Transnational Rural Labor Force from Shandong Province Working in Japan and Korea

By Min Zheng, Joy Tio & Thelma D. Palaoag

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I. Introduction

a) Background and Motivation

Economic globalization has made possible the realization of a global village. This global village is composed of countries with their own characteristics and advantages in information, industry, service, labor and other aspects. With the deepening of specialized division of labor, each country can make achievements in its own industries and deepen the contact and cooperation between countries. Capital, raw materials, science and technology, commodities and other factors of production flow around the world, so that each country can give full play to its own advantages and greatly improve the production efficiency and commodity quality. Among the factors of production, in addition to capital, raw materials, science and technology, commodities, there is also a very important factor of production --labor force. The effective allocation of labor force in the world is one of the important signs of economic globalization. The role of labor resources in economic development is more important in countries characterized by an aging

society, a society where people over 65 account for 7% of the total population. Countries with sufficient labor can transfer surplus labor to countries with scarce labor, which will develop rapidly in a win-win manner.

According to the world migration report of 2018, the number of global migrants has reached 244 million, accounting for 3.3% of the global population, which is equivalent to one in every 30 people (World Migration Report, 2018). Developing countries are the main sources of international labor. Economic globalization, income gap, demographic changes, violent conflicts and other factors will urge people to seek work and life in areas with higher income and better environment. The flow of labor in the international market can not only optimize the allocation of global labor force, but also benefit the economic development of various countries (Moses, J.2006).

At present, the transnational flow of labor has increasingly become one of the focus of government agencies and researchers in China. China's labor resources are relatively rich. According to the data of the Ministry of Labor and Social Security, there are about 14 million new labor forces in China every year, and 150 million rich labor forces need to be transferred in rural areas. The urban flow of labor cannot completely solve the problem of labor supply and demand. The employment problem brought by the surplus labor force is not conducive to the economic development and social stability of our country. The expansion of international labor demand provides a new opportunity to effectively solve the problem of domestic surplus labor. However, China's labor force only accounts for 2% of the international labor market, which is far from the scale of China's labor force, which accounts for 20% of the world's labor force. The level of cross-border labor flow in China needs to be improved (Sun Z, 2014). Study on the situation of Chinese labor force working abroad and influencing factors is not only conducive to easing the employment pressure of China's labor market and increasing the income level of migrant workers, but also conducive to adjusting the domestic economic structure and laying the foundation for China's "going out" strategy.

The export of labor services in Shandong Province has gradually become an important part of the regional foreign economic cooperation, and has made positive contributions to the implementation of the "going out" strategy. In 2018, Shandong province

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dispatched 58000 labor personnel (including seafarers), among which 22000 were dispatched under foreign contracted projects, accounting for 37.4% of China's total, and 36000 under labor cooperation, accounting for 62.6%. The main markets of the province are Japan, Singapore, South Korea, Indonesia, Hong Kong, Panama, Algeria, Israel, Saudi Arabia and Kuwait. Among them, more than 60% of the total number of overseas students to Japan and South Korea have been sent from Shandong Province, which maintains Shandong Province the position of the largest overseas labor market in China. According to statistics, every 1% increase in the turnover (COR) of labor service cooperation in Shandong Province will increase the GDP of Shandong Province by 0.6765%. This is the situation that provides the rationale and relevance of this study. The findings of this study can be used as reference for the rural labor force who want to work abroad in Shandong Province and overseas employment service. The findings may also be used by the companies engaged in the practice of providing labor for overseas employment. They can use the findings as inputs in making policy decisions.

b) Statement of the Problem

The primary aim of this study was to describe the situation of the Shandong rural labor force groups working abroad. Specifically, it aimed to answer the following questions:

1. What are the individual characteristics of Shandong transnational rural labor force?
2. What is the situation of Shandong transnational rural labor force along
   a) Length of time of going abroad
   b) Country of employment
   c) Place of work
   d) Type of work
   e) Income
   f) Willingness to return to China
3. What is the relationship between individual characteristics and the situation of Shandong transnational rural labor force?
4. What factors influence the Shandong rural labor's income?

II. Literature Review

The academic circles have also carried on the thorough discussion to the labor force to work abroad and so on, its research content mainly concentrated in four aspects. The first is about the causes of the formation of migrant workers; the second is about the influencing factors; the third is about the significance and problems of migrant workers; the fourth is about the facts relating to choice of countries.

At present, the academic research on the influencing factors of cross-border labor mobility mainly

discusses from the following aspects: first, personal characteristics; second, trade capital; third, management system; fourth, access restrictions.

a) Personal Characteristics

In terms of personal characteristics: the education level, marriage, age, intergenerational relationship, family structure, income status, household registration system, welfare risk, emotional relationship, etc. All of these have a significant impact on their decision to work abroad (David McKenzie and Hille Rapoport, 2007; Yang Xue and Ma Xiaoman, 2015; Zhao Feng et al., 2015; Wu Yanhua and Wang Yijie, 2017). Among them, in order to obtain higher labor remuneration, more promotion opportunities, more jobs and so on, become the main microeconomic reasons of labor force transnational flow (Tseng and yen Fen, 2011). In addition, labor price will also significantly affect the cross-border flow of labor (Zhang Zhixin et al., 2019). The low quality of migrant workers, conservative ideas and fierce market competition have become the main obstacles to China's labor export (Wang Weinan, 2014). AnJingjing (2018) found that the quality of migrant workers is low when studying the labor export of Henan Province, which makes Henan Province have no competitive advantage in labor export in the international market. Therefore, in terms of labor export, actively exploring emerging markets, avoiding homogeneous competition with other population exporting countries, and building labor service brand of migrant workers will become new growth points of labor export in China (Li Zhuowei and Zhang Ying, 2018).

b) Trade Capital

In terms of trade capital, export trade will significantly affect the cross-border flow of labor. There is a long-term and stable synergistic relationship between export trade and labor export (Zhan Yong and Li Li). The increase of China's export trade will lead to an increase in the number of migrant workers (Li, 2004). In addition, foreign capital agglomeration is also one of the main forces of regional labor mobility in China, and foreign capital agglomeration has a significant impact on China's labor mobility (ZangXin and Zhao Jiong, 2016).

c) Management System

At present, China's labor management system has to be improved. XiongZhanlin (2014) took the migrant workers in Heilongjiang Province as the research focus, analyzed the current situation of migrant workers in Russia, and found that the lack of safety guarantee and the irregular employment channels are the main obstacles to labor cooperation between China and Russia. China and Russia should give full play to the complementary advantages of labor resources of the two countries, increase China's labor output to Russia, and establish a sound employment mechanism,

so as to better promote the economic development of China and Russia (DuanMeizhi, 2018). In addition to strengthen labor cooperation with Russia, we should also attach great importance to the labor cooperation mechanism with Southeast Asia and other neighboring countries. The cross-border flow of labor can bring unprecedented ideological confrontation and cultural integration to Yunnan border areas (ZiZhiyue and ShenPeng, 2018).

d) Access Restrictions

In terms of access restrictions: in addition to personal characteristics, trade capital and management system, the entry restrictions of importing countries will also have a certain impact on the labor force going abroad. Because of the cross-border flow of labor force, the interests of different groups will be uneven (Bonin H,2005). Therefore, some countries will impose restrictions on the degree of their labor market opening to the outside world. This kind of access restriction on cross-border labor mobility is the main force that affects the cross-border labor flow, increases the cost of cross-border labor mobility, and is not conducive to the overall Pareto improvement between exporting and importing countries (Moses J.W., 2006). Some labor importing countries have some contradictory psychology on the issue of transnational labor force. On the one hand, they hope to solve the problem of labor shortage through the introduction of foreign labor force, and on the other hand, they worry that the introduction of foreign labor force will damage the interests of local residents to a certain extent (Song Yanan, 2011).

III. METHODOLOGIES

Research designs are introduced in the first section. The second section explains data gathering tools, and the researcher presents the treatment of data in the last section.

a) Research Design

This study was a descriptive study of the Chinese labor force working overseas. It is descriptive since it described the demographic characteristics of the labor force as well as the factors that influence their working income. Quantitative and qualitative methods of analysis were used in the study.

The researcher used convenience sampling in selecting the respondents of this study. The sample was taken from Shandong Labor Cooperation Company. This company has been providing labor services to Japan and South Korea for more than five years. Hence, detailed and reliable data can be obtained.

The researcher distributed questionnaires to Shandong transnational rural labor force working in Japan and Korea through Shandong Labor Cooperation Company in the past three years. The researcher distributed 360 questionnaires and collected 322 valid questionnaires.

b) Data Gathering Tools

The researcher used a survey questionnaire as the primary data gathering tool. The questionnaire consisted of two major parts. The first part of the questionnaire dealt with the profile of the respondents – the individual characteristics of rural labor force, such as gender, age, birthplace, education level, family population, number of children and marital status. These variables were used to understand the relationship between the personal characteristics of migrant workers (gender, age, birthplace, education level, family population, number of children and marital status) and the situation of migrant workers(time of staying abroad, country of employment, place of work, type of work, income, willingness to return to China), so as to understand the situation of rural labor force in Japan and South Korea in detail, and find out the relationship between personal characteristics and migrant workers. Quantitative and qualitative data were collected.

The second part of the questionnaire investigates the situation of rural labor force going abroad, such as the time of going abroad, the country of work, the place of work, the type of work, the income and the willingness to return home.

c) Treatment of Data

The quantitative method was used to measure the degree of correlation between the individual characteristics and the working abroad situation. Specifically, it included the following:

Descriptive statistics: First of all, descriptive statistics on the individual characteristics of migrant workers in rural areas. Secondly, descriptive statistics are made on the situation of rural labor force working abroad. Finally, the paper makes an interactive analysis of the individual characteristics and the working abroad situation

Empirical analysis: The influencing factors are analyzed, and OLS regression model is used to analyze the influencing factors of rural labor income in Japan and South Korea.

Interview method: By interviewing the rural labor force of migrant workers, this paper tries to find the reasons behind the current state of migrant workers.

IV. DATA DESCRIPTIONS

The population of this study included the rural labor force of Shandong Province who were working in Japan and South Korea. They were sampled from Shandong Labor Cooperation Company. Shandong Labor Cooperation Company's main business is to provide labor services of Shandong to Japan and South Korea. It has been engaged in this service for more than five years, so detailed and reliable data can be obtained. 322 samples were expected collected, accounting for 60% of the total business volume.

The analysis of the personal characteristics of rural labor force in Japan and South Korea is shown in Table 1.

Table 1: Descriptive statistical tables of personal characteristics

	Persons	Percentage		Persons	Percentage
Gender			**Marital Status**		
Female	147	45.65	Unmarried	133	41.3
Male	175	54.35	Married	189	58.7
Ages			**Birthplace**		
21-30	152	47.20	Qingdao	90	27.95
31-40	145	45.03	Weihai	57	17.70
41-50	25	7.76	Yantai	34	31.10
Education Background			Jinan	30	9.32
Primary school and below	1	0.31	Weifang	25	7.76
Junior middle school	71	22.05	Rizhao	22	6.83
Higher middle school	164	50.93	Jining	19	5.90
Junior College	63	19.57	Linyi	19	5.90
Bachelor's and above	23	7.14	Liaocheng	11	3.42
Number of kids			Heze	6	1.86
0	5	1.6	Binzhou	6	1.86
1	94	29.2	Zibo	3	0.93
2	75	23.3			
3	145	45.0			

The analysis on the situation of the labor force going to Japan and South Korea is showed in table 2.

Table 2: Descriptive statistical tables of transnational rural labor force working in Japan and Korea

Countries	Persons	Percentage	Time of staying abroad (year)	Persons	Percentage
Japan	290	90.06	1	116	54.66
Korea	32	9.94	2	113	35.09
Work place			3	93	28.88
Tokyo	61	18.94	**Willingness to go abroad again**		
Aichi	46	14.29	Go abroad again	201	62.42
Hyogo	44	13.66	Return home	121	37.58
Osaka	43	13.35	**Types of work**		
Hiroshima	38	11.80	Care for the aged	110	34.16
Hokkaido	33	10.25	Production workers	104	32.30
Nagoya	28	8.70	auto parts technician	48	14.91
Seoul	15	4.66	building worker	19	5.90
Jeju Island	13	4.04	server	16	4.97

Pusan	12	3.73	Agricultural workers	14	4.35
Ulsan	10	3.11	culturist	8	2.48
Inchon	7	2.17	chef	3	0.93
Income level (Ten thousand yuan)					
2-10	116	36.02			
11-20	113	35.09			
21-30	93	28.88			
>31	6	1.86			

V. Findings

This section explains the findings based on descriptive statistics, empirical analysis and interview. In the following parts, four research questions are discussed respectively.

Individual characteristics of Shandong transnational rural labor force

Most of the rural labor force going to Japan and South Korea in Shandong Province are male, middle-aged and married. Most of them are educated in middle school. Most of them are families of five and have three children. Among the 12 cities surveyed in Shandong Province, Qingdao, Yantai, Weihai and Jinan have the largest and most concentrated number of migrant workers abroad, while other cities are relatively scattered.

Situation of Shandong transnational rural labor force

The number of rural labors working in Japan is obviously more than that in South Korea. The number of rural labors working in Japan is mainly concentrated in Tokyo, Aichi, Hyogo and Osaka. They work abroad for a short time, mainly for one year, mostly engaged in nursing, manufacturing and other related work, and their annual income is between 100,000 and 150,000. In addition, rural workers in Japan and South Korea hope to work abroad for a long time, and their willingness to return home is weak.

Relationship between individual characteristics and the situation of Shandong transnational rural labor force

The time for women to work abroad is less than that for men. Women prefer to work in Tokyo, Aichi, Osaka, Hokkaido and Hiroshima. Men prefer to work in Tokyo and Hyogo. No matter male or female, the number of workers engaged in manufacturing, nursing and auto parts is more than others. Compared with men, the proportion of women who are willing to return home is larger.

The choice of countries is slightly different among different age groups. Most of the 21-30-year-old rural workers prefer to work in Aichi, Japan; most of the 31-40-year-old rural workers went to Tokyo and Aichi, Japan. There are some differences in their choice of jobs. Among them, 21-30-year-old rural labor force are mainly nursing workers, manufacturing workers and auto parts workers, 31-40-year-old rural labor force are mainly engaged in manufacturing and nursing and 41-50-year-old rural labor force are mainly nursing workers. With the increase of age, the proportion of people who intend to return to China gradually decreases, while the proportion of people who do not intend to return to China gradually increases.

The rural labor force from Yantai and Weihai who went to Japan and South Korea worked abroad longer time than those from other cities. The rural labor force with different birthplace also has different choice for the country of work. The rural labor force with native place of Weifang, Rizhao, Liaocheng, Jining, Jinan, Heze, Binzhou tends to work in Japan, while the rural labor force with native place of Zibo, Yantai, Weihai, Qingdao tends to work in South Korea. The rural labors from Liaocheng have the strongest willingness to return home, next are labors from Yantai, Weifang, Jining and Qingdao. Heze and Zibo have the weakest willingness to return home.

The higher the level of education, the weaker their willingness to return China in the future. In the rural labor force with junior high school, senior high school, junior college and undergraduate education, the proportion of low-income people in the total number of people with corresponding education level decreased in turn.

Analysis on influencing factors of rural labor force's income in Japan and South Korea.

a) Variable selection

1. Explained variable

The explained variable is their working income, expressed in annual income.

2. Explanatory variable

The explanatory variables of this paper include the personal characteristics of rural labor in Japan and South Korea and the situation of working abroad. The personal characteristics of rural labor force in Japan and South Korea are composed of six variables: gender, age, native place, education level, marital status (married means married, unmarried includes unmarried, divorced and widowed)and number of children. The situation of rural labor going abroad to Japan and South

Korea includes four variables: time of going abroad, type of work, place of work and willingness to return home. The specific variable description are shown in table 3.

Table 3: Variable meaning and sample specification

Variable	Variable meaning	Mean	Std
Gender	Male=1, Female=2	1.46	0.24
Age	21-30years=1, 31-40years=2, 41-50years=3, others=4	1.62	0.44
Birthplace	Zibo=1, Yantai=2, Weihai=3, Weifang=4, Rizhao=5, Linyi =6, Qingdao =7, Liaocheng=8, Jining=9, Jinan=10, Heze=11, Binzhou=12	7.29	1.29
Education	primary school=1, junior high school=2, senior high school=3, junior college=4, bachelor=5	3.11	0.70
Marriage	Marriage=1, unmarried=2, divorced=3, widowed=4	1.46	0.33
Kids number	continuous variable, unite(people)	2.15	0.82
Time of abroad	continuous variable, unite(year)	1.91	0.64
Wiliness to return	No willingness=1, willingness=2	1.38	0.23
Type of Work	Construction worker=1,chef=2,fish farmer=3, auto-part worker=4, manufacturing workers=5, waiter=6, Agricultural workers=7,carer for the aged=8	5.70	4.10
Working country	Korea=1, Japan=2	1.91	0.10
Workplace	Seoul=1, Ulsan=2, Pusan=3, Jeju Island=4, Inchon=5, Tokyo=6, Hiroshima=7, Osaka=8, Hyogo=9, Aichi=10, Hokkaido=11, Nagoya=12	6.67	3.10
Income	continuous variable, unite (million yuan/year)	10.38	3.77

b) Model setting

In order to verify the influencing factors of rural labor income in Japan and South Korea, this part establishes the following econometric model

$$Y = \alpha_0 + \alpha_1 X + \delta$$

Among them, Y is the income of rural labor force going to Japan and South Korea, and X is the explanatory variable, including gender, age, native place, marital status, education level, total number of children, time of going abroad, type of work, place of work and willingness to return home. δ is a random interference term.

c) Regression analysis

This part uses OLS regression model to explore the influencing factors of the income of rural labor force in Japan and South Korea. The regression results are shown in Table 4. From the model, it can be seen that in all the explanatory variables, except gender, age, birthplace, marital status and willingness to return home have no effect on the income of rural labor going to Japan and South Korea, all the other variables have significant effect on the income of rural labor going to Japan and South Korea.

In terms of years of education, it can be seen from table 4 that education level has a positive effect on income ($r = 0.12$, $P = 0.03 < 0.05$), the annual income of rural labor force in Japan and South Korea will increase by 12,000 yuan every additional year. This is basically consistent with the conclusion of the cross analysis of education level and income of rural labor force in Japan and South Korea before. The reason may be that with the increase of education level, the more competitive the rural labor force going to Japan and South Korea has in the labor market, and they are more likely to find jobs with high salary and good working environment.

In terms of the total number of children, it can be seen that the total number of children has a positive effect on the income ($r=0.09$, $p=0.04<0.05$；$r=0.14$, $p=0.03<0.05$). With the increase of the total number of children, their annual income increased by 14,000 yuan. With the increase of the total number of families or children, the higher the income of rural labor going to Japan and South Korea. The reason may be that with the increase of the number of families or children, the pressure of rural labor going to Japan and South Korea is increasing. The purpose of their going abroad to work is to earn more money and then take it home or improve their life. The increase in the number of families or children will encourage them to work hard and get more labor remuneration.

In terms of time to go abroad, it can be seen that the influence of time abroad on income is positively related (r=0.31, p=0.02 < 0.05), the annual income of rural labor force going abroad to Japan and South Korea will increase by 3100 yuan every additional year. The reason may be that with the increase of working time abroad, rural workers in Japan and South Korea adapt to foreign life better. The higher acceptance of cultural difference and the more social capital they accumulate abroad make them have more opportunities to get jobs with higher labor remuneration.

In terms of types of work, it can be seen that the impact of construction workers, chef, fish farmers and agricultural workers on income presents a positive relationship (r=0.14, p=0.31>0.05; r=0.20, p=0.09> 0.05; r=0.05, p=0.10>0.05; r=0.04, p=0.16>0.05), but they were not significant. On the other hand, the impact of manufacturing workers, carer for the aged and auto parts workers on income showed a positive relationship. (r=0.28 p=0.03<0.05; r=0.12, p=0.04<0.05; r=0.18, p=0.04<0.05 The income of manufacturing workers, carer for the aged and auto parts workers is higher, and the annual income gap is 1200-2800 yuan, which has passed the significance test. The reason may be that manufacturing workers, care for the aged and auto parts workers require higher professional skills and less job substitutability, so they will get higher remuneration. The rest of the types of work did not pass the significance test, which may be because the other types of workers are engaged in similar work and do not need professional skills, so the income difference is not significant.

In terms of workplace, it can be seen from table 4 that the impact of workplace in Tokyo on income presents a positive relationship (r=1.88, p=0.03<0.05), that of workplace in Seoul presents a positive relationship (r =1.44, p=0.04< 0.05), and that of workplace in Aichi presents a positive relationship (r=0.43, p=0.02 < 0.05), the annual income of rural labor force from Tokyo and Seoul is more than 10000 yuan higher than that from Aichi Japan. The reason may be that Tokyo and Seoul are the capitals of Japan and South Korea, with better economic development, higher average consumption expenditure and higher corresponding labor remuneration.

Table 4: Regression analysis of the factors influencing the income of migrant workers

Variables	Model	
	Income	
Gender	-0.07	(0.19)
Age	0.55	(0.09)
Birthplace		
Linyi	0.09**	(0.04)
Zibo	0.10	(0.13)
Yantai	0.03	(0.08)
Weihai	0.05	(0.06)
Taian	0.06	(0.18)
Rizhao	-0.12	(0.09)
Qingdao	-0.01	(0.11)
Liaocheng	0.05	(0.12)
Jining	0.13	(0.19)
Jinan	0.07	(0.11)
Heze	-0.10	(0.20)
Binzhou	0.01	(0.14)
Education	0.12**	(0.03)
Marriage	0.26	(0.13)
Kids number	0.14**	(0.03)
Time of abroad	0.31**	(0.02)
Willingness to return	0.33	(0.06)
Type of work		
construction worker	0.14	(0.31)
chef	0.20	(0.09)
fish farmer	0.05	(0.10)
auto-parts worker	0.18**	(0.04)
manufacturing worker	0.28**	(0.03)
waiter	0.12**	(0.04)
agricultural workers	0.04	(0.16)
carer for the aged	0.20**	(0.01)
Workplace		
Seoul	1.44**	(0.04)

Ulsan	0.52	(0.11)
Pusan	0.36	(0.13)
Jeju Island	0.58	(0.23)
Inchon	0.41	(0.22)
Tokyo	1.88**	(0.03)
Hiroshima	0.23	(0.10)
Osaka	0.69	(0.11)
Hyogo	0.49	(0.28)
Aichi	0.47	(0.22)
Hokkaido	0.51	(0.16)
Nagoya	0.60	(0.19)
Constant	4.10**	(0.03)
R2	0.21	
Observation	322	

*Note: *, * *, *** respectively indicate that they have passed the statistical tests with significance levels of 10%, 5% and 1%.*

VI. Conclusions & Recommendations

This part presents the conclusions derived from the findings and the recommendations forwarded by the researcher.

a) Conclusions

Based on the relevant data of rural labor force in Shandong Province, the researcher first makes descriptive statistics on the individual characteristics and the situation of rural labor force going abroad to understand the sample distribution. Secondly, through the interactive analysis of the individual characteristics of rural labor force and the situation of migrant workers abroad, the researcher understands the correlation between the personal characteristics of migrant workers and the situation of migrant workers. Finally, the OLS regression model is used to analyze the influencing factors of income of rural labor force. In the light on the findings of the study, the following are the conclusions:

1. There are specific characteristics that are common to the Shandong transnational rural labor force. According to the research, most of the rural labor force going to Japan and South Korea in Shandong Province are male, middle-aged and married. Most of them are educated in middle school. Most of them are families of five and have three children. Among the 12 cities surveyed in Shandong Province, Qingdao, Yantai, Weihai and Jinan have the largest and most concentrated number of migrant workers abroad, while other cities are relatively scattered.

2. There is a distinct profile that is common to the labor force that works in Japan and Korea in terms of time of going abroad, country of employment, place of work, type of work, income and willingness to return to China. The number of rural labors working in Japan is obviously more than that in South Korea. The number of rural labors working in Japan is mainly concentrated in Tokyo, Aichi, Hyogo and Osaka. They work abroad for a short time, mainly for one year, mostly engaged in nursing and manufacturing and other related work, and their annual income is between 100,000 and 150,000. In addition, rural workers in Japan and South Korea all hope to live and work abroad for a long time, and their willingness to return home is weak.

3. In the rural labor force going to Japan and South Korea, gender is related to the time of going abroad, workplace, type of work, income and willingness to return. Age is related to the country, workplace, type of work and willingness to return home. Birthplace is related to time of going abroad, working country and the willingness to return home. The education level is only related to the income and the willingness to return home.

4. The main factors affecting the income of rural labor force in Japan and South Korea are the number of years of education, the total number of children, the time of going abroad, the type of work and the place of work. Manufacturing workers, caregivers and auto parts workers and workers in Tokyo, Japan and Seoul, South Korea have higher incomes; with the increase of years of education, the total number of children and the time of going abroad, the income of rural labor going to Japan and South Korea is higher.

b) Recommendations

The cross-border flow of labor is conducive to the relief of employment pressure in China. In order to better promote income level, the following are recommended.

1. The surplus rural labor force is encouraged to work abroad. Through the analysis of Shandong Province rural labor force to Japan and South Korea, we can see that their income level is higher than that of the domestic labor market, and their willingness to return home is weak. Therefore, compared with domestic workers, they are more willing to work abroad, and they are more satisfied with the overall situation abroad. Therefore, the related branches in Shandong Province can publicize the benefits of working abroad, let the labor force of the right age

or other surplus labor force know the working status and satisfaction of working in Japan and South Korea, eliminate their worries about working abroad, and stimulate their desire to work in Japan, South Korea or other countries. This can not only improve the income level, their living conditions, it will also help to ease the employment pressure in Shandong Province.

2. Enhance the education level of migrant workers abroad. Through the analysis of the personal characteristics and the situation of going abroad of the rural labor force in Shandong Province, we can know that the education level of the rural labor force in Shandong Province is low, which makes them not have much competitive advantage in the labor market at home and abroad. From the analysis of the influencing factors of rural labor income in Japan and South Korea, we can see that the higher the level of education, the higher the income. In order to better promote the rural labor force to work abroad, we can start from the following aspects: on the one hand, the Shandong government can encourage migrant workers to participate in adult college entrance examination, increase their education level and improve their academic qualifications. On the other hand, relevant institutions can carry out vocational and technical education for migrant workers. Increasing the practicality and professionalism of education is an effective strategy to meet the needs of labor force.

3. Strengthen the skill training of migrant workers abroad. It can be seen from the survey that the rural labor force in Shandong Province who go to Japan and South Korea are mostly engaged in some jobs with low professional requirements, which makes them excluded from the high-income groups. From the analysis of the influencing factors of rural labor income in Japan and South Korea, it can be seen that workers with higher professional skills, such as manufacturing workers, nursing workers and auto parts workers, whose job substitution is small can get higher labor remuneration. Therefore, we need to improve the professional and technical level of migrant workers abroad, so as to increase their income level. First, determine the focus of professional skills training. Because the younger labor force has a strong learning ability and will work for a long time in the future, professional skills training for them can not only save the training cost, but also obtain better training effect. Therefore, in the process of professional skills training for labor force, we should take the younger labor force as the key training object. Secondly, increase the pertinence of professional skills training. Training can be carried out according to the demand of labor should be focused on. Through the discussion and in-depth interview, we learned that language is one

of the main obstacles for the labor force to work abroad. Strengthening the language training of the labor force is conducive to their faster integration into the foreign working environment. At present, the cost of foreign language learning in the market is high, so it is difficult for ordinary labor force to spend too much money on foreign language learning. Their education level is low, and the difficulty of self-learning foreign language is also great. Therefore, the relevant branches of Shandong Province should establish language training for migrant workers abroad, so that they can afford the cost of learning foreign languages.

4. Form a group of migrant workers with geographical ties. From the analysis of the interaction between the Birthplace of rural labor force in Japan and South Korea and the country where they work, we can see that the rural labor force whose native place is Weifang, Rizhao, Liaocheng, Jining, Jinan,Heze, Binzhou tend to work in Japan, while the rural labor force whose native place is Zibo, Yantai, Weihai and Qingdao tend to work in South Korea. From the analysis of the influencing factors of rural labor income in Japan and South Korea, it can be concluded that the rural labor force in different cities have different choices for the migrant countries. The reason may be that the number of migrant workers in China is still small. Most of the migrant workers choose to work abroad because they are introduced by their relatives and friends. Therefore, migrant workers in different cities have different choices about the country of work. In order to make it more convenient for the migrant workers to understand the situation of the migrant country and ensure the legitimate rights and interests of the migrant workers, the relevant branches in Shandong Province should set up relevant institutions to be responsible for the problem of labor force going abroad to work in the region, and provide help for the workers who want to go abroad to work. In addition, WeChat subscription, WeChat, QQ group can also be used to push information and reduce the cost of information transmission. Take the city as the center, form a group of migrant workers with geographical ties, and enhance their sense of belonging.

5. Diversified overseas employment channels led by the government should be built. In the past, the channels for Chinese labors to work abroad were relatively single, and they were generally monopolized by the government, which could not meet the needs of Chinese labors to work abroad, leading to the emergence of some illegal immigration. Later, the emergence of labor service companies abroad provided convenience for our labor force to work abroad. However, in the process of talking with migrant workers, we find that some

labor export companies have higher intermediary costs that most of the labor cann't afford. Therefore, in the labor export market, we should take the government as the leading role, take each labor export company as the auxiliary, the government is responsible for supervising and auditing the legitimacy of the labor export company, and give some preferential policies to the labor export company, so as to reduce the cost of labor when they go abroad to work, and protect the legitimate rights and interests of the labor who go abroad to work. In addition, relevant government agencies should provide convenience for individual workers to directly go abroad for employment, so as to provide them with better employment opportunities. It is helpful for our country's labor force to work abroad by building a diversified way of labor force working abroad.

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