using the employment historical data of new generation migrant workers in different types of cities in Liaoning province, China. The results show that with more demand, more access and more advanced methods to get occupational information, new generation migrant workers have more frequency of occupational mobility; online job apply, advanced methods to get information and more frequency of occupational mobility help them to upward mobility.

Keywords: new generation migrant workers, occupational mobility, occupational information acquisition, upward mobility

1 Introduction

According to Ministry of Human Resources and Social Security.PRC, the total amount of migrant workers in China has reached 253 million in 2011, about 60% of them are new generation migrant workers who becoming the main part of migrant workers. New generation migrant workers in this paper refers to the farmers who were born after 1980, have residence of rural China and degree of high school and below (including technical secondary school and technical school) and have experience of working in cities but no experience of farming. Employment, housing and social security are the key factors that hindering citizenization of new generation migrant workers during the urbanization process in China^[1]. Have stable jobs in cities, however, is foundation to solve problems of

housing and social security. Compare with urban residents, migrant workers have far more frequency of occupational mobility^{[2] [3]} but maintain in a low social status^[4] that hinder their citizenization process directly. Therefore, it is necessary to analyze the occupational mobility of new generation migrant workers.

Papers have different views on occupational mobility^{[3] [5]}. Overseas and domestic scholars examine the effects of education, social network and working time of migrant workers and employment administration system in cities on one aspect of occupational mobility (decision, frequency, results and etc)^{[6] [7] [8] [9] [10]}.

Occupational information is a basic resource to employment in labor market and is a vital factor of occupational mobility decision^[25]. In order to explain some special phenomena in Chinese labor migrant process, insufficient information as a major factor should be taken into account^[11].Ton of papers focus on how the information acquisition channel (network) impact the migrant workers' first flow that means migrate from rural into the cities for the first time,and the results indicate that the blocked channel and weak ability of acquiring occupational information in labor market^[12] make them mainly depends on their social network to get job or occupational flow^{[13] [14] [15] [16] [17]}. Social network, however, can't help migrant workers getting higher wages or higher prestige job^{[18] [19]} and have little effect on upwards occupational mobility^[20] and occupational flow in cities^[21]. Channel is only one part of the information acquisition process, no existing papers empirically research the effect of whole information acquisition process on occupational mobility of new generation migrant workers.

To sum up, the existing papers, which lay the foundation for our study, have revealed some of the factors that affecting occupational mobility of migrant workers in China, but have not took the information acquisition process into account. By using the survey data from different types of cities, this paper empirically investigate the effect of information acquisition on occupational mobility of new generation migrant workers. The second part is the methods, the third part is the empirical analysis; the fourth part is the conclusion.

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Tab.1 Basic Statistical characteristics of respondents

Variables	Freq.	Percent	Variables	Freq.	Percent
<i>City type</i>			<i>Marital Status</i>		
1=Provincial Capital	309	47.47	Married	226	34.72
2=Prefecture-Level	219	33.64	Unmarried	425	65.28
3=County-Level	123	18.89	<i>Hometown</i>		
<i>Skill Level</i>			1=Liaoning	490	75.27
0=unskilled	462	71.08	2=Heilongjiang, Jilin	63	9.68
1=Low-Skilled	16	2.46	3=Others	98	15.05
2=Skilled	144	22.15			
3=Highly Skilled	28	4.31			
Variables	Mean	Std. Dev.	Min	Max	
Gender(Male=1)	0.71	0.456	0	1	
Age(Year)	23.76	4.743	18	32	
Educational Degree	4.20	0.571	2	5	
Work Time(Months)	55.97	45.05	1	191	

Notice: Educational degree mean: 1=illiteracy, 2= primary school 1-3 years, 3 =primary school 4-6 years, 4= junior school, 5 =senior school or technical school

2 Methodology

2.1 Data

The data come from the field survey of new generation migrant workers in Liaoning province which was collected in July-August 2012 by the project group of National Natural Science Foundation of China organized by the College of Economics and Management of Shenyang Agricultural University. Finally, we obtain 651 effective questionnaires by one-to-one interview. The choice of sample cities is based on the following consideration: first, from the view point of city scale, they belong to province capital city, prefecture-level cities and county-level cities. Second, from the differences between population and economic development, three types of cities represent from high to low of the population and economy. Third, as a representative of the northeast provinces of China, Liaoning belongs to the eastern coastal area and is typical and representative between cities. If megapolis like Beijing, Shanghai and Guangzhou are chosen as samples, the relevant experiences are difficult to extend in other provinces. Therefore, under the policy background of active promotion on the urbanization of the small and medium-sized town, China's urbanization problems can easily be revealed by analyzing new generation peasant workers from different scale of cities in Liaoning province.

Tab.1 shows the unmarried, male and junior school ones account for the majority of the samples. All respondents have primary school degree or above, the average age is 24 with a high dispersion degree. Their working time in cities is mostly about 4 years. More than 70% of them have no skills before getting into the cities. These characteristics show the differences between migrant workers and new generation migrant workers, especially their education level have improved obviously. From the hometown distribution, 80% of the samples are come from northeast of China, almost 75% samples are in Liaoning province.

2.2 Content of information acquisition and occupational mobility

• Information acquisition

Learn from the definition of information defined by Shennong^① (1948), occupational information in this paper refers to the thing that help the new generation migrant workers to get job that they wanted in cities(eliminate the uncertainty). Information acquisition generally includes four stages^②: (1) clarify the information requirements; (2) select information source; (3) determine the information acquisition method; (4) evaluate the information obtained. considering the characteristics of new generation migrant workers, the occupational information acquisition in this paper include: (1) requirements^③; (2)sources that include the number of channels used to get information, whether get information not through the "relationship" network^④ and whether get information through the network; (3)method (PC level^⑤); (4) information evaluation(whether the information is useful that they got).

^① In 1948, C. E. Shannon, the founder of information theory, points out that "information is used to eliminate the random uncertainty".

^② <http://whzx.tzr.com.cn/read.php?wid=2489>

^③ This article focuses only on those requirements that can lead to information acquire behaviors, regularly search for occupational information stand for the strong demand, occasionally or not search for information stand for weak and none requirement respectively.

^④ Zhang and Li (2003) found that "relationship" has significant effect for farmers to obtain employment, they think that "relationship" play an important role in the process of passing information in labor market, especially to the young migrant workers.

^⑤Survey data show that nearly 67% of the new generation migrant workers search occupational information through the Internet, so this paper use computer operation level stand for the difference of information acquisition method, the advanced method means the one use Internet expertly.

- Quantification of occupational mobility

According to the definition of occupational mobility determined by Mc Connell [5] and Qiang Li [22], we determine the occupational mobility as the job or cities change after the new generation migrant workers get the first job in cities. According to the frequent mobility characteristics of the migrant workers and the data availability, we use two indexes to measure the occupational mobility:

Occupational stability: the times of changing jobs after the new generation migrant workers work in the city, if they haven't change their jobs or engage in a job less than three months, the occupational mobility frequency is 0.

Upward mobility: Learn from Mitra [20], this paper compare the first wages they earned in cities with the current wages, if it increase it means the upward mobility.

2.3 Model construction

- Poisson Model

To investigate the effect of occupational information on occupational mobility frequency, this paper chooses the Count Data Model. The dependent variable is count data. To test which model conforms to this data, a comparison was made (shown in Figure.1) among actual distribution of new generation migrant workers' mobility, Poisson distribution and negative binomial distribution (Cameron, Trivedi, 1998). Due to the poorer fitting degree the STATA software automatically deletes the negative binomial distribution, we choose Poisson Regression.

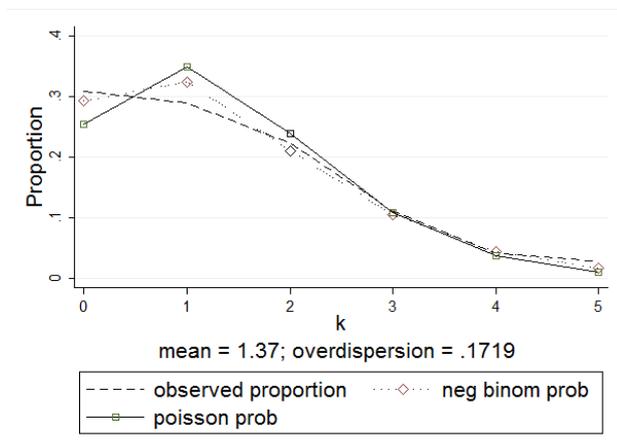


Fig.1 Comparison among observed value, poisson distribution and negative binomial distribution

- Logistic Model

The direction of mobility is the binary classification variable, so we choose Logistic model, the basic form is as follows:

$$\ln\left(\frac{P_i}{1-P_i}\right) = \alpha + \sum_{k=1}^n \beta_k x_k \quad (1)$$

$$\frac{P_i}{1-P_i}$$

In formula (1), $\frac{P_i}{1-P_i}$ is the ratio of the occurrence probability or not of the dependent variable. We take the

$$\ln\left(\frac{P_i}{1-P_i}\right)$$

log of occurrence probability $\ln\left(\frac{P_i}{1-P_i}\right)$, Logistic Model assume that it has inner relationship between independent variables. We use exponential smooth transition to convert parameter of independent variables to get Exp (β). If Exp (β)>1, the occurrence probability of dependent variable is increase; if Exp (β)<1, the probability is decrease; if Exp (β)=1, there is no effect to occurrence probability.

2.4 Variables selection

This paper focuses on effect of information acquisition on occupational mobility of new generation, through the statistical analysis of variables and based on the experience knowledge we are put forward the core hypothesis: the ones with more requirements and accesses of occupational information, don not use the "relation" network but advanced methods to get information and highly evaluate the obtained information will have upward mobility, but poor occupational stability.

Based on existing researches, control variables mainly include three aspects: (1) Personal characteristics: gender, age, marital status and their home. (2) Human capital: usually refers to the sum of knowledge, skill and health. Due to the little difference of health condition, this paper adopts the education years, the initial technical level and technique changes in the process of mobility as the measurement of human capital. With high level of education and technology have more opportunities to find a satisfying job, and have fewer frequency of occupational mobility and more possibility to upward mobility. (3) Working years: Experience show that the longer they work in city the more opportunities to get new occupational information and more likely to have occupational mobility. In addition, this paper makes two regressions by bringing the control variable of spouse or father's occupation into and out the model because that if their spouse or father has stability job and security income, they often choose adventure and mobility job. The meanings of variables are shown in Tab.2.

3 Results

To occupational mobility frequency, we remove the information acquisition variables in our study to be a benchmark return in Tab.3 Model 1, and then put them in the Model 2 we found Preseudo R² increased 0.0187, which indicate that information acquisition variable plays a significant role in occupational mobility frequency. We also take the "hometown" and "city type" as virtual variables to construct Model 3.

In information acquisition variables, consciousness, access numbers and methods pass the significance test in

Tab.2 Model variable declaration

Variable	Meaning
<i>Dependent Variable</i>	
Occupational mobility frequency	Continuous Variable
Upward mobility	0=No; 1=Yes
<i>Independent Variable</i>	
Information Acquisition Consciousness	1=Strong 2=Weak 3=None
Information accesses number	Continuous Variable
Use “relationship” Network	0=Yes 1=No
Search job online	1=Yes 0=NO
Information Acquisition Methods	1=No 2=Relative 3=Ordinary 4=Advanced 5=Quite Advanced
Evaluation of information	1=Useless 2=Ordinary 3=Useful 4=Quite Useful
Education Years	Unit: Year
Skill Level before getting into city	from 0 to 3
Skill improve	1=Yes 0=No
Work Time	Unit: Month
Gender	1=Male; 0=Female
Age	Unit: Year
Marital Status	1=Married; 0=Unmarried
Hometown	1=Liaoning 2=Heilongjiang, Jilin 3=Others
City type	From 1 to 3

Tab.3 Regression Results of Occupational Mobility Frequency

Independent Variables	Model 1		Model 2		Model 3	
	IRR	Std. Err	IRR	Std. Err	IRR	Std. Err
<i>Information Acquisition</i>						
--Consciousness			1.109**	0.052	1.105**	0.052
--access number			1.233****	0.053	1.235****	0.054
--Use Network			0.965	0.066	0.962	0.066
--Search job online			1.008	0.075	1.014	0.076
--Methods			1.065**	0.029	1.065**	0.029
--Evaluation			0.950	0.032	0.949	0.032
Education Years	0.944***	0.017	0.925****	0.017	0.923****	0.017
Skill Level	1.087**	0.038	1.088**	0.038	1.093**	0.038
Skill improve	1.092	0.077	1.100	0.078	1.097	0.078
Work Time	1.006****	0.001	1.005****	0.001	1.005****	0.001
Gender	1.111	0.094	1.163*	0.101	1.154*	0.100
Age	1.001	0.011	1.003	0.011	1.003	0.011
Marital Status	0.936	0.084	0.982	0.089	0.990	0.090
Hometown	1.325****	0.057	1.315****	0.057		
--Heilongjiang, Jilin					1.225*	0.135
--out of Northeast					1.749****	0.154
City Type	1.153***	0.057	1.175***	0.060		
--Prefecture-Level					1.293****	0.102
--County-Level					1.326***	0.142
Spouse or Father’s Job	1.004	0.009	1.001	0.009	1.000	0.009
LR chi2	173.24		210.98		213.83	
Prob> chi2	0.0000		0.0000		0.0000	
Pseudo R2	0.0855		0.1042		0.1056	
N	651		651		651	

Notice: *P<0.10; **P<0.05; ***P<0.01; ****P<0.001

5%, 0.1% and 1% significance level respectively. Education years, technical level, work time, gender, hometown and city type variables pass the significance test in 0.1%, 5%, 0.1% and 5%, 0.1% and 1% significance level respectively. These entire variables have impact on occupational mobility frequency.

The results show that: (1) with higher consciousness, more accesses and advanced information acquisition methods new generation migrant workers have more times of occupational mobility. Under the demand stimulus of mobility they use all accesses they have and

more advanced method to get more occupational information, so the probability of employment and the possibility of occupational mobility are higher. (2)The ones with more education years can easily find a job they want and have high leaving cost, so their mobility is low. The ones with higher technical level before they work in city can find a job easily and they pursuit to higher wages so their mobility is high. (3) The longer time they working in city, the more frequency of mobility. (4)Men flow more than women; migrant workers out of the northeast have the most frequency of occupational

Tab.4 Regression results of upward mobility

Independent Variable	Model 4		Model 5	
	IRR	Std. Err.	IRR	Std. Err.
Information Acquisition				
--Consciousness			1.364	0.275
--access number			0.948	0.189
--Use Network			1.129	0.341
--Search job online			2.072**	0.715
--Methods			1.791*	0.099
--Evaluation			0.810	0.128
Education Years	1.027	0.081	1.068	0.091
Skill Level	1.048	0.154	1.049	0.163
Skill improve	0.945	0.286	1.001	0.311
Work Time	1.036****	0.007	1.042****	0.007
Gender	0.793	0.274	0.781	0.284
Age	0.912*	0.043	0.915**	0.040
Marital Status	1.930	0.861		
Hometown				
--Heilongjiang, Jilin	1.955	1.135	1.706	1.004
--out of Northeast	2.545*	1.249	2.580*	1.271
City Type				
--Prefecture-Level	2.667***	0.953	2.378**	0.884
--County-Level	1.349	0.530	1.298	0.538
Spouse or Father's Job	0.949	0.034	0.958	0.036
LR chi2		74.20		85.64
Prob> chi2		0.0000		0.0000
Pseudo R2		0.1907		0.2201
N		450		450

Notice: *P<0.10; **P<0.05; ***P<0.01; ****P<0.001

mobility, the ones from Heilongjiang flow more times than the ones in Liaoning, it indicate that the farther distance from their hometown, their mobility is higher; from prefecture-level cities, county-level cities and cities, their mobility becomes low.

To mobility direction, after put occupational information acquisition variables in the Model, the pseudo R² increased 0.0294, which indicates that information acquisition variables play a significant role in upward mobility. Numbers of information acquisition channels, information acquisition methods, working time, age, and hometown and city types pass the significance test in 5%, 10%, 0.1%, 5%, 0.1% and 5% significance level respectively.

Seen from the Tab.4 Model 5: (1) Apply job online, have higher information acquisition method are helpful to upward mobility of new generation migrant workers' occupational. Compared with other channels, there is much more information online, through which new generation migrant workers can get more occupational information with better paying. Meanwhile, new generation migrant workers with advanced method on information searching can use the internet to get occupational information much easier, so the probability of finding job with high salary is higher, which is helpful to upward mobility. (2) The longer working years the more likely to achieve upward mobility. (3) From the personal characteristics, with the decrease of the age, the new generation migrant workers show up an upward mobility. We think that the age of migrant workers in

cities has the same influence as the decision-making process for the first time, which produces a larger psychological cost for the old migrant workers^[23], so their choice of less mobility decrease the probability of upward mobility. New generation migrant workers out of the northeast provinces tend to an upward flow. This result is same as Yuan Zhang^[24]: migrant workers tend to an upward mobility if they can get into the farer labor market. Migrant workers in prefecture-level cities are likely to have an upward mobility, which may relate to their frequency occupational mobility.

It is generally acknowledged that the more frequency of occupational mobility in cities is not conducive to obtain and accumulate working experience, which affects the upward mobility of migrant workers.

Separately regression on upward mobility and occupational mobility, this paper finds out that occupational mobility frequency has a positive and significant influence on upward mobility, which may due to the types of job they have are physical jobs without skill requirement, the experience or training in one job has little influence on wage^[25], more occupational mobility is advantageous to receive a variety of occupational experience, which is conducive to upward mobility.

4 Conclusion and discussion

This paper examines the effects of occupational information acquisition on occupational mobility with

the survey data of migrant workers from different types of cities in Liaoning Province. The results are as follows: With higher information acquisition requirement, more acquisition channels and advanced acquisition methods, new generation migrant workers have more occupational mobility frequency; Getting job online and advanced information acquisition methods are good for their upward mobility. It means that "requirement" and "methods" from "formation acquisition" variables have an effect on occupational mobility, which full fill the past researches only paid attention on information acquisition channels. In addition, the internet and advanced information acquisition methods have a positive effect on their mobility frequency and upward mobility, which is different from the first flow from rural and shows that "relationship" network plays a little role in the process of occupational mobility in cities.

Improving information acquisition methods, reasonably guiding on getting jobs online are important ways to promote the upward mobility and promote the citizenization of new generation migrant workers.

The results show that occupational mobility frequency have a positive and significant influence on mobility direction, which against the common acknowledged that frequent occupational mobility has a negative influence on upward mobility. Therefore, we cannot only emphasize occupational stability of the new generation migrant workers, and we should guide their occupational mobility reasonably, and help them achieve upward mobility.

Seen from the city types, new generation migrant workers in the prefectural-level and country-level cities achieve the upward mobility which is helpful to their citizenization. From this perspective, this conclusion also supports the national policy that the migrant workers should settle down in small and medium-sized cities in China.

It is conducive to promote the progress of citizenization by understanding that occupational information acquisition plays an important role in occupational mobility for new generation migrant workers, which also provides a further research direction: the influencing factors on occupational information acquisition of new generation migrant workers, and it will be helpful to optimize their occupational mobility by finding out these factors. Meanwhile, we will take a more detailed research on information acquisition index, occupational mobility, especially for their occupational mobility directions.

References

[1]Xiwen Chen. Agricultural rural economy situation and main task in 2010. *China Development Observation*, 2010, 3: 5-6.
 [2]Knight John, Linda Yueh. Job mobility of residents and migrants in urban China. *Journal of Comparative Economics*, 2004(32): 637-660.
 [3]Changan Li. An empirical analysis on the

discrimination of occupational mobility against the migrant workers and its impact on their income. *Population & Economics*, 2010, 6: 27-32.
 [4]Jian Lin, Xiaowei Ge. Chinese farmers' occupation change and expectations in career choice. *Journal of Zhejiang University*, 2007, 2: 110-117.
 [5]Campbell R Mc Connell, Stanley L Brue, David A Macpherson. *Contemporary labor economics*. 7ed. nd. Beijing: Posts & Telecom Press, 2006.
 [6]Yukichi Mano, Takashi Yamano, Aya Suzuki, Tomoya Matsumoto. Local and personal networks in employment and the development of labor markets: Evidence from the cut flower industry in Ethiopia. *World Development*, 2011, 39(10): 1760-1770.
 [7]Yves Zenou. Job search and mobility in developing countries. *Theory and Policy Implications, Journal of Development Economics*, 2008, 86(2): 336-355.
 [8]Kajisa K. Personal networks and nonagricultural employment: The case of a farming village in the Philippines. *Economic Development and Cultural Change*, 2007, 55(4): 669-707.
 [9]Funing Zhong, Zhigang Xu, Jingdong Luan. A research on the gender differentials of the non-local labor force in developed rural regions. *Population & Economics*, 2001(2): 31-37.
 [10]Nansheng Bai, Jing Li. Migrant workers employment liquidity study. *Management World*, 2009(7): 70-76.
 [11]Ming Lu. Labor migration facing a glass wall: Institutional constraint, social interaction and lagged urbanization. *South China Journal of Economics*, 2011(6): 23-36.
 [12]Jun Chen. Shortage of migrant workers employment information research. *Hunan Social Sciences*, 2005(5): 83-85.
 [13]Mingfen Zhu. Migrant workers professional transfer characteristics and the influencing factors discussed. *Chinese Rural Economy*, 2007(6): 9-20.
 [14]Peilin Li. Migrant workers' social network and social status. *Sociological Research*, 1996(4): 43.
 [15]Ziwei Cao. The re-established social network by the peasant workers and the orientation of the resource flow in the social network. *Sociological Research*, 2003, 4: 99-110.
 [16]Xiaobo Zhang, Guo Li. Does guanxi matter to nonfarm employment? *Journal of Comparative Economics*, 2003, 31(2): 315-331.
 [17]Mitra A. Social capital, livelihood and upward mobility. *Habitat International*, 2008, 32(2): 261-269.
 [18]Bridges William P, Wayne J Villemez. Informal hiring and income in the labor market. *American Sociological Review*, 1986, 51(4): 574-582.
 [19]Staiger D, J H Stock. Instrumental variables regression with weak instruments. *Econometrica*, 1997, 65(3): 557-586.
 [20]Mitra A. Migration, livelihood and well-being: Evidence from Indian city slums. *Urban Studies*, 2010, 47(7): 1371-1390.
 [21]Jinmei Liu. Social networks, human capital and

reflowing of vocation of peasant-workers. Huazhong University of Science and Technology, 2006.

[22]Qiang Li. In mainland China professional flow of urban migrant workers in mainland China. *Sociological Research*, 1999(3): 93-101.

[23]Yaohui Zhao. China's rural labor mobility and the function of education in it. *Economic Research Journal*, 1997(2): 37-42.

[24]Yuan Zhang, Ming Lu. Whether social networks help to raise the level of migrant workers' wages? *Management World*, 2009(3): 45-54.

[25]Knight J, Song L, Huaibin J. Chinese rural migrants in urban enterprises: Three perspectives. *The Journal of Development Studies*, 1999, 35(3): 73-104.

[26]Meral Taner Dermana. Determining the information literacy skills of teacher candidates for the sustainability

of quality in education. *Proscenia Social and Behavioral Sciences*, 2009: 1455-1459.

[27]Huang Zuhui, Liu Xichuan, Cheng Enjiang. Experience explanation on farmers' low participation degree of normal credit market. *Journal of Economic Research*, 2009(4): 116-128.

[28]Dale J Poirier. Partial observability in bivariate probit models. *Journal of Econometrics*, 1980(12): 209-217.

[29]Rothenberg T. Identification in parametric models. *Econometrics*, 1971(39): 577-591.

[30]Wang Jianhua, Li Lutang. Influencing factors research of migrant workers' employment information acquisition: Based on the theory and empirical analysis of 243 migrant workers. *Soft Science*, 2010(12): 98-102.