

The Impact in Economy of the Expansion of the Proportion of the General Job Diversion in the Secondary Examination

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Abstract: With the increase of the proportion of general and vocational streams in the secondary school examination, more and more secondary school students are facing the status quo of attending vocational high schools after graduation. People's attention to vocational high schools is increasing day by day. The general-vocational streaming will affect the professional ratio of graduates and the corresponding knowledge and skills in many aspects. Therefore, based on the economic sub-provincial data for five years since 2018, this study uses a panel regression model to study the impact of universal-job diversion on the economy. The economic progress indicators selected in this paper are disposable income per capita and gross domestic product per capita. It is found that the increase in the proportion of universal job streaming has a significant positive effect on the gross domestic product per capita, and also has a significant positive effect on the disposable income per capita. It is of great significance for China's stable and rapid progress to find the most suitable ratio for China in the course of progress by continuously exploring the influence of the ratio of universal job sharing on the economy and society.

Keywords: panel regression model, branching system, secondary school diversion, national economic level

1. Introduction

China has always been a country with a branch system as its main educational system, that is, all students are enrolled in primary school at the prescribed age, and are then promoted to junior high school, at the end of which they choose to enrol in vocational high school or ordinary high school according to their own results in the secondary school examination and other aspects. Upon graduation from vocational high school, students directly enter into vocational technical jobs, while in general high school they have the opportunity to continue their studies at university.

During this procedure, the ratio of enrolment in ordinary senior high schools to enrolment in vocational senior high schools is known as the General-Vocational Streaming Ratio in the secondary examination. In fact, since the resumption of the secondary school examination in 1977, the diversion ratio for the secondary school examination has been sustained at 5:5. During this period, the country needed skilled talents as well as literacy elimination. As a result, this policy was maintained for 18 years. Until 1995, when the GVSR was revised to 3:7, and it has been fluctuating between 2:8 and 3:7, the change in this figure has mainly caused by the enrollment expansion of ordinary high schools [1].

Time to 2021, a Notice of the General Office of the Ministry of Education on Doing a Good Job of Enrolling Students in Secondary Vocational Schools in 2021 was published, spelling out three major reforms regarding the secondary school exams: firstly, the enrolment ratio between vocational secondary schools and general high schools is mandatorily required to be 5:5; at the same time, all schools and institutions are prohibited from enrolling students who repeat the third year of junior high school. Finally, those who do not reach the standard in the secondary school examination will have to continue their studies in vocational and technical schools [2].

Since then, the general and vocational split-six ratio has reverted back to the stringent level of 5:5. The publication of the policy has caused anxiety among most people, the brunt of which is borne by the candidates and parents who will participate in the Secondary School Certificate Examination (SSCE) in 2021, while teachers in junior secondary schools are also facing tremendous pressure. The introduction of the policy means that a large proportion of students will lose the opportunity to study in tertiary institutions [3]. Then, why should the ratio of general and vocational streaming be raised again in 2021. The same as in 1977, in today's rapidly advancing technology, too many people are going into progress positions with a corresponding lack of skilled people. Increasing the output of skilled personnel and allowing a balanced progress of the industrial structure are prerequisites for steady progress in the age of technology. At the same time, many students lack the ability to learn but have excellent hands-on skills. Allowing such students to learn technology and optimise the talent structure is also a major boost to economic progress [4].

2. Document Overview

In terms of the impact of the expansion of the proportion of the general job diversion in the secondary examination, many scholars have conducted a series of studies since 2013, using empirical analysis, qualitative analysis and regression analysis, based on the theory of the return on investment in education, human resources theory and other aspects of empirical analysis. Before 2018, most of the scholars based on the provincial data of 31 provinces across the country, based on the data analysis, as well as a variety of questionnaires have reached the conclusion tends to the conclusion that the expansion of the proportion of the general and vocational diversion of the middle school examination does not have a significant impact on the progress of China's economy [5]. However, this conclusion began to change after 2018, and by 2022, scholars generally believe that the expansion of the proportion of the general job stream in the secondary examination has an extremely significant impact on China's economic progress. This may be due to the fact that since 2018, China has begun to rapidly advance its streaming policy, bringing the streaming ratio to an average of 5:5.

At the same time, there have been analyses of the impact of the expansion of the ratio of the general and vocational streams in the secondary school examinations on the per capita consumption level, the well-being index, and other data. From the conclusion, the expansion of the streaming ratio has a relatively positive impact on all aspects of national life [6]. However, in the questionnaire investigation, most of the students and parents expressed doubts and uneasiness about the expansion of the streaming ratio, and similarly, some secondary school teachers expressed their worries about the policy change.

Some scholars, looking at the separate provinces where they live, have also made more detailed and targeted sub-city data. Such investigations reach different conclusions depending on the province.

Some provinces are more inclined to technical talents to play, it is obvious to conclude that the expansion of the proportion of secondary school general vocational diversion has a significant positive impact on the economy [7]. However, some provinces, such as the coastal cities, has been less demand for vocational talents, the corresponding school-enterprise joint policy has not been a

large number of benefits to implement, and thus does not have the advantages of vocational education progress, and even the loss of local vocational high school graduates, graduates chose to go to more suitable for vocational progress of the city without the promotion of the local economy.

The controversy because of the geographical problem can only be explained by the national data, so after that, more scholars began to discuss based on the human resources theory, based on the 31 provinces of the country by province, and got relatively stable results. In the analysis of the results of the study of provincial data, it can be seen that: with the increasing proportion of the general and vocational streams in the secondary school examination, that is, the expansion of the number of students enrolled in vocational high schools, the Chinese economy has indeed produced a significant positive progress.

On the whole, the increase in the proportion of general and vocational streams in the SSPA has both advantages and disadvantages for China's economic progress. Although the ratio is slowly increasing, from GDP, per capita disposable income, consumption level and other intuitive data have a significant increase, but there are still many other factors, such as technological advances, epidemics and so on cannot be completely ruled out. Similarly, students, parents and teachers are mostly pessimistic and nervous about the increase in the proportion of streaming. Whether this nervousness will affect the students' learning state and whether the streaming of students from the secondary school examination onwards will result in some slow, playful but smart students being put into vocational education prematurely before they understand the learning methods, thus leading to the burying of talents is still a question worth exploring further.

However, as far as the current results are concerned, the expansion of the ratio of general and vocational streams in the SSPA has significant positive effects on all aspects of the economy and life.

3. Methods

3.1. Research Hypothesis

The expansion of the proportion of universal job sharing does not have a significant impact on China's economic progress.

3.2. Statistics

In terms of data, this paper has collected the enrolment of vocational high schools over the five years since 2018, the number of current.

Whether or not there is a 5:5 ratio of general employment, provincial data on per capita disposable income of the entire population over the past five years, and per capita gross domestic product of the 31 provinces over the past five years. The source of the data is the National Bureau of Statistics.

4. Results

4.1. Descriptive Statistics

Descriptive statistics of variables were shown in Table 1.

Table 1: Descriptive statistics of variables.

sample	average	standard deviation	maximum	minimum
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Table 1: (continued).

Vocational high school enrollment	155	149962.9032	112900.0252	442500	9700
GDP per capita	155	33887.23097	27597.3502	129118.6	1548.4
Per capita disposable income	155	31455.69355	12649.91077	78027	17286

The present study collected data on the number of students enrolled in vocational high schools in a total of 155 samples from 31 provinces over a five-year period starting from 2018, including whether or not the 5:5 ratio of general and vocational streaming has been implemented in the local area, and the per capita gross domestic product (GDP) of the per capita disposable income of the entire population of the individual provinces over the five-year period. The source of the data is the National Bureau of Statistics.

4.2. Empirical Model and Theoretical Model

The present study utilized panel regression model to analyze relation between variables. For human capital theory, that is, human capital is an important component of the factors of production. As long as effective investment is made in this factor, the overall quality of trained labour can be improved, either indirectly or directly, thereby promoting the progress of science and technology and sustainable economic growth [8].

The investment in education is crucial to human capital, and in the progress of national economy, the quality of population is more important than the number of population, and the improvement of the quality of population must rely on education; the role of human capital is becoming more and more important to economic growth, and the return on investment in human capital is higher than the investment in physical capital; an important way to acquire human capital is to participate in school education and on-the-job training, which can be divided into general training and special training. On-the-job training is divided into general training and special training [9].

The emergence of human capital theory has prompted the State, society and individuals to pay constant attention to education, and has had a profound impact on the real society, greatly promoting the overall progress of education, so that the quality of the labour force has been improved, which in turn greatly promotes the social and scientific and technological forces of innovation and progress [10].

4.3. Processing the Data

Panel regression models usually involve three models, namely the mixed Pool model, the fixed effects (FE) model and the random effects (RE) model.

Firstly: F-test was used for comparison of FE model and Pool model selection. p-value less than 0.05 means that FE model is better and vice versa Pool model is used;

Second: BP test is used for comparison of RE model and Pool model selection, p-value less than 0.05 means RE model is better and vice versa Pool model is used;

Third: Hausman test was used for comparison of FE model and RE model selection. p-value less than 0.05 means that FE model is better and vice versa RE model was used.

By conducting a test first with enrolment as the explanatory variable and disposable income per capita as the explanatory variable, it can be seen that:

The F-test presents significance at 5% level $F(19,59)=95.404, p=0.000<0.05$, implying that the FE model is superior relative to the Pool model.

The BP test presents significance at the 5% level $\chi^2(1)=100.914, p=0.000<0.05$, implying that the RE model is superior relative to the Pool model.

Hausman's test presents significance at 5% level $\chi^2(1)=41.985, p=0.000<0.05$, implying that the FE model is superior relative to the RE model.

Combining the above analyses, the FE model was used as the final result.

Panel data can be viewed as a mixture of time series data and cross-section data, which are data obtained from repeated observations of individuals in the cross-section at different time points. Therefore, we first enter the investigation tables and transform the character data into numerical data recognisable by stata [11].

4.3.1.State Analysis about Per Capita Disposable Income

Results of the analysis about per capita disposable income is shown in Table 2.

Table 2: Analysis about per capita disposable income.

Per capita disposable income	Coefficient	Std.err.	t	$P> t $	[95%conf. Interval]
Number of enrollments	.0486448	.0120686	4.03	0.000	.0246721 .0726175
Secondary school entrance examination streaming cons	4136.25	384.2382	10.76	0.000	3373.008 4899.492
	23126.72	1787.793	12.94	0.000	19575.49 26677.95

From chart State analyse about Per capita disposable income and State analyse about GDP per capita, there are two pieces of data that require special attention in the table. First, the data in the column $P>|t|$ represents the degree of influence of the independent variable on the dependent variable, and when the value is less than 0.05, the independent variable can be considered to have an extremely significant influence on the dependent variable. And the data in the column of Coefficient represents the value of the effect of the independent variable on the dependent variable. That is, the independent variable is raised by 1 unit, the dependent variable is raised by the number of units.

4.3.2.State Analyse about GDP Per Capita

Results of the analysis about per capita disposable income is shown in Table 2.

Table 3: Analysis about GDP per capita.

GDP per capita	Coefficient	Std.err.	t	$P> t $	[95%conf. Interval]
Number of enrollments	.0848469	.0178127	4.76	0.000	.0493641 .1201297

Table 3: (continued).

Secondary school entrance examination streaming _cons	4730.395	567.1212	8.34	0.000	3603.879	5856.912
	18762.21	2638.715	7.11	0.000	13520.72	24003.69

The results reveal that the p-value of the t-test, i.e. the column of $p > t$, is 0.000, which is less than 0.01. Therefore, whether or not to implement the 5:5 streaming of the secondary school examination and the enrolment of vocational high schools have an extremely significant effect on the gross domestic product per capita. At the same time, it also has an extremely significant effect on per capita disposable income.

5. Discussion

Detailed parsing leads to the conclusion that for each additional person enrolled in a vocational high school, the gross product per capita increases by \$0.0847, starting with a standard error of \$0.178. For per capita disposable income, there will be a corresponding increase of \$0.0486, with a standard error of \$0.012. Meanwhile, if the local community implements the 5:5 streaming of general jobs, the GDP per capita will be boosted by \$4,370.395, with a standard error of \$567.1212. And the per capita disposable income will be raised by \$4,136.25, with a standard error of \$384.2382.

Through the output of the panel regression model, it is easy to see that the increase in the ratio of the general streaming of the secondary school examination has an extremely significant positive impact on the economy, especially on per capita disposable income as well as per capita GDP. The increase from a diversion ratio of 3:7 to 5:5 resulted in an increase in GDP per capita of about \$4,370 and in disposable income per capita of about \$4,136.

The increase in the proportion of students diverted from the secondary examination, that is, the increase in the number of students enrolled in vocational high schools, has produced an increase in the proportion of skilled personnel. This group of students learns the appropriate professional skills in vocational high schools and can enter the workforce directly after graduation, increasing productivity. Fewer resources and less time are needed than entering university for further study after high school graduation or going through a period of training before entering the workforce after graduating from a regular high school, which increases the productivity of resources while saving money. At the same time, some of the skilled people who enter vocational high school is difficult to quiet down, than the mode of education is more adapted to the work routine, which also makes a certain increase in productivity.

With regard to the increase in the ratio of streaming between general and vocational streams, students should pay more attention to the HKCEE, so as to reduce the situation of slow-moving talents being buried because of premature streaming. However, there is no need to be excessively worried because the importance attached by the community to both vocational and general senior secondary schools has been increasing, and students' mindset and learning should not be affected by the worry about streaming in the HKCEE. Teachers, on the other hand, should be quicker to accept and adapt or change the mode of education after the increase in the proportion of streaming, so as not to affect their own pace and lead students to find their own goals under the new system. Parents, on the other hand, should relax their mindset and guide their children appropriately, so as not to add too much pressure to their children after an intense study period. As for the Government, it should press ahead with the progress of the streaming of general education and vocational education in a step-by-step manner. At the same time, there may be ratios that are more conducive

to the economy than the 5:5 ratio. Therefore, while maintaining the existing ratio, the ratio should be increased and decreased on a pilot basis as appropriate, so as to find a ratio that is more suitable for the economy and social progress, and to promote the steady progress of society.

6. Conclusions

This study finds that the implementation of the 5:5 streaming of the secondary school examination has an extremely significant positive impact on China's economic progress, with a positive effect on GDP per capita and contributing to an increase in disposable income per capita. Therefore, the state should continue to implement the policy of 5/5 bifurcation of the secondary school examination and promote the linkage between vocational high schools and local enterprises to maintain the positive growth of investment and reporting in education. At the same time, it should slowly explore possible streaming ratios while maintaining the current impact. This is because in the first few years, the research on the 3/7 diversion ratio still shows the conclusion that the general-vocational diversion has a positive impact on China's economic progress. Perhaps a more appropriate ratio will be found in the future, which will have a great push on China's economic progress. And the graduates of vocational education will surely become important technical talents in China in the future, which will play an important role in China's social and economic progress. However, at the same time, there are many influencing variables in this study, such as the increase of GDP per capita, and the influence of other factors in addition to the ratio of general and vocational diversion, and in the future research, improving for this aspect may help to find the best diversion ratio.

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