

Intention of Junior High School Students towards Secondary Vocational Education and its Determinants in Rural China



United Nations
Educational, Scientific and
Cultural Organization



International Research
and Training Centre
for Rural Education



United Nations
Educational, Scientific and
Cultural Organization



International Research
and Training Centre
for Rural Education

© 2012 UNESCO International Research and Training Centre for Rural Education (INRULED). All rights reserved.

19 Xijiekouwai Street, Haidian District, Beijing 100875, PRC

Tel: +86 10 58801920/1923 Fax: +86 10 58801920

info@inruled.org; www.inruled.org

International Research and Training Centre for Rural Education (INRULED) is a UNESCO Category II Centre, located at Beijing Normal University, China. INRULED is the only agency engaged in research and training for rural education under the auspices of UNESCO. INRULED is commissioned to initiate and facilitate activities focused on exchange and popularization of experiences for international rural education within the broader framework of Education for All (EFA), to undertake human resource training programmes for international rural education, and to serve the UNESCO member states, especially developing countries.

Cover picture courtesy of Peter Morgan, 2012.

Graphic and layout designer: Thirriard Damien

Intention of Junior High School Students towards Secondary Vocational Education and its Determinants in Rural China

HUANG Bin, XU Caiqun, JIANG Xiaoyan¹

¹ Huang Bin, Corresponding Author, Associate Professor of Nanjing University of Finance and Economics, email address : James7526@hotmail.com; Xu Caiqun, postgraduate student of Nanjing University of Finance and Economics; Jiang Xiaoyan, Associate Researcher of China National Institute for Educational Research;

Contents

■ Abstract	3
■ Introduction	4
■ Data, Models and Methods	8
Data	8
Models, Methods and Independent Variables Description	9
Models and Methods	9
Independent Variables Description	10
■ Empirical Results	14
Intention of Junior High School Students for the Secondary Vocational Education in rural China	14
Influencing Factor Analysis of Intention of Junior High School Students for the Secondary Vocational Education in rural China	17
■ Summary and Discussion	22
■ Acknowledgement	25
■ References	26

Abstract

The paper investigates empirically the intention of Chinese rural students for the Secondary Vocational Education (SVE) and its determinants, on the basis of survey data collected in Zhejiang, Anhui and Shanxi Provinces in 2010. The results show that junior students in rural China strongly incline towards Secondary General Education (SGE), while their intention towards SVE is relatively low. According to multinomial logistical regression, the study shows that rural junior students' intention towards SVE is affected by many factors. Students' choice between SGE and SVE is mostly influenced by personal academic performance, while familial economic status exerts a significant influence on the choice between employment and SVE. Whether or not junior high school students know about financial aid for rural SVE students does not change their intention. The results suggest that Chinese central government abolish the policy that aims to maintain roughly equal enrollment between SGE and SVE. In addition, it is recommended that the central government increases amount of financial aid for rural SVE students, especially those in central and western China.

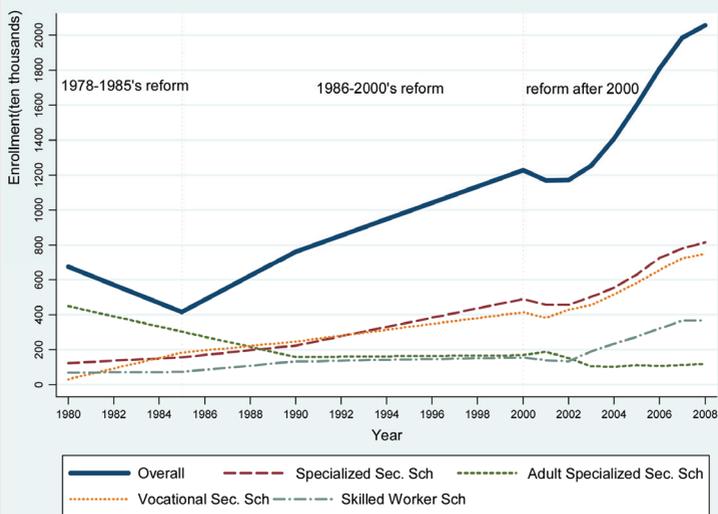
Keywords:

rural students, secondary vocational education, students' intention, financial aid

Introduction

Chinese Secondary Vocational Education (SVE) includes technical secondary schools, vocational high schools, technical schools, and adult secondary schools. In the current four-strata education system consisting of pre-school, primary, secondary, and higher education in China, both SVE and Secondary General Education (SGE) belong to the stage of secondary education. Since China's reform and opening up in 1978, Chinese SVE has undergone a series of institutional reforms in order to keep pace with changes in external economic environment, and to meet the demand of economic development for skilled labors. The enrollment of SVE was growing at a rapid pace. In 2008, the number of students in SVE was more than 20 million, three times the figure in the initial period of reform and opening up.

Figure 1 : Change in the Number of Students in SVE since Reform and Opening Up



Source : National Bureau of Statistics of China. (2009). 中国教育统计年鉴 2008 [Educational Statistics Yearbook of China 2008]. 北京, 中国: 人民教育出版社 [Beijing, China, People's Education Press].

The past 30 years of Chinese SVE development can be divided into the following three stages :

- **Stage one (1978–1985).** Reforms in this period mainly focused on the structural adjustment of vocational education, emphasizing quality improvement of SVE, and cultivating more technical talents to meet the needs of rapid economic development. As a result, a large number of part-time and low-quality adult vocational schools in rural areas were closed, the number of high-quality specialized and vocational secondary schools that financially supported by government was increased. Since then, a formal SVE system mainly consisting of specialized and vocational secondary schools was developed.
- **Stage two (1986–2000).** The central government issued “the State Council’s Decision on Efforts to Develop Vocational Education” in 1991, which proposed to improve the quality of vocational education and increase the enrollment of vocational schools in the next decade so as to make secondary vocational school students outnumber those in senior high schools. At the same time, the central government began to promote nine-year compulsory education and general secondary education nationwide, to reduce enrollment of junior vocational education, and to delay the tracking of general and vocational education from junior high education stage to senior high education stage.
- **Stage three (2000--).** The government abolished the system of guaranteeing job assignments for SVE graduates in the late 1990s while the enrollment of higher education began to expand. In the meantime, the quality of SVE education started to decline dramatically because of its increasing enrollment and high-quality students’ fading interest in SVE. It became generally accepted that “good” students went to senior high schools and

“bad” students went to secondary vocational schools. SVE became an eliminative tracking mechanism rather than the originally well-designed selective tracking mechanism (Xing, 2005, November 17). Under the mainstream of elite education, more and more students and parents tended to choose SGE instead of SVE, which resulted in a shrinking enrollment of SVE. The number of students in SVE schools accounted for only less than 40% of all students at the stage of secondary education in 2004, a drop of 10% since 2000. To improve the situation, the central government established the policy of roughly equal enrollment between SGE and SVE, and assigned the enrollment task to local education administration. At the same time, the government had made great efforts to help SVE attract more students, especially rural students, via stipends and tuition waiver policies since 2005¹. A series of policies were put in place and official data also showed that the number of students at secondary vocational schools was going up in recent years. However, reality is not optimistic as expected. It is reported that SVE is still uninterested to rural students and parents. Therefore the recruitment pressure secondary vocational school faced remains pervasive and tremendous. In many provinces, annual enrollment tasks assigned to local education administrations by the Ministry of Education were left unfinished (China Youth Daily, 2011, May 30). How to implement effective policies to retrieve the attractiveness and the enrollment of SVE has become an urgent mission for Chinese government.

Tracking junior high school graduates' choices and their determinants has always been a hot discussion topic in international educational researches. There has been

1 Relevant policies include : “Decision of the State Council on Actively Developing Vocational Education” in 2005, “The Provisional Rules for National Subsidization in Secondary Vocational Schools” in 2006 and 2007, and “Comments on Free Education of Rural Students from Poor Families and Students Studying Agriculture-related Subjects in Secondary Vocational Schools” in 2009.

considerable amount of literature on the subject such as some empirical research from the developing countries. The previous international empirical results have shown that students' choice when graduating from junior high school may indeed be influenced by many factors such as the graduates' academic achievements, their family economic background and local characteristics (Moenjak & Worswick, 2003; Aypay, 2003). In China, a limited number of empirical researches have been conducted on the intention of junior high school students towards SVE (Jiang, 2002; Li, 2009; Song, Luo & Wei, 2011). Majority of their samplings covered only one city or one province and the results would probably be unrepresentative for the whole country. Therefore, on the basis of the previous research, this paper uses the latest survey data from three provinces in China to make empirical analysis on the following issues :

(1) What is the intention of junior high school students in Chinese rural area towards secondary vocational education?

(2) What factors influence students' intentions to receive SVE in Chinese rural areas and how do these factors influence them?

Data, Models and Methods

Data

This study originates from an international cooperation between UNESCO's International Research and Training Centre for Rural Education (INRULED) and The National Research University Higher School of Economics (HSE) project "Inter-country Policy-oriented Comparative Studies on Technical and Vocational Education for Rural Development in the Transitional Countries, China and Russia: Policy Responses and Innovative Practices." In order to investigate the demand of Chinese rural students for SVE and their future labor migration and career prospects, the Chinese research group surveyed 1,876 rural junior high school and SVE students in Zhejiang, Anhui and Shaanxi Provinces¹ from November to December 2010. The content of questionnaire contained the students' personal characteristics, family background, educational and employment planning and so forth. Among the interviewed students, 957 were junior high students in third grade, and 919 were SVE students in second grade. This article mainly uses the sample of junior high students to make an analysis, combining with some data information from the sample of SVE students.

¹ Zhejiang, Anhui and Shanxi are respectively located in China's east, central and western regions.

Models, Methods and Independent Variables Description

Models and Methods

In the questionnaire, students were asked the following question: “What do you want to do after graduating from junior high school?” There were three given answers to choose from: (1) SVE; (2) SGE; (3) immediate employment. As these three different choices of students are unordered multinomial variables, multinomial logistical regression was applied to conduct analysis. The multinomial logistical regression model is constructed as follows :

$$\begin{aligned} \ln(odds_j) = & a_j + b_{1j} \cdot grade + b_{2j} \cdot fam_income + b_{3j} \cdot fam_property \\ & + b_{4j} \cdot parent_edu + b_{5j} \cdot social_capital + b_{6j} \cdot grant \\ & + b_{7j} \cdot gender + \sum_{i=8}^n b_j X_j \quad (j = 2,3) \quad (1) \end{aligned}$$

According to the multinomial logistical regression method, when the dependent variable has j categories, a certain category is treated as the baseline category, which is compared to other alternative categories respectively to form $j-1$ equations for regression analysis. In this case, students graduating from junior high school have three possible choices. We use the option of “SVE” as the baseline category, and model 1 actually contains two logistic regression equations. The dependent variable is the logarithmic value of odds. $Odds(odds_j = \frac{P(y=j)}{P(y=1)} = 2,3)$ respectively expresses the ratio of probability of choosing SGE among rural students after graduation from junior high school compared to their choosing SVE, and the ratio of probability of their choosing immediate employment compared to choosing SVE. Similar to the linear regression, logistic regression coefficient b_j can also be interpreted as the value change of log-odds caused by unit changes of the independent variable. Although such an interpretation way is intuitive, it is of no practical significance in the applied

analysis. A more common explanation is transforming the coefficient of independent variable regression b_i into e^{b_i} . e^{b_i} is expressed as multiples change of odds value caused by a unit change of independent variable.

Independent Variables Description

To measure students' academic achievement, students' rank of academic performance in the same grade of school was investigated in the questionnaire. According to the rank, students were divided into three categories. Those on the top 30% of rank were the upper class; those who ranked between 31% and 50% belong to the middle class, and those who ranked below 50% were assigned to the middle-lower and lower class. As mentioned above, the trend of tracking by students' academic achievement is very obvious between SGE and SVE in rural China, so the authors predict that academic performance will have an extremely important impact on diffluent intention between SGE and SVE.

A large number of empirical studies in the past have pointed out that both students' education choices and achievements are highly correlated to their family socioeconomic background (Coleman, 1988; Smith, Beaulieu, & Israel, 1992; Lu, 2006; Wei, Luo, & Song, 2009). Family socioeconomic background generally contains three indicators: parental education background, family income and wealth, and parental occupational status. In previous studies, there are two common ways to apply these three indicators to measure family socioeconomic background. One is to convert these three indicators into a single variable by using factor analysis method and then bring it into regression equation. The other is to select one or two of the aforementioned three indicators as proxy variables for family socioeconomic status. The advantage of the first way is that converting these three socioeconomic indicators into a single variable can avoid multicollinearity considering there is a close relationship among them. Its disadvantage is that converting the three kinds of indicators into one variable implies that the three indicators have the same impact on students' education choices, but in fact, their impacts are likely to differentiate in

degree or direction. For this reason, the authors use the second method, bringing family income and family property, and mean of parents' schooling years into Equation 1. In the questionnaire, the authors designed a series of questions about parents' annual income in the last three years and their relative income level compared to other local residents. Based on their answers, students' family income was categorized into five levels : wealthy, upper-middle, middle, lower-middle and poor. Moreover, students' parents were asked whether the family owned 15 possessions including computer, car, urban housing, and air conditioner (see Table 1). An exploratory factor analysis was made on the basis of the questionnaire results, and these 15 possessions were put into three categories: high-value, medium-value, and low-value.

Table 1 : Results of Exploratory Factor Analysis of Students' Familial Possessions

Category	Items	Factor Loading		
		1	2	3
High-value property	Does your family own a computer?	.63		
	Does your family own a car?	.60		
	Does your family own a house in the city?	.59		
	Does your family own a house in the countryside?	.57		
	Does your family own an air-conditioner?	.50		
	Does your family own valuable equipment?	.50		
	Does your family own a microwave oven?	.49		
	Does your family order newspapers and periodicals?	.46		
	Does your family own a LDC TV?	.45		
Middle-value property	Does your family own a house in the town?			.64
	Does your family own agricultural machinery?			.58
Low-value property	Does your family own a refrigerator?		.73	
	Does your family own a water heater?		.59	
	Does your family own a motorcycle?		.53	
	Does your family own a telephone?		.52	
Characteristic value		2.76	1.88	1.24
Percentage of explanatory factors in overall variances		18.4	30.9	39.2

Social Capital variable reflects parents' social network resources derived from relatives and friends which contribute to children's schooling and employment. The concept of social capital has been widely used in the field of educational research. The results of some previous studies have shown that family social capital contributes to students' educational achievement, and thus directly or indirectly affect students' education choice (Zhong & Lu, 2006; Smith, Beaulieu, & Israel, 1992; Israel, Beaulieu, & Hartless, 2001). As for the measurement of social capital, Lin (1999) held the view that social network resources can be measured by three dimensions called "upper reachability," "distance" and "heterogeneity." Therefore, it is feasible to measure three types of social network resources owned by individuals respectively, and then to use factor analysis method to convert these indicators into a single variable proxy for family social network resources. Several researchers have applied this method to measure the influence of family social capital on Chinese students' choice of higher education (Lei & Zhong, 2005; Zhong & Lu, 2006). However, in this study, such a relatively complex measurement method was not used. Instead, authors designed the following question in the questionnaire.

Can you settle the following problems with the help of relatives and friends?

- (1) Find a job or get a promotion;
- (2) Get high-quality medical service for yourself, your relatives or and friends;
- (3) Send children (yours or others) to good schools;
- (4) Borrow money or other living assistance from them;
- (5) Find an accommodation for your children in urban areas if the school or company cannot provide them.

The authors assume that the social network resources owned by rural households will have the above mentioned five contributive aspects for children's schooling and employment, and the answers to these questions will reflect the social network resources a family possesses to some extent.

Grant is a binary categorical variable, which indicates whether students know about financial aid of central government for rural vocational school students. 0 refers to "I do not know," and 1 refers to "I Know." Chinese central government has implemented stipends and a tuition wavier policy for rural SVE students since 2007, which is aimed at attracting more students from rural and poor families to get SVE. If this policy is effective, we can anticipate that students who know about this grant are more willing to receive SVE than those who do not know about the information.

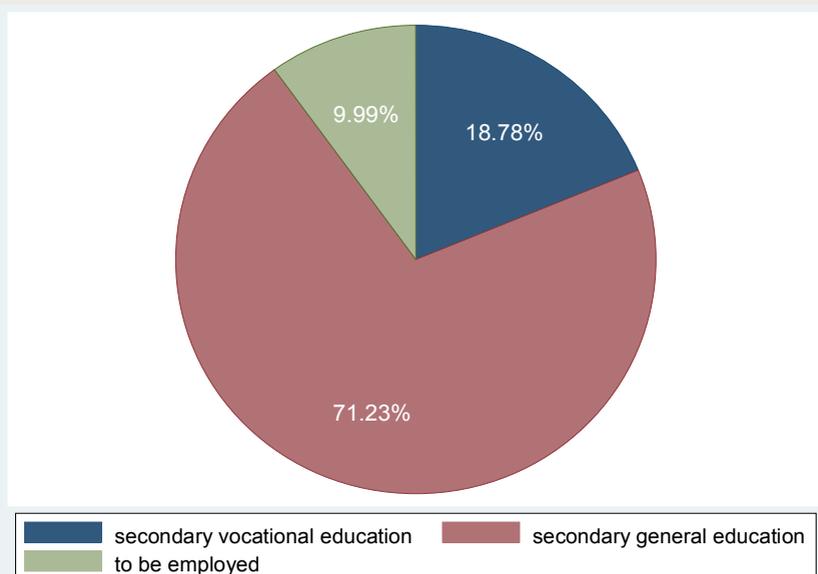
In addition to independent variables stated above, Equation 1 also includes other controlling variables such as students' gender, number of siblings, and locality (eastern, central and western areas of China).

Empirical Results

Intention of Junior High School Students for the Secondary Vocational Education in rural China

As shown in Figure 2, among three possible choices of junior high school students, those who choose immediate employment after graduation occupy the smallest proportion with only 10% in our sample, which indicates that most students want to continue their secondary education after graduating from junior high school. The proportion of choosing SGE is more than 70%, much higher than that of the proportion of students choosing SVE. This indicates that students in Chinese rural areas have a strong demand for SGE in senior high school education and their intention towards SVE is relatively low.

Figure 2 : Rural Students' Choices after graduation



In the interview, principals and teachers of junior high schools and SVE schools unanimously agreed that the vast majority of students with good academic performance tend to attend SGE schools, while students with poor performance are inclined to get SVE or to choose immediate employment after graduation. However, according to the results of crosstab analysis between students' academic achievement and their choices after graduation (Table 2), no matter what level students' academic achievement is, their willingness to receive SGE is always the highest proportion in our sample. Even among students with the lower-middle level of academic achievement, over 40% still choose SGE, which reflects the prevalent and strong desire of rural students for SGE.

Table 2 : Chinese Rural Students' Academic Achievements and Their Choices after graduation

		Students' Choice			
		SVE	SGE	Immediate employment	Total
Academic achievement	Upper Class	3.27%	94.35%	2.38%	100%
	Middle class	21.07%	69.50%	9.43%	100%
	Lower-middle and lower Class	37.16%	40.37%	22.47%	100%

Majority of students who intend to pursue SVE after graduating from junior high school chose information technology (24.5%), health and medicine (14.4%) and teaching (13.7%) as their major with only one student willing to study in agriculture major. Although the central government has exempted tuition for SVE students studying agriculture and related majors at state-run SVE schools since 2009, rural students didn't have much interest in such majors due to the big wage difference

among agricultural sectors, industrial and service sectors. In the short term, the effect of the tuition-exemption policy is not obvious. As for future schooling locality and labor migration, more than half of students stated that they prefer urban schools instead of local ones. Nearly 80% of the students desire to work in cities rather than in rural areas after graduating from SVE schools. Most of students expressed that if they study or work in city, they will receive better vocational education and have more opportunities to find a desired job and earn more money, even though many of them confessed that living in rural areas suits them better than living in the city. In addition, almost 80% of students choosing SVE viewed "learning a skill to find a desired job in the future" as their primary reason, and less than 9% took "I'm interested in SVE" as their primary reason for choosing SVE. By contrast, 40.29% of students took "self-realization" as their primary reason for choosing SGE. This indicates that initiative motivation of students to choose SVE is insufficient.

Influencing Factor Analysis of Intention of Junior High School Students for the Secondary Vocational Education in rural China

According to Table 3, the significance level for the likelihood-ratio chi-square indicates that Model 1 is significantly better than the intercept-only model. Results of some goodness-of-fit tests that are commonly applied in categorical regression range from .28 to .43, and the predicted accuracy (Count R^2) of Model 1 is also higher than 80%. These results reveal that rural students' choice between employment and schooling after their graduation from junior high school are indeed affected by independent variables included in Model 1 to a certain extent.

Among all independent variables in Model 1, academic achievement has the most prominent effect on tracking choice of students. First of all, the contribution of the academic achievement to the model overall goodness-of-fit is nearly 50%, much higher than that of other independent variables. Secondly, academic achievement influences rural students' choice between SGE and SVE significantly, and its estimated coefficient is relatively high. It is estimated that students with better academic achievement are more likely to join SGE schools. With other variables remaining stable, the odds of students with upper-class performance choosing SGE is 36 times that of students with lower-class performance. The odds ratio of middle-class performance students choosing SGE to those with lower-class performance is up to four. Thus, it is assumed that academic achievement is a primary factor when Chinese rural students make choice between SGE and SVE, and the tracking between general education and vocational education in the stage of secondary education is actually some kind of elite selection mechanism based on individual academic achievement. Moreover, the impact of academic achievement on students' choice between immediate employment and SVE is not significant, which shows that in attracting high-quality junior high graduates, SVE not only is inferior to SGE, but also seem to have no obvious advantages over immediate employment.

Table 3 : Determinants of Intention of Junior High School Students towards SVE in rural China

Variables	Choices after Graduation			
	SGE vs. SVE		Employment vs. SVE	
	Coefficient	Z value	coefficient	Z value
Intercept	2.665**	2.26	-.103	-.06
Students' academic achievement (lower-middle class as reference group)				
Upper class	3.587***	7.10	.492	.64
Middle class	1.392***	4.10	.263	.52
Family income level (poor as reference group)				
Upper level	-3.431*	-1.69	-14.412	-.02
Upper-middle level	-3.411***	-3.61	-4.163***	-2.75
Middle level	-1.690**	-2.25	-2.285**	-2.32
Lower-middle level	-1.550**	-2.09	-1.627*	-1.70
High-value property	-.786***	-3.57	-.298	-.91
Middle-value property	-.199	-1.14	-.394	-1.44
Low-value property	-.088	-.52	-.244	-.96
Schooling years of parents	-.022	-.27	-.077	-.65
Social capital	.058	.42	.438**	2.28
Know of fiscal grant or not ("do not know" as reference group)	.018	.06	.194	.38
Gender	.010	.31	.784	1.60
Number of siblings	.086	.32	.730*	1.91
Locality (Western region as reference group)				
Eastern region	-1.541***	-3.33	-1.328*	-1.77
Central region	-.238	-.44	.971	1.34
<i>LR test of overall model</i>	182.66***			
<i>McFadden's R²</i>	.281			
<i>Cox-Snell R²</i>	.317			
<i>Nagelkerke R²</i>	.427			
<i>Count R²</i>	.815			

Note : Multinomial logistical regression was applied with students' choice of SVE after graduation as baseline category; *** 1% significant, ** 5% significant, * 10% significant.

The three variables of family income, possessions and education level which can reflect family socioeconomic status have varying influences on rural students' choice. Parental education level will not significantly influence students' choice either between SGE and SVE or between employment and SVE. However, the influence of family income and possessions is significant and highly so. As for the students' choice between SGE and SVE, the coefficient of family income is negative, and decreases with income level. That is to say, keeping other variables stable, the wealthier the family is, the greater the tendency of students' choosing SVE, and vice versa. Estimates of family properties play similar roles in which the fewer the high-value possession a family has, the stronger the intention for rural students to get SGE. The reason is that students from wealthy families are raised and educated with better socioeconomic background and superior social network resources which can provide them with more chances for future individual development, so they are not motivated to receive general education by studying at a high-class university as the only way to realize promotion of their socioeconomic status. By contrast, students from poorer families are in lack of sufficient social resources, thus SGE will be regarded as the most important and effective way for them to seek promotion of their socioeconomic status¹. Regarding students' choice between employment and SVE, family income variable also have a significantly negative impact. It means that the poorer the family is, the greater the tendency of students to choose immediate employment rather than

1 It is worth noting that students' tracking intentions rather than actual choices after graduation were analyzed here. In general, wealthy families are usually able to strive for more and better educational resources for their children, thus, the wealthier families are, the greater the possibility that their children will receive SGE. Although students from poor families have stronger intentions towards SGE than those from wealthy families, the actual possibility of students from poor families choosing SGE may be less than that of those from wealthy families. Previous empirical research concerning actual tracking choices of junior high school students in rural China (Song, Luo, & Wei, 2011) showed that students from high-level income families in rural areas have a far higher possibility to get an chance to get SGE than those from low-level income families. In our sample of SVE students, most of SVE rural students come from middle or lower-middle level income family, and those from upper-level income families only account for 2.2%.

SVE. The pressure of financial burden will push poorer students to choose immediate employment after graduation from junior high school if they have no chance to receive general education.

Familial social capital does not have significant impact on choices between SGE and SVE for rural students, while it has a significant influence on choices between employment and SVE. According to estimated results, the richer social network resources family owns, the more inclined students will be to choose immediate employment after graduation from junior high school. It is intuitive to believe that if graduates of junior high school don't have good prospects on future employment of SVE and the social network resources their families own can help them find a good job, they will naturally tend to choose immediate employment after graduation rather than continuing their study in SVE.

The financial aid information variable doesn't exert significant influence on students' intention to choose between SGE and SVE, or between employment and SVE. As mentioned above, since family income is found to have a significant influence on the tracking choice of students, we can anticipate that there should be significant differences in intention to get SVE between students who do know and do not know about government financial aid. However, the estimates show that whether students are aware of financial assistance or not will not affect students' education choice. The reason may be that current amount of financial aid from central government for SVE students is too limited to alter students' intention effectively. Among SVE student samples, 70.6% expressed that the present 1,500 RMB stipend per year cannot meet their daily demands of learning and living. In addition, although the central government has implemented the exempt-tuition policy for rural students and students studying at agriculture-related majors in SVE schools since 2009, the proportion of SVE students who have received financial aid remains low at the rate of 13.5% tuition waiver.

There are no significant gender differences in junior high students' choice between employment and SVE. The number of siblings has a significantly positive influence on the odds ratio of rural students' choosing immediate employment to SGE after graduation at $P = 0.1$ level. It is concluded that if the number of children in the family increases, the burden of child-fostering and education for families will become heavier. Children may be provided with less resource in their future study experience, so they are more likely to find a job immediately after graduation from junior high school.

In the regional comparison, there are no significant differences in the intention of junior high school students towards SVE between Anhui and Shanxi Provinces, while students' intention towards SVE in Zhejiang Province is significantly higher than that in Anhui and Shanxi Provinces. The results suggested that the odds of students in Zhejiang Province choosing SVE compared to those choosing SGE and immediate employment are respectively 4.7 times and 3.8 times that of Anhui and Shanxi Provinces. As a developed coastal province, the economy of Zhejiang is much more prosperous than that of Anhui and Shanxi. Besides, Zhejiang natives traditionally prefer to be engaged in commercial and trading activities, so private industry and commerce there have been highly developed. As a result, there is a greater demand for young skilled workers. That's why students from Zhejiang have stronger intention to choose SVE.

Summary and Discussion

On the basis of survey data collected in Zhejiang, Anhui and Shanxi Provinces in 2010, the paper investigates empirically the intention of Chinese rural students towards the Secondary Vocational Education and its determinants by using multinomial logistical regression method. Our empirical findings have wide policy implications for future development of secondary education in China.

Firstly, rural students in China currently have a strong demand for senior high school education, but within elite education system, this demand is mainly manifested in the urgent desire for secondary general education. Rural students' intention towards secondary vocational education remains quite low. Less than one third of respondents expressed that they would go on with SVE after graduation from junior high school, and most of those students were not strongly motivated to choose SVE. Under such an educational demand and preference structure held widely by rural students and their parents, the recruitment goal formulated by the central government to maintain roughly equal enrollment of SGE and SVE is hard to achieve. In fact, this recruitment plan artificially forces SVE schools which don't have enough competitive power in the education market to compete with SGE schools which are more competitive. Therefore, the central government should consider abolishing the recruitment plan and shift policy goal to how to effectively improve quality of SVE and to attract students who would originally plan to be employed immediately graduation back to schools to get vocational education.

Table 4 :Family Burden of SVE Cost in Investigated Provinces

Investigated province	Average direct cost of SVE in a family (RMB per year)	Average family income (RMB per year)	Family Burden of SVE direct cost
Zhejiang	8,648.0	61,290.0	14.1%
Anhui	8,447.0	32,114.0	26.3%
Shanxi	6,533.0	15,827.0	41.3%
Mean	7,876.0	36,410.3	21.6%

Note : Family's SVE costs include various direct costs paid by a family to support children's SVE, such as tuition, accommodation, transportation, books, stationery and other costs; Family burden of SVE direct cost = Average direct cost of SVE in a family / average familial annual income.

Secondly, rural students' choice between SGE and SVE is mainly affected by their academic achievement while the choice between immediate employment and SVE is mainly subject to their family economic status. The result provides a direct empirical support for the current financial aid policy of Chinese central government for rural SVE students. Since there is a positive correlation between the odds that students choose SVE (compared to immediate employment) and family income level, it can be predicted that governmental financial aid will strengthen the intention of rural students from poor families towards SVE by relieving their financial burden on education, and attract more of them to continue vocational education after graduation from junior high school rather than enter the labor market so early. A latest empirical evidence (Huang & Zhong, 2011, November) shows that the private rate of return to SVE is no lower than, and even higher than that of SGE in rural China. Therefore, the fiscal grant for rural SVE students from poor families can not only increase their chance

to get vocational education and promote their lifetime income, but also contribute to narrow income gaps and improve intergenerational equity in Chinese rural society.

Finally, it is found that whether junior high school students know about the financial aid policy or not doesn't significantly affect their choice after graduation. This result may be closely related to the current limited amount of financial aid. According to other information from SVE students samples, the sum of direct and indirect expense for rural students receiving SVE is 17,761 RMB per year¹. Compared with this, the aid of 1,500 RMB per year is obviously too low. Besides, the central government should take full account of regional differences in rural family income when determining the amount of financial aid. Currently, the amount of financial aid provided by central government for rural SVE students is the same in every province, despite there are large differences in family burden of SVE among provinces. As shown in Table 4, there are no obvious differences in family direct cost of SVE but a big regional income gap among the three provinces, which directly leads to great inter-provincial differences in family burden of SVE. The average burden of a family in Shanxi Province is as high as 41.3%, which is almost three times higher than that of a family in Zhejiang Province. For this reason, the central government must pay great attention to the inter-regional differences in private cost of SVE and alter the "one standard fits all" mode of financial aid program. In order to promote the vertical equity of the financial aid program, financial aid standard for rural SVE students in central and western areas should be increased to a great extent in the future.

1 SVE cost includes direct and indirect cost. Direct costing can refer to Table 4. Indirect cost refers to rural students' probable annual income level if they obtain employment immediately without receiving SVE after graduating from junior high school. According to the survey data in rural families of Zhejiang, Anhui and Shanxi Provinces by the author in the end of 2009, rural labor force with junior high school education and at the age of 16 to 18 years have an average annual income of 9,885 RMB.

Acknowledgement

This study was sponsored as part of an international cooperation project of UNESCO's International Research and Training Centre for Rural Education (INRULED) and The National Research University Higher School of Economics (HSE) project "Inter-country Policy-oriented Comparative Studies on Technical and Vocational Education for Rural Development in the Transitional Countries, China and Russia : Policy Responses and Innovative Practices." It was part of a project funded by the Priority Academic Program Development of Jiangsu Higher Education Institutions.

References

- Aypay, A. (2003). The tough choice at high school door: An investigation of the factors that lead students to general or vocational schools. *International Journal of Educational Development*, 23(5), 517–527.
- China YouthDaily. (2011, May 30). 教育部建议 2011年中职招生820万被指脱离实际 [Suggestion from the Ministry of Education to recruit 8.2 million students in secondary vocational school is supposed to divorce from reality]. *中国青年报* [China Youth Daily].
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, (94), 95–120.
- Huang, B., & Zhong, X. L. (2011, November). 中国农村地区的教育与个人收入: 基于三省六县入户调查数据的实证研究 [Education and personal income in Chinese rural areas: An empirical research based on survey data from six counties in three provinces]. 论文发表于中国教育经济学年会, 南京, 中国 [Paper presented at Annual Conference on Economy of Education, Nanjing, China].
- Israel, G. D., Beaulieu, L. J., & Hartless, G. (2001). The influence of family and community social capital on educational achievement. *Rural Sociology*, 66(1), 43–68. doi: 10.1111/j.1549-0831.2001.tb00054.x
- Jiang, H. X. (2002). 初中学生教育分流意向的形成: 关于北京市初中学生和父母问卷调查的实证分析 [Formation of tracking intention in junior high school students education: A questionnaire empirical study concerning junior high school students and their parents in Beijing]. *教育科学研究* [Educational Science Research], (9), 20–23.

- Lei, W. P., & Zhong, Y. P. (2005). 中国高等教育需求中的城乡差异：人力资本与社会资本理论的视角. [Difference between rural and urban areas in demand for higher education in China: From an angle of human capital and social capital theory]. 北京大学教育评论 [Peking University Education Review], 3(3), 48–57.
- Li, L. L. (2009). 初中学生对高中阶段入学选择实证研究 [An empirical research of junior high schools students' choice of entering in senior high school]. 职教论坛 [Vocational and Technical Education Forum]. (15), 8–10.
- Lin, N. (1999). Building a network theory of social capital. *Connections*, 22(1), 28–51.
- Lu, G. S. (2006). 高中生高等教育需求影响因素分析 [Influencing factor analysis of higher education for senior high school students]. 集美大学学报:教育科学版 [Journal of Jimei University: Education Science], 7(3), 3–12.
- Moenjak, T., & Worswick, C. (2003). Vocational education in Thailand: A study of choice and returns. *Economics of Education Review*, 22(1), 99–107.
- Smith, M. H., Beaulieu, L. J., & Israel, G. D. (1992). Effects of human capital and social capital on dropping out of high school in the south. *Journal of Research in Rural Education*, 8(1), 75–87.
- Song, Y. G., Luo, P. S., & Wei, J. G. (2011). 农村初中生的分流意向，教育选择及影响因素：来自西部某省41个贫困县的证据 [Tracking intention, educational choice and influencing factors of rural junior high school students: Evidence from 41 poor counties in a province in the west]. 北京大学中国教育财政科学研究所科研简报 [Bulletin of China Institute for Educational Finance Research, Peking University], 54(5).

- Wei, J. G., Luo, P. S., & Song, Y. G. (2009). 家庭背景与就读大学机会关系的实证研究 [An empirical research of the relationship between family background and chance to attend universities]. 教育发展研究 [Exploring Education Development], (21), 15–20.
- Xing, H. (2005, November 17). 教育分流：选择与淘汰的尴尬 [Education tracking: Embarrassment between selection and elimination]. 中国教育报 [China Education Daily].
- Zhong, Y. P., & Lu, G. S. (2006). 社会资本因素对个体高等教育需求的影响 [Influence of social capital factor on individual demand for higher education]. 高等教育研究 [Journal of Higher Education], 27(1), 39–47.



United Nations
Educational, Scientific and
Cultural Organization



International Research
and Training Centre
for Rural Education

UNESCO International Research and
Training Centre for Rural Education

19 Xijiekouwai Street, Haidian District, Beijing 100875, China.

Tel : +86-10-58801920/1923

Fax : +86-10-58801920

E-mail : info@inruled.org

Website : www.inruled.org