


Article

Does Vocational Education Matter in Rural China? A Comparison of the Effects of Upper-Secondary Vocational and Academic Education: Evidence from CLDS Survey

Geng Wang *, Xin Zhang and Rui Xu

School of Education, Tianjin University, Tianjin 300350, China

* Correspondence: geng_wang@tju.edu.cn

Abstract: The Chinese government has emphasised the role of vocational education and training (VET) in promoting the rural economy. Since 2018, the government has invested heavily in setting up secondary vocational schools, training centres, specialised programmes, and courses in rural areas. This paper aimed to explore whether VET at the upper-secondary level leads to better labour market outcomes than academic education in Chinese rural areas. We also aimed to quantitatively investigate the social prestige of vocational and academic education among rural residents by comparing the subjective social status level of those who graduated from upper-secondary vocational schools and general academic schools. We drew data from the China Labour-force Dynamic Survey (CLDS). A binary logit model and multinomial logit model were used in this research. The results showed that rural upper-secondary vocational graduates had an advantage over general graduates in terms of their income and employment stability. However, VET led to lower subjective social status when compared with general education. This study demonstrated that although promoting VET in rural areas could potentially benefit rural residents financially, cultural change is needed to ensure the elevation of the standing of vocational education and promote the worthiness, effectiveness, and capabilities that vocational graduates possess.

Keywords: vocational education and training; rural China; labour market outcome; employment stability



Citation: Wang, G.; Zhang, X.; Xu, R. Does Vocational Education Matter in Rural China? A Comparison of the Effects of Upper-Secondary Vocational and Academic Education: Evidence from CLDS Survey. *Educ. Sci.* **2023**, *13*, 258. <https://doi.org/10.3390/educsci13030258>

Academic Editor: Doris L. Watson

Received: 25 January 2023

Revised: 25 February 2023

Accepted: 26 February 2023

Published: 28 February 2023



Copyright: © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

Since the start of the reform era in 1978, the disparity between rural and urban incomes in China has increased markedly [1]. Rural residents have been recognised as a particularly disadvantaged group [2]. Although the achievements in the education of urbanised provinces in China have been widely studied and celebrated, the situation of rural youth remains under-researched [2,3].

Similarly to policymakers throughout the world [4], the Chinese government believes that vocational education and training (VET) is crucial to economic development [5]. VET provides enhanced access to education and an alternative pathway to increased earnings for individuals who are unable or unwilling to participate in academic education [6,7]. The *National Strategic Plan for Rural Revitalisation* reiterated that ‘vocational education in rural areas is in need of vigorous development’ [8]. Therefore, a number of strategies, such as improving rural residents’ access to VET and setting up VET schools, have been initiated.

Numerous studies have revealed that upper-secondary VET can help generate economic returns and improve intergenerational mobility, especially in less-privileged areas [7,9,10]. However, qualitative studies on the Chinese VET sector have suggested that vocational education has lower social prestige than academic education [11,12], and rural parents are not willing to send their children to vocational schools [12]. Previous studies on VET in rural China have focused on its drop-out rates [2,13], quality [14], school performance [15], and the participation of rural women [16]. Few have addressed the effects

of upper-secondary VET on the labour market outcomes of rural residents, especially in comparison to academic pathways. This paper was intended to fill the gap in the literature by exploring whether VET leads to better labour market outcomes than academic education in Chinese rural areas and whether VET is economically worth pursuing for rural residents. We also aimed to quantitatively investigate the social prestige of vocational and academic education among rural residents by comparing the level of subjective social status of those who graduated from upper-secondary vocational schools and general academic schools.

Following the introduction, we proceed with discussions on the upper-secondary education system in China, the Chinese VET sector, and its role in 'rural revitalisation'. The next section presents the theoretical foundation and hypotheses that underpin this study. Following the discussion of data, measures, and methodology, the major findings, discussion, and conclusion are presented.

1.1. The Chinese Upper-Secondary System

Since 1986, the Compulsory Education Law in China has required every student to complete nine years of education, including six years of primary education and three years of lower-secondary education [17]. At the end of the ninth grade, students have the option to take the High School Entrance Exam (HSEE or zhongkao), which places them into either an upper-secondary vocational school or a general/academic high school for another three years. After completing secondary education, students have the choice of continuing their education at a four-year university or a three-year vocational college [18]. While a number of studies have focused on the effect of higher (vocational) education on Chinese youth [19,20], this study aimed to fill the gap by exploring the upper-secondary sector, which includes the vocational route (e.g., specialised schools, skilled-worker schools, and vocational secondary schools) and the general/academic route (e.g., general high schools).

The upper-secondary sector in China has expanded steadily over the past three decades. The Chinese government considered the expansion of upper-secondary education as a necessary approach to meet the need for upskilling the workforce as well as to potentially increase residents' incomes, thus further eradicating social inequalities [21,22]. By 2019, 39 million students were enrolled in upper-secondary education, with 39.5% in the vocational route and 60.4% in the academic route [23].

1.2. The VET Sector and Social Status

The lower standing of the VET sector in China has been damaging the development of the skilled workforce [12]. In 2019, the Chinese government published the *Implementation Plan on National Vocational Education Reform*, which emphasised the equal standing of vocational education and general education [5]. The attractiveness of the VET sector is largely determined by whether it could bring equal economic return and social status when compared with general education. In terms of economic return, scholars of various countries have found that, compared with the graduates of general upper-secondary education, VET graduates could benefit from an increased level of economic returns [24,25]. However, in terms of social status, the advantage of VET in China is not particularly prominent. Vocational graduates are more likely to find themselves with a lower socio-economic status and receive limited upward social mobility [12]. Although vocational and academic secondary education are set at the same level, the vocational route is treated as 'an inferior option' [26]. Students are expected to experience their childhood and youth as dedicated and industrious labourers, producing the best possible test scores [12]. With the nationwide expansion of higher education as well as rapid urbanisation, Chinese parents, in rural and urban household alike, expect their children to proceed to the academic route and attend university, which may not have been possible when they were young [27]. Vocational students are considered as 'low-value' and 'low-quality' youth by the general public [11,12], and they tend to internalise this form of social stereotyping and accept their inferior status as vocational students [12].

When making an educational choice, one considers both the economic and non-economic returns of a certain type of education [28]. The decision to invest in education is closely related to the level of perceived upward social mobility that education could bring. Vocational education was highly regarded throughout the socialist era and was delivered by work units [29]. Vocational graduates were assigned to ‘iron rice bowl’ jobs, which guaranteed their livelihoods over the course of their lifetime [30]. Thus, the VET sector enjoyed great prestige and popularity, as young people would benefit by having the opportunity of upward social mobility [31]. However, since the start of the reform era, this training arrangement from the socialist era has become obsolete. Investing oneself in vocational education to become a worker or technician no longer brings lifetime job security and social respect in the market economy [31]. Based on the China Family Panel Survey, Wei and Bai found that the advantage of upper-secondary vocational education only existed among those who were born before 1980, and it gradually disappeared among those who were born after 1980 [32].

Despite the initiatives to reform the vocational education sector, the dilemma over the inferior status of vocational learning in Confucian tradition versus the need to develop ‘a highly skilled workforce’ remains [33]. The Confucian philosophy determined a hierarchy of work and the academic/vocational divide in Chinese society following the imperial era [34]. In the reform era, the perceived low status of vocational education and the subjective association between academic education and upward mobility were evident [35]. Confucian values advocate that ‘the student should apply himself to be an officer’; thus, ‘scholar-officials’, who gained exam success through academic learning, enjoyed the highest positions in Imperial China, above the skilled workers and farmers [35] (p. 23). Similar to the social prestige given to the ‘scholar-officials’, by applying oneself to the academic route and achieving higher tests scores, one is considered a student of ‘merit’, representing high social value among young people [11,12]. One of the aims of this research was to quantitatively explore the subjective social status of graduates of upper-secondary vocational education compared with those in the academic route.

1.3. ‘Rural Revitalisation’ through Developing VET

Although China may be one of the fastest-growing economies, the benefits of this economic growth ‘have been bestowed mainly on urban residents’ [1]. Since the start of the reform era, rural residents have been the least advantaged, kept separate from urban dwellers by a household registration system that denied them many welfare benefits and rights [1]. Aiming to eradicate the urban–rural disparity, the Chinese government has taken a number of measures to boost the rural economy [36]; for example, the *National Strategic Plan for Rural Revitalisation* was put forward in 2018.

Despite the recent success in the economy, the vocational education sector in China is not meeting the country’s needs for upskilling [36–38], particularly in the context of the Fourth Industrial Revolution. In recent years, a series of reforms have been initiated by the Chinese government for the vocational education sector. At the end of 2017, *Plans on Deepening the Integration of Industry and Vocational Education* was published by the State Council [39]. In 2018, *The Guidelines on Promoting the Cooperation of Vocational School and Enterprise* was enacted, in order to provide students with improved industrial skills and knowledge [21]. As for the disadvantaged rural areas, developing a quality vocational education pathway for rural residents has been vital in the process of promoting rural revitalisation strategies [23]. Since 2018, the Chinese government has invested heavily in setting up secondary vocational schools, training centres, specialised programmes, and courses in rural areas. Approximately 55% of the total secondary enrolment was within the vocational pathway [39].

This paper aimed to investigate whether rural residents could benefit more financially from upper-secondary vocational schools than general academic high schools, as well as compare the subjective social status of those who graduated from these two pathways.

1.4. Theoretical Background and Hypotheses

One possible explanation for the connection between one's education and outcomes in the labour market is provided by the human capital theory. One's decision to invest in education is highly similar to a company's decision to invest in capital, which will increase productivity and generate higher earning. Becker distinguishes general human capital from specific human capital [28]. General human capital is not directly associated with a specific job, but it can be applied in various contexts and thus increase the expected returns in employment opportunities [40]. Specific human capital is directly applicable to a certain job and immediately increases productivity [41]. General human capital is normally obtained through general or formal education, while specific human capital is obtained through on-the-job training or vocational education. Therefore, the distinction between general and vocational education lies in their educational goals: vocational graduates would gain more practical and directly applicable skills and knowledge, while academic graduates would gain more analytical and abstract skills [42].

An individual's choice of investing in vocational education is based on the relevance of the skills acquired and the social position they may bring. According to E. O. Wright, the access to certain skills and certificates would set a distinctive place in class relations [43]. Those who obtain essential skills through vocational training may have the potential to achieve upward social mobility. Parkin also argued that the certification of skills through vocational training was associated with the level of social stratification in modern society [44].

Research on general/specific human capital at the secondary educational level demonstrates that in the domain of a small-scale business, vocational graduates require less practical training and have more expertise in work tasks than academic graduates [45]. Therefore, vocational graduates could apply their skills more rapidly than their academic counterparts while lowering the training costs for a potential employer. Vocational graduates may gain higher labour market returns due to their increased productivity than academic graduates, who may face lower returns but greater learning opportunities [46,47]. Vocational graduates, with their practical skills that are immediately applicable to the firm, may enjoy more employment stability than academic graduates, whose skills are highly transferable [48,49]. Therefore, we hypothesised:

H1: *Upper-secondary vocational graduates receive a higher level of income compared to graduates of general high schools in rural China.*

H2: *Upper-secondary vocational graduates are more likely to be in stable employment compared to graduates of general high schools in rural China.*

One of the aims of this paper was to investigate the social prestige of upper-secondary vocational and academic education among rural residents in China. Qualitative research on the Chinese VET sector has shown that the vocational route is often chosen by default or as a poor second choice by students and their parents [11,26]. The reform era witnessed the massive expansion of the Chinese higher education sector and the increased demand for university credentials, which is viewed as a mechanism for class closure. The proliferation of higher education credentials decreased the demand for VET, hence the lack of desire to become skilled workers [27].

Education credentials, especially academic ones, play a significant role in the distribution of job opportunities through the 'signalling effect' [19]. Based on evidence in urban China from 2003 to 2008, Hu found that academic graduates have been treated favourably in the labour market in terms of their starting salary and likelihood of finding a job when compared with vocational graduates [19,20]. This economic position of different types of graduates may reinforce Chinese young people's commitment to the academic pathway.

Moreover, under the influence of Confucian values, people have conferred social prestige and recognition on the 'scholar-officials' and academic graduates [34]. Developing VET may help to increase rural residents' incomes, therefore achieving 'rural revitalisation'. However, participation in VET does not necessarily lead to an increase in perceived social

status compared with those who graduated from general high schools. Therefore, we hypothesised:

H3: *Upper-secondary vocational graduates have a lower level of subjective social status compared to graduates of general high schools in rural China.*

2. Methodology

2.1. Data

In this research, we drew data from the China Labour-force Dynamic Survey (CLDS). Launched by the Centre for Social Survey at Sun Yat-sen University, the CLDS is a nationally representative, biennial survey of Chinese communities and individual workers. It adopts a multi-stage stratified sampling strategy to interview households from 29 provinces/autonomous regions (Tibet, Hainan, Macau, Taiwan, and Hong Kong SAR were not included). The CLDS provides information on respondents' demographic characteristics, type of education, income, and nature of work that has been used in various studies [50]. This study employed the 2018 wave of the CLDS and included 1302 respondents in rural areas. We only included those who completed their secondary education before 2018 and further restricted the sample to include only respondents with a valid input of gender, education, income, urbanicity, occupation, and socioeconomic status. Table 1 describes the variables used in this research.

Table 1. Variable description.

Variable	Type	Description
Education	Binary	=‘1’ for VET; =‘0’ for general/academic education
Ln(income)	Numerical	Natural log of individual’s annual income
Occupation	Categorical	An individual’s occupation
Employment stability	Binary	=‘1’ for stable work; =‘0’ for unstable work
Subjective social status	Categorical	An individual’s perceived social status
Age	Numerical	Age as of 2018
Years of education	Numerical	Individual years of schooling
Gender	Binary	= ‘1’ for male; =‘0’ for female
Experience	Numerical	The working life of the individual
Party membership	Binary	=‘1’ for member of party; =‘0’ for not a member of party
Marriage	Binary	=‘1’ for married; =‘0’ for unmarried
Employment type	Binary	=‘1’ for formal employment; =‘0’ for informal employment
Father’s years of education	Numerical	The father’s years of schooling

2.2. Measures

The labour market outcomes and the perceived social prestige of graduates from upper-secondary education were captured in this study through the analysis of three dependent variables. The log-transformed value of the total annual income in 2017 served as the first dependent variable. We also measured the skill levels and collar type possessed by workers, following Hessels et al. [51]. Four major occupational groups were formed based on this taxonomy: highly skilled and white-collar, highly skilled and blue-collar, low-skilled and white-collar, low-skilled and blue-collar (see Table 2).

Table 2. Classification of four occupational groups.

Collar type	White collar	Legislators, senior officials, and managers; professionals, technicians, and associate professionals; clerks and service workers; shop and market sales workers.
	Blue collar	Skilled agricultural and fishery workers and craft and related trades workers; plant and machine operators, assemblers, and elementary occupations.

Table 2. Cont.

Skill level	Highly skilled	Legislators, senior officials, and managers; professionals, technicians, and associate professionals; skilled agricultural and fishery workers; craft and related trades workers.
	Low skilled	Clerks, service workers, and shop and market sales workers; plant and machine operators, assemblers, and elementary occupations.

The second dependent variable, employment stability, refers to the level of stability of a worker's job. By referring to studies on precarious employment [52,53], this study measured the level of employment stability using an indicator to separate those who had signed a formal employment contract from those who had not. Following previous research [54,55], subjective social status was measured by an individual's perception of his or her own position in the social hierarchy on a 10-step ladder. This study converted this continuous variable into a categorical one, with a score of 1–3 representing low-level social status; 4–7 average-level social status; and 8–10 high-level social status.

Along with the primary variables of interest, our study also included a number of control variables representing various demographic characteristics that could potentially obscure the connection between the type of education and employment outcomes. As shown in Table 1, these included age, years of education, gender, experience, party membership, marriage, employment type, and father's years of education.

2.3. Research Methodology

A Mincerian earnings equation was used to evaluate the graduates' economic returns from these two types of education [56]. The Mincerian income equation model is illustrated by Equation (1) below:

$$\ln(\text{income}) = \beta_0 + \beta_1 \text{edu}_i + \beta_2 A_i + \varepsilon, \quad (1)$$

where *income* is the individual's annual total income in 2017; *edu_i* is the core explanatory variable, representing graduates' type of education; *A_i* denotes a set of control variables; and ε is the residual.

A binary logit model was used to examine the effect of the two types of education on graduates' employment stability. Equation (2) below represents this model:

$$\text{Stability}_i = \ln(P_i/1-P_i) = \beta_0 + \beta_1 \text{edu}_i + \beta_2 X_2 + \dots + \beta_n X_n + \varepsilon, \quad (2)$$

where *Stability_i* is the dependent variable, *P_i* represents the probability of achieving a stable job, β_0 is the constant term, *edu_i* stands for a graduate's type of education, and ε represents the residual.

A multinomial logit model was employed to analyse the relationship between the types of education and the degree of subjective social status. The maximum likelihood estimation (MLE) was utilised to calculate the coefficient in the multinomial logit model. The model is represented by Equation (3) below:

$$\text{Status}_i = \beta_0 + \beta_1 \text{edu}_i + \dots + \beta_n X_n + \varepsilon, \quad (3)$$

where *Status_i* is the dependent variable, *edu_i* stands for a graduate's type of education, β_0 is the constant term, *X_n* denotes a set of control variables, and ε is the residual. The base value of the independent variable in Equations (2) and (3) was set to 0.

3. Results

3.1. Descriptive Findings

The study's descriptive findings are presented in Tables 3 and 4. The average annual income of those with an upper-secondary education degree was RMB 45,211.44 (USD 6639.56), which was 1.24 times of the average annual income (RMB 36,416.29/USD 3547.94) of the rural residents in the sample. In 2017, the annual income of rural upper-secondary vocational graduates was slightly higher than that of their general/academic counterparts. In terms of employment stability, the proportion of rural vocational graduates with stable jobs was 17.5% greater than that of rural general graduates at the upper-secondary educational level. In terms of subjective social status, seven in ten rural graduates with upper-secondary education believed that their social status was at the average level.

Table 3. Descriptive statistics.

Variable	Mean (SD)/Percentage
Dependent Variable	
Income	45,211.44 (116,807)
Ln(income)	10.18 (1.08)
Occupation	
Low-skilled and blue-collar worker	23.8%
Highly skilled and blue-collar worker	13.4%
Low-skilled and white-collar worker	27.3%
Highly skilled and white-collar worker	9.3%
Employment stability	
Stable work	47.7%
Unstable work	52.3%
Subjective social status	
Low	25.6%
Average	70%
High	4.4%
Key Independent Variable	
Upper-secondary education (vocational)	0.27 (0.44)
Control Variable	
Age	42.60 (0.49)
Years of education	11.90 (0.39)
Gender (male)	0.61 (0.49)
Experience	14.07 (14.56)
Party membership (CPC)	0.11 (0.31)
Marriage (married)	0.81 (0.39)
Employment type (formal employment)	1.18 (0.52)
Father's years of education	3.66 (4.35)
Training (received)	0.12 (0.32)

Table 4. Comparison of upper-secondary general and vocational graduates.

	General	Vocational
N (%)	954 (73.3)	348 (26.7)
Income (RMB)	44,857.67	46,188.79
Employment stability (%)		
Stable work	41.8	59.3
Unstable work	58.2	40.7
Subjective social status (%)		
Low	27.0	21.7
Average	68.1	75.1
High	4.8	3.2
Total	100.00	100.00

3.2. Income

The ordinary least-squares (OLS) results regarding the relationship between the different types of upper-secondary education (general/vocational) and income are presented in Table 5. The first column shows the regression results of rural vocational education in comparison to general education in terms of income; columns 2–5 display the regression results of graduates from four occupational groups and their incomes. The regression results demonstrated that rural upper-secondary vocational graduates earned more than general graduates, which supported Hypothesis 1. The findings were still valid when socioeconomic, location, and family factors were taken into account. As can be seen in Table 5, in the blue-collar and highly skilled occupational group, the income of rural vocational graduates was significantly higher than that of their general counterparts by 32.1%.

Table 5. Results of the OLS model.

	Ln (Income)				
	Overall	Blue-Collar Low-Skilled	Blue-Collar Highly Skilled	White-Collar Low-Skilled	White-Collar Highly Skilled
Education	0.147(0.066) ***	−0.198(0.368)	0.321(0.082) ***	0.205(0.121)	0.180(0.194)
Years of education	−0.006(0.080)	0.026(0.247)	0.231(0.126) *	0.022(0.091)	−0.094(0.167)
Gender	0.342(0.072) ***	0.319(0.161) *	0.413(0.129) ***	0.335(0.104) ***	0.476(0.162) ***
Experience	−0.005(0.003)	−0.009(0.009)	0.002(0.005)	0.003(0.005)	−0.006(0.007)
Party membership	0.033(0.067)	0.175(0.106)	−0.024(0.302)	−0.001(0.106)	−0.194(0.163)
Marriage	0.272(0.137) *	0.754(0.359) **	0.189(0.173)	0.187(0.147)	0.407(0.233) *
Employment type	−0.526(0.067) ***	−0.407(0.362)	−0.534(0.130) ***	−0.172(0.110)	−0.392(0.131) ***
Father’s years of education	0.025(0.008) ***	0.014(0.015)	0.036(0.012) ***	0.027(0.014) *	0.021(0.014)
Social status	0.017(0.021)	0.007(0.046)	0.010(0.030)	0.067(0.020) ***	0.003(0.057)
Training	0.392(0.075) ***	0.383(0.306)	0.111(0.243)	0.390(0.142) **	0.270(0.141) *
Constant	10.226(0.978) ***	9.226(2.907) ***	7.334(1.443) ***	9.414(1.169) ***	11.164(2.026) ***
N	925	287	166	348	121

Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

3.3. Employment Stability

Table 6 shows the effect of the different types of upper-secondary education on the graduates’ employment stability. The results indicated that rural vocational graduates had an advantage over general high school graduates in terms of employment stability, and that their chances of landing a stable job were 1.82 times higher than those of their general counterparts, which supported Hypothesis 2.

Table 6. Results of the binary logit model.

	Employment Stability			
	Coef.	Odds Ratio	Lower Bound	Upper Bound
Education	0.599(0.295) **	1.82(0.537) ***	0.02	1.178
Years of education	−0.295(0.313)	0.745(0.233)	−0.909	0.319
Ln(income)	0.667(0.208) ***	1.949(0.404) ***	0.26	1.074
Age	−0.021(0.014)	0.979(0.014)	−0.049	0.006
Gender	−0.071(0.313)	0.931(0.291)	−0.684	0.541
Experience	−0.056(0.017) ***	0.946(0.016) ***	−0.089	−0.023
Party membership	−0.747(0.456)	0.474(0.216)	−1.64	0.147
Marriage	0.221(0.366)	1.247(0.457)	−0.498	0.939
Employment type	−3.534(0.529) ***	0.029(0.015) ***	−4.57	−2.498
Father’s years of education	0.061(0.031) **	1.063(0.033) **	0.001	0.122
Social status	−0.11(0.081)	0.895(0.073)	−0.27	0.049
Training	−0.074(0.339)	0.928(0.315)	−0.739	0.591
Constant	3.557(4.414)	35.062(154.747)	−5.093	12.208
N		417		

Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$.

3.4. Subjective Social Status

The relationship between the different types of upper-secondary education and the subjective social status level is presented in Tables 7 and 8. The results indicated that upper-secondary vocational education lowered graduates' chances of obtaining high-level subjective social status. In other words, upper-secondary vocational education graduates in rural areas were found to be less likely to perceive themselves as having high-level social status than general education graduates. Thus, Hypothesis 3 was supported.

Table 7. Results of the multinomial logistic model (low-level social status compared to average-level social status).

	Subjective Social Status			
	Coef.	Odds Ratio	Lower Bound	Upper Bound
Education	−0.172 (0.187)	0.835(0.167)	−0.540	0.196
Years of education	−0.059(0.182)	0.942(0.172)	−0.415	0.298
Ln(income)	−0.251(0.081) ***	0.780(0.063) ***	−0.404	−0.097
Age	−0.00001(0.00001)	0.998(0.009)	−0.0003	8.94×10^{-6}
Gender	0.281(0.177)	1.328(0.241)	−0.066	0.628
Experience	−0.00001(0.007)	1.002(0.007)	−0.00003	0.00001
Party membership	−0.453(0.257) *	0.636(0.167) *	−0.960	0.053
Marriage	0.184(0.240)	1.230(0.323)	−0.287	0.655
Employment type	0.102 (0.150)	1.078(0.995)	−0.193	0.396
Father's years of education	−0.006(0.018)	0.995(0.018)	−0.042	0.029
Constant	1.842(2.302)	6.704(15.607)	−2.670	6.356
N		926		

Standard errors in parentheses. *** $p < 0.01$, * $p < 0.1$.

Table 8. Results of the multinomial logistic model (high-level social status compared to average-level social status).

	Subjective Social Status			
	Coef.	Odds Ratio	Lower Bound	Upper Bound
Education	−0.966(0.506) **	0.357(0.185) **	−1.958	0.026
Years of education	−0.088(0.392)	0.925(0.364)	−0.856	0.680
Ln(income)	−0.083(0.166)	0.894(0.155)	−0.409	0.243
Age	−0.0002(0.00001)	0.984(0.021)	−0.0004	3.99×10^{-6}
Gender	−0.045(0.372)	0.898(0.335)	−0.774	0.684
Experience	0.037(0.124) ***	1.049(0.018) ***	0.013	0.062
Party membership	−1.012(0.628)	0.377(0.238)	−2.244	0.220
Marriage	0.058(0.572)	1.222(0.753)	−1.62	1.178
Employment type	−0.587(0.314) **	0.532(0.170) **	−1.203	0.029
Father's years of education	0.003(0.038)	1.013(0.038)	−0.006	0.078
Constant	−0.579(4.943)	1.090(5.482)	−10.269	9.110
N		926		

Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$.

3.5. Robustness Checks

The above logistic regression models partially disregarded the endogenous issue brought on by the interaction between the sample selection and variables, which may have led to biased estimate results. Therefore, we conducted an additional robustness check using trimmed samples (trimmed by 1%). Tables 9–12 presents the results from the trimmed samples. The estimates were largely consistent with the above estimates presented in Tables 5–8, demonstrating that the research results were robust.

Table 9. Results of the OLS model.

	Ln (Income)				
	Overall	Blue-Collar Low-Skilled	Blue-Collar Highly Skilled	White-Collar Low-Skilled	White-Collar Highly Skilled
Education	0.154(0.062) ***	−0.172(0.276)	0.320(0.155) ***	0.217(0.097) **	0.154(0.169)
Years of education	−0.011(0.074)	0.005(0.169)	0.244(0.191) *	0.001(0.108)	−0.034(0.183)
Gender	0.343(0.069) ***	0.312(0.13) *	0.333(0.185) ***	0.342(0.093) ***	0.607(0.179) ***
Experience	−0.005(0.003) *	−0.009(0.005)	0.002(0.006)	0.004(0.006)	−0.01(0.006)
Party membership	0.032(0.07)	0.172(0.201)	−0.004(0.263)	0.002(0.164)	−0.235(0.206)
Marriage	0.26(0.138) *	0.754(0.357) **	0.173(0.206)	0.164(0.111)	0.379(0.29) *
Employment type	−0.519(0.064) ***	−0.406(0.368)	−0.523(0.176) ***	−0.168(0.142)	−0.435(0.196) ***
Father’s years of education	0.026(0.008) ***	0.014(0.017)	0.039(0.018) ***	0.031(0.011) ***	0.018(0.019)
Social status	0.017(0.021)	0.003(0.037)	0.013(0.040)	0.067(0.027) ***	−0.022(0.051)
Training	0.37(0.07) ***	0.383(0.261)	0.095(0.235)	0.385(0.131) **	0.197(0.155)
Constant	10.282(0.9) ***	9.489(2.131) ***	7.235(2.312) ***	9.646(1.292) ***	10.658(2.151) ***
N	922	286	165	348	120
R-squared	0.157	0.059	0.146	0.104	0.145
Number of province	27	25	22	25	24
Province FE	YES	YES	YES	YES	YES

Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 10. Results of the binary logit model.

	Employment Stability			
	Coef.	Odds Ratio	Lower Bound	95% CI Upper Bound
Education	0.541(0.292) *	1.718(0.502) **	−0.032	1.114
Years of education	−0.266(0.313)	0.745(0.233)	−0.879	0.347
Ln(income)	0.663(0.207) ***	1.949(0.404) ***	0.258	1.067
Age	−0.022(0.014)	0.979(0.014)	−0.049	0.005
Gender	−0.035(0.311)	0.931(0.291)	−0.645	0.574
Experience	−0.056(0.017) ***	0.946(0.016) ***	−0.089	−0.022
Party membership	−0.718(0.455)	0.474(0.216)	−1.609	0.174
Marriage	0.25(0.363)	1.247(0.457)	−0.461	0.961
Employment type	−3.519(0.523) ***	0.029(0.015) ***	−4.544	−2.494
Father’s years of education	0.06(0.033) **	1.063(0.033) **	−0.003	0.124
Social status	−0.11(0.081)	0.896(0.073)	−0.269	0.049
Training	−0.076(0.339)	0.926(0.314)	−0.741	0.588
Constant	3.557(4.414)	35.062(154.747)	−5.383	11.887
N		413		

Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 11. Results of the multinomial logistic model (low-level social status compared to average-level social status).

	Subjective Social Status			
	Coef.	Odds Ratio	Lower Bound	95% CI Upper Bound
Education	−0.195 (0.198)	−0.195(0.199)	−0.584	0.195
Years of education	−0.051(0.183)	−0.051(0.183)	−0.409	0.308
Ln(income)	−0.254(0.082) ***	−0.254(0.082) ***	−0.415	−0.094
Age	−0.003(0.009)	−0.003(0.009)	−0.019	0.014
Gender	0.276(0.180)	0.276(0.18)	−0.078	0.629
Experience	−0.002(0.007)	0.002(0.007)	−0.013	0.016

Table 11. *Cont.*

	Subjective Social Status			
	Coef.	Odds Ratio	Lower Bound	95% CI Upper Bound
Party membership	−0.457(0.263) *	−0.457(0.263) *	−0.972	0.059
Marriage	0.213(0.262)	0.213(0.262)	−0.300	0.725
Employment type	0.098 (0.164)	0.098(0.164)	−0.224	0.420
Father’s years of education	−0.004(0.019)	−0.004(0.019)	−0.041	0.033
Constant	1.870(2.331)	1.87(2.331)	−2.700	6.439
N			918	

Standard errors in parentheses. *** $p < 0.01$, * $p < 0.1$.

Table 12. Results of the multinomial logistic model (high-level social status compared to average-level social status).

	Subjective Social Status			
	Coef.	Odds Ratio	Lower Bound	95% CI Upper Bound
Education	−1.088(0.515) **	−1.088(0.515) **	−2.097	−0.080
Years of education	−0.060(0.394)	−0.06(0.394)	−0.832	0.711
Ln(income)	−0.123(0.176)	−0.123(0.176)	−0.467	0.221
Age	−0.022(0.021)	−0.022(0.021)	−0.063	0.019
Gender	−0.026(0.373)	−0.026(0.373)	−0.758	0.706
Experience	0.049(0.017) ***	0.049(0.017) ***	0.016	0.082
Party membership	−0.986(0.631)	−0.986(0.631)	−2.223	0.251
Marriage	0.295(0.612)	0.295(0.612)	−0.905	1.496
Employment type	−0.611(0.315) **	−0.611(0.315) *	−1.223	0.006
Father’s years of education	0.010(0.039)	0.01(0.039)	−0.066	0.087
Constant	0.120(5.055)	0.12(5.055)	−9.787	10.027
N			918	

Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

4. Discussion

Based on CLDS data, we compared the labour market results of two types of upper-secondary education (the vocational and general pathways) in rural China in terms of the graduates’ income and employment stability. We also compared their subjective social status. This produced a number of noteworthy findings.

Firstly, the different types of upper-secondary education led to discrepancies in graduates’ incomes in rural China, with graduates of the vocational route benefiting from an economic advantage. This was similar to the results generated by a study in Switzerland, indicating higher wages for vocational graduates compared with academic ones [42]. However, this contradicted the empirical results concerning graduates at the post-secondary level in urban China, which showed that post-secondary academic graduates enjoyed more advanced labour market positions than their vocational counterparts [57,58]. It was evident that in rural China, compared with the general/academic pathway, the upper-secondary vocational pathway improved students’ future incomes, especially as blue-collar highly skilled workers. Secondly, the results of this research also demonstrated that, in comparison to the jobs of academic graduates, the jobs held by upper-secondary vocational graduates involved a higher level of security. The specific human capital acquired by vocational graduates could enable them to immediately apply their practical skills to the workplace and benefit from a higher level of employment stability [41]. Finally, this research showed that even though graduating from upper-secondary vocational education could increase one’s income and employment stability, it still led to a lower subjective social status compared with experiencing a general education. This concurred with the findings of qualitative studies showing that vocational education is considered inferior or a

poor second choice [11,12]. It was apparent that these societal sentiments about the low standing of vocational education and its associated occupations were still pervasive. Those graduating from the vocational route perceived themselves to be at a lower level of the social hierarchy compared with those in the general route.

Apart from the education factor, it is evident that gender relations also have a significantly impact on the income disparity in rural China. Since the beginning of the reform era, marketisation has increased gender income inequality in China's labour market [59]. Based on China Household Income Project (CHIP) data, Kim argued that female workers were in a disadvantage position in terms of human capital accumulation when compared with male workers [60]. The gender gap in earnings and employment remains alarmingly apparent and requires that policymakers take gender factors into account.

This paper showed that upper-secondary vocational education is a pathway with significant potential and value in rural China, yet those who benefited from it did not perceive their social position as favourable. The perceived undesirable social status among vocational graduates could potentially lead to the even lower attractiveness of vocational education [61]. The Chinese government is urged to highlight the goal of promoting the parity of esteem between the vocational and academic routes, positioning vocational learning as a beneficial alternative that is crucial to all students. Rather than being marginalised as an 'inferior option' [26], vocational education should be collaboratively promoted by multiple actors, including policymakers, industry advisors, employers, educators, and community workers.

5. Conclusions

The aim of this research was to explore whether VET at the upper-secondary level leads to better labour market outcomes than academic education in Chinese rural areas. Drawing data from the China Labour-force Dynamic Survey (CLDS), we also quantitatively investigated the social prestige of vocational and academic education among rural residents by comparing the level of subjective social status of those who graduated from upper-secondary vocational schools and general academic schools. Admittedly, for this paper, we used a rather small sample of rural graduates with upper-secondary education from the CLDS 2018, which introduced a number of limitations. It prevented our study from investigating other factors influencing rural graduates' labour market results. It is possible that unobserved variables existed that may have led to biases in our casual inferences. Nonetheless, this paper represents a contribution to the literature on the labour market outcomes of upper-secondary graduates in rural China, as well as their subjective social status. In recent years, the Chinese government has put increased emphasis on vocational education, which could produce the 'skill-oriented talents' that the Chinese economy desperately requires [36]. In particular, this study demonstrated that the *National Strategic Plan for Rural Revitalisation*, which promotes vocational education in rural areas, could potentially benefit rural residents financially and possibly bring more job security for rural youth. However, cultural change is needed to ensure the elevation of the standing of vocational education and promote the worthiness, effectiveness, and capabilities that vocational graduates possess.

Author Contributions: Conceptualization, G.W.; methodology, X.Z.; formal analysis, X.Z.; investigation, X.Z. and R.X.; writing—original draft preparation, G.W.; writing—review and editing, G.W.; visualization, X.Z.; supervision, G.W. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data reported in this paper are available on reasonable request to the corresponding author.

Acknowledgments: We are grateful to Xinqiao Liu for his support.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Harvey, D. *A Brief History of Neoliberalism*; Oxford University Press: New York, NY, USA, 2005.
2. Wan, Y. Capacity or money? Why students choose to drop out of junior high school in rural northeast China. *Educ. Rev.* **2021**, *74*, 1264–1281. [[CrossRef](#)]
3. Tucker, M.S. *Chinese Lessons: Shanghai's Rise to the Top of the PISA League Tables*; National Center on Education and the Economy: Washington, DC, USA, 2014.
4. Allais, S. Will Skills Save Us? Rethinking the Relationships between Vocational Education, Skills Development Policies, and Social Policy in South Africa. *Int. J. Educ. Dev.* **2012**, *32*, 632–642. [[CrossRef](#)]
5. State Council. Implementation Plan on National Vocational Education Reform. 2019. Available online: http://www.gov.cn/zhengce/content/2019-02/13/content_5365341.htm (accessed on 12 January 2023).
6. Eichhorst, W.; Rodriguez-Planas, N.; Schmidl, R.; Zimmermann, K. A Roadmap to Vocational Education and Training Systems Around the World. *IZA Discuss. Pap.* **2012**, *68*, 314–337. [[CrossRef](#)]
7. Psacharopoulos, G. Child Labor versus Educational Attainment Some Evidence from Latin America. *J. Popul. Econ.* **1997**, *10*, 377–386. [[CrossRef](#)] [[PubMed](#)]
8. State Council. *The National Strategic Plan for Rural Revitalisation*; State Council: Beijing, China, 2011.
9. Rözer, J.J.; Bol, T. Labour Market Effects of General and Vocational Education over the Life-Cycle and across Time: Accounting for Age, Period, and Cohort Effects. *Eur. Sociol. Rev.* **2019**, *35*, 701–717. [[CrossRef](#)]
10. Watson, L. *Making the Grade: Benchmarking Performance in Australian Schooling*; Graduate Program in Public Policy, Australian National University: Canberra, Australia, 1994.
11. Woronov, T. *Class Work: Vocational Schools and China's Urban Youth*; Stanford University Press: Stanford, CA, USA, 2015.
12. Hansen, M.H.; Woronov, T.E. Demanding and Resisting Vocational Education: A Comparative Study of Schools in Rural and Urban China. *Comp. Educ.* **2013**, *49*, 242–259. [[CrossRef](#)]
13. Min, W.; Chang, F.; Wang, H. The non-economic factors contributing to junior high school student dropout in rural areas. *Educ. Econ.* **2016**, *5*, 72–77. (In Chinese)
14. Luo, R.; Shi, Y.; Zhang, L.; Liu, C.; Rozelle, S.; Sharbono, B. Malnutrition in China's rural boarding schools: The case of primary schools in Shaanxi province. *Asia Pac. J. Educ.* **2006**, *29*, 481–501. [[CrossRef](#)]
15. Liu, C.; Zhang, L.; Luo, R.; Sharbono, B.; Rozelle, S.; Shi, Y. Development challenges, tuition barriers, and high school education in China. *Asia Pac. J. Educ.* **2009**, *29*, 503–520. [[CrossRef](#)]
16. Shan, X.; Liu, Z.; Li, L. Vocational training for Liushou women in rural China: Development by design. *J. Vocat. Educ. Train.* **2015**, *67*, 11–25. [[CrossRef](#)]
17. Ministry of Education. Compulsory Education Law of the People's Republic of China. 1986. Available online: <http://www.hljcourt.gov.cn/lawdb/show.php?fid=5136> (accessed on 14 January 2023).
18. Wang, A.; Guo, D. Technical and vocational education in China: Enrolment and socioeconomic status. *J. Vocat. Educ. Train.* **2019**, *71*, 538–555. [[CrossRef](#)]
19. Hu, A. Proliferation of Educational Credentials, Changing Economic Returns, and Rising Occupational Education Requirements: Evidence in Urban China from 2003 to 2008. *Int. Sociol.* **2013**, *28*, 448–466. [[CrossRef](#)]
20. Hu, A.; Vargas, N. Economic Consequences of Horizontal Stratification in Postsecondary Education: Evidence from Urban China. *High Educ.* **2015**, *70*, 337–358. [[CrossRef](#)]
21. Ministry of Education. *The Guideline on Promoting Vocational Education in Poverty Alleviation in Deeply Impoverished Areas*; Ministry of Education: Beijing, China, 2019. Available online: http://www.moe.gov.cn/srcsite/A07/s7055/201910/t20191030_406100.html (accessed on 13 January 2023).
22. Ministry of Education. *The Guideline for Popularizing High School Education (2017–2020)*; Ministry of Education: Beijing, China, 2017. Available online: http://www.moe.gov.cn/srcsite/A06/s7053/201704/t20170406_301981.html (accessed on 13 January 2023).
23. Ministry of Education. National Educational Development Bulletin in 2019. 2020. Available online: http://www.moe.gov.cn/jyb_sjzl/sjzl_fztjgb/202005/t20200520_456751.html (accessed on 13 January 2023).
24. Kane, J.; Rouse, C. Labor-Market Returns to Two- and Four-Year College. *Am. Econ. Rev.* **1995**, *85*, 600–614.
25. Bishop, J.; Mane, F. The Impacts of career-technical education on high school labor market success. *Econ. Educ. Rev.* **2004**, *23*, 381–402. [[CrossRef](#)]
26. Ling, M. Bad Students Go to Vocational Schools!": Education, Social Reproduction and Migrant Youth in Urban China. *China J.* **2015**, *73*, 108–131. [[CrossRef](#)]
27. Kipnis, A.B. *Governing Educational Desire: Culture, Politics, and Schooling in China*; University of Chicago Press: Chicago, IL, USA, 2011.
28. Becker, G.S. *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education*; Columbia University Press: New York, NY, USA, 1994.
29. Thøgersen, S. *Secondary Education in China after Mao: Reform and Social Conflict*; Aarhus University Press: Aarhus, Denmark, 1990.

30. Unger, J. *Education Under Mao: Class and Competition in Canton Schools, 1960–1980*; Columbia University Press: New York, NY, USA, 1982.
31. Zhang, N. The Choice of Vocational and Technical Education for Senior Secondary Students in Urban China. *Int. J. Learn.* **2008**, *15*, 205–217.
32. Wei, W.; Bai, Y. Does vocational education have labour market advantage? *Soc. Dev. Res.* **2016**, *7*, 210–243.
33. State Council. The Guidelines of Promoting the Cooperation of Vocational School and Enterprise. Available online: http://www.gov.cn/zhengce/zhengceku/2018-12/31/content_5434083.htm (accessed on 13 January 2023).
34. Xiong, J. Understanding Higher Vocational Education in China: Vocationalism vs. Confucianism. *Front. Educ. China* **2011**, *6*, 495–520. [[CrossRef](#)]
35. Munch, J.; Risler, M. *Vocational Training in the People's Republic of China. Structures, Problems, and Recommendations*; European Community Information Service: Washington, DC, USA, 1987.
36. State Council. The 19th National Congress Report. 2017. Available online: http://cpc.people.com.cn/19th/n1/2017/1018/c414305-29595155.html#/hisx_mbdx (accessed on 13 January 2023).
37. Stewart, V. *Made in China: Challenge and Innovation in China's Vocational Education and Training System. International Comparative Study of Leading Vocational Education Systems*; National Center on Education and the Economy: Washington, DC, USA, 2015.
38. Klorer, E.; Stepan, M. Off Target: China's Vocational Education and Training System Threatens the Country's Rise to Industrial Superpower Status. *Mercat. Inst. China Stud.* **2015**, *24*.
39. State Council. Plans on Deepening the Integration of Industry and Vocational Education. Available online: http://www.gov.cn/zhengce/content/2017-12/19/content_5248564.htm (accessed on 13 January 2023).
40. Gimeno, J.; Folta, T.; Cooper, A.; Woo, C. Survival of the Fittest? Entrepreneurial Human Capital and the Persistence of Underperforming Firms Author(s). *Adm. Sci. Q.* **1997**, *42*, 198–230. [[CrossRef](#)]
41. Kambourov, G.; Manovskii, I. Occupational Specificity of Human Capital. *Int. Econ. Rev.* **2009**, *50*, 63–115. [[CrossRef](#)]
42. Backes-Gellner, U.; Geel, R. A Comparison of Career Success between Graduates of Vocational and Academic Tertiary Education. *Oxf. Rev. Educ.* **2014**, *40*, 266–291. [[CrossRef](#)]
43. Wright, E.O. *Approaches to Class Analysis*; Cambridge University Press: Cambridge, UK, 2005.
44. Parkin, F. System Contradiction and Political Transformation. *Eur. J. Sociol.* **1972**, *1*, 45–62. [[CrossRef](#)]
45. Scherer, S. Patterns of Labour Market Entry—Long Wait or Career Instability? An Empirical Comparison of Italy, Great Britain and West Germany. *Eur. Sociol. Rev.* **2005**, *21*, 427–440. [[CrossRef](#)]
46. Muller, G. Education and Youth Integration into European Labour Markets. *Int. J. Contemp. Sociol.* **2005**, *46*, 461–485. [[CrossRef](#)]
47. Noelke, C.; Gebel, M.; Kogan, I. Uniform Inequalities: Institutional Differentiation and the Transition from Higher Education to Work in Post-Socialist Central and Eastern Europe. *Eur. Sociol. Rev.* **2012**, *28*, 704–716. [[CrossRef](#)]
48. Roksa, J.; Levey, T. What Can You Do with That Degree? College Major and Occupational Status of College Graduates over Time. *Soc. Forces* **2010**, *89*, 389–415. [[CrossRef](#)]
49. Brunello, G.; Rocco, L. The Labor Market Effects of Academic and Vocational Education over the Life Cycle: Evidence Based on a British Cohort. *J. Hum. Cap.* **2017**, *11*, 106–166. [[CrossRef](#)]
50. Wang, F.; Zhang, C. Housing differentiation and subjective social status of Chinese urban homeowners: Evidence from CLDS. *Hous. Stud.* **2021**, *36*, 567–591. [[CrossRef](#)]
51. Hessels, J.; Arampatzi, E.; van der Zwan, P.; Burger, M. Life Satisfaction and Self-Employment in Different Types of Occupations. *Appl. Econ. Lett.* **2018**, *25*, 734–740. [[CrossRef](#)]
52. Olsthoorn, M. Measuring Precarious Employment: A Proposal for Two Indicators of Precarious Employment Based on Set-Theory and Tested with Dutch Labor Market-Data. *Soc. Indic. Res.* **2014**, *119*, 421–441. [[CrossRef](#)]
53. García-Pérez, C.; Prieto-Alaiz, M.; Simón, H. A New Multidimensional Approach to Measuring Precarious Employment. *Soc. Indic. Res.* **2017**, *134*, 437–454. [[CrossRef](#)]
54. Adler, N.E.; Epel, E.S.; Castellazzo, G.; Ickovics, J.R. Relationship of Subjective and Objective Social Status with Psychological and Physiological Functioning: Preliminary Data in Healthy, White Women. *Health Psychol.* **2000**, *19*, 586–592. [[CrossRef](#)] [[PubMed](#)]
55. Nielsen, F.; Roos, J.M.; Combs, R.M. Clues of Subjective Social Status among Young Adults. *Soc. Sci. Res.* **2015**, *52*, 370–388. [[CrossRef](#)]
56. Mincer, J. *Schooling, Experience, and Earnings*; National Bureau of Economic Research, Inc.: New York, NY, USA, 1974.
57. Wang, G.; Wang, Z. Vocational Education: A Poor Second Choice? A Comparison of the Labour Market Outcomes of Academic and Vocational Graduates in China. *Oxf. Rev. Educ.* **2022**, 1–20. [[CrossRef](#)]
58. Ding, X. *An Analysis of the Employment of Secondary Vocational Education Graduates in Urban China*; Bulgarian Comparative Education Society: Sofia, Bulgaria, 2014.
59. He, G.; Wu, X. Marketization, occupational segregation, and gender earnings inequality in urban China. *Soc. Sci. Res.* **2017**, *65*, 96–111. [[CrossRef](#)] [[PubMed](#)]

60. Kim, J. Gender difference in employment and income in China's labor market. *J. East Asian Aff.* **2013**, *27*, 31–53.
61. Hao, T.; Pilz, M. Attractiveness of VET in China: A study on secondary vocational students and their parents. *J. Educ. Work* **2021**, *34*, 472–487. [[CrossRef](#)]

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.