Analysis on the Spatial Effect of Talent Supply of Vocational Education and Economic Growth of Tobacco Industry from the Perspective of Human Capital

Wei Wang, Professor
Yanan Yang, PhD Student
Ping Li, Associate Professor

Wei Wang, Professor, Lecture in Labor Economics, College of Public Finance and Administration, Harbin University of Commerce, Heilongjiang, Harbin, China. Yanan Yang, PhD Student, Lecture in Labor Economics, College of Public Finance and Administration, Harbin University of Commerce, Heilongjiang, Harbin, China. Ping Li, Associate Professor, Lecture in Labor Economics, College of Business, Quzhou University, Zhejiang, Quzhou,China.Correspondence: Yanan Yang; yynmie@163.com

Objectives: Human capital plays an important role in the economic growth of tobacco industry.Education is the direct way to form human capital. At the same time, vocational education is a part of the education system. Vocational education is mainly to cultivate skilled human capital. From the perspective of human capital, this paper studies the impact of talent supply of vocational education on tobacco economic growth. A combination of qualitative and quantitative analysis was used. This paper analyzes the current situation of talent supply of vocational education and tobacco economy in China. It also analyzes the correlation between talent supply of vocational education and tobacco economy. Based on the theoretical model of human capital economic growth. Establish the theoretical model of talent supply in vocational education and tobacco economic growth. Comprehensively consider the spatial interaction of economic growth. Using the spatial panel econometric model, this paper makes an empirical analysis on 29 provinces and cities in China. Use Geoda, MATLAB and other software for empirical calculation.The results show that the supply of vocational education talents and the growth of tobacco economy are on the rise. However, the regional distribution is uneven. And vocational education is positively correlated with tobacco economic growth.The empirical results show that the regional tobacco economic growth in China has negative spatial auto-correlation. Employment, lifetime number of vocational education and human capital level in the tobacco industry significantly promote the economic growth of the tobacco industry. The results provide a reference for the regulation of China's tobacco industry.

Key words: human capital; vocational education; tobacco economy; spatial effects

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Tobacco industry is an important tax source of China's economy.In 2020, the total amount of profits and taxes paid by China's tobacco was 1290.3 billion yuan, and the total amount of Finance paid

reached 1203.7 billion yuan. The total amount of taxes and profits and the total amount of Finance turned over have made positive contributions to the increase of national and local financial revenue and economic development. Although smoking is harmful to health, smokers seem to be open to it when formulating correct anti-smoking information and policies.[1] Among them, it is more common for college students to oppose participation activities than to support participation activities.[2] For the sustainable growth of tobacco economy, scientific and technological progress, the number of labor force and the improvement of economic system are indispensable and important factors. In order to make the above influencing factors reach a reasonable level, a certain amount and quality of human capital is a more critical factor. Education is an important way to form human capital. At the same time, vocational education is a kind of education system. Vocational education is mainly to cultivate skilled human capital. Vocational education can train professionals for the tobacco industry, provide intellectual support for the development of the tobacco industry, and then promote the economic growth of the tobacco industry.

At present, there are few studies on education and economic growth of tobacco industry. Because the tobacco industry is one of the main industries in China's economic development. Therefore, we can analyze the relationship between education and economic growth of tobacco industry from the perspective of the correlation between education and economic growth. In summary, there is a pluralistic linkage logic between vocational education and regional economy, but there are some problems in the linkage between vocational education and regional economy, such as disconnection, derailment and loss of measures.[3] Due to the active position of economic development, the development of vocational education will lag behind the economic development.[4] From the two aspects of scale structure and quality connotation, the matching between higher vocational education and economic development in China has an increasing trend.[5] Although the scale and quality of vocational education are beneficial to the economic growth of our country, the overall impact of vocational education quality is more significant.[6] The process of quality management of vocational education is the process of "forced" quality generation in regional economy and society.[7] In the structure of human capital investment, the greater the proportion of vocational education investment in the whole education investment, the higher the regional economic growth rate.[8] In terms of educational level, secondary vocational education can promote China's economic growth in a short time.[9] The relationship between higher vocational education and economic growth in the same period shows phased characteristics. China's vocational education also needs government regulation, in the institutional level, organization and specific strategies to strengthen the management and guidance of vocational education.[10] From the perspective of regional economic development, the gap between the western region and the eastern coastal developed region is mainly on the level of county economic development.[11] Where the level of economic development is moderate, the degree of impact of vocational education investment on the economy is the largest; where the level of economic development is high, the degree of impact of vocational education investment on the economy is the least.[12]In the process of urban-rural integration, vocational education and regional economy interact and restrict each other. The interaction between the two is a win-win and mutually beneficial development strategic model.[13]In term of research methods, scholars use various research methods to analyze the relationship between vocational education and economic growth. For example, Dennison and Madison algorithm.[14]Co-integration test, Granger causality test, generalized difference equation, etc.[15] Cobb Douglas production function, grey association theory.[16] Some scholars have put forward a theoretical model that vocational education promotes economic growth by promoting human capital accumulation and employment.[17]

In terms of research scope, it mainly analyzes the direct effect of vocational education on economy, but rarely considers the level of human capital. In terms of research methods, most of them focus on

regression analysis, but few consider it from the perspective of spatial correlation. Vocational education mainly trains high-efficiency and skilled human capital for the country. The difference of human capital level has different effects on the development of tobacco economy. Therefore, it is necessary to analyze the role of talent supply of vocational education on tobacco economy from the level of human capital. Taking 29 provinces and cities in China from 2006 to 2019 as the research object, this paper empirically analyzes the impact of vocational education talent supply on the economic growth of tobacco industry under the level of human capital in term of spatial correlation.

THE SITUATIONOFTHE SUPPLYOF VOCATIONAL EDUCATION TALENTSANDTHE PRESENT SITUATIONOFTOBACCO ECONOMIC GROWTH

The Situation of the Supply of Vocational Education Talents

The society pays more and more attention to vocational education, and the development of vocational education has made great progress, and the number of students and the potential of employment have been greatly improved. Figure 1 shows the development trend of the scale of students in vocational education schools in China from 2006 to 2019. Among them, the number of vocational education graduates in China increased from 4.8069 million in 2006 to 6.6801 million in 2019. The number of students in school increased from 19.2748 million in 2006 to 22.2047 million in 2019. Admissions increased from 6.4323 million to 8.0519 million.

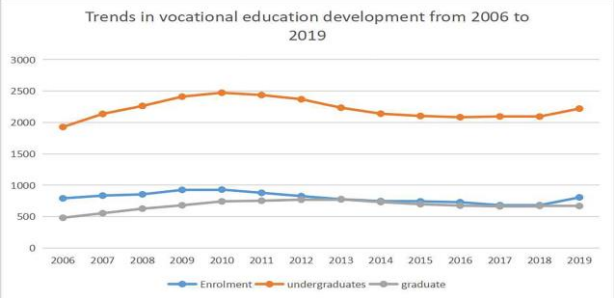

Figure 1 Trends in vocational education development from 2006 to 2019

Vocational education and economy in all regions develop simultaneously. Compared with 2006, the level of Vocational Education in 2019 has developed greatly, but the development level of each region is different. In 2006, Shandong Province had the largest graduates from vocational education, reaching 0.44 million. By 2019, the number of graduates will increase to 0.48 million. The province with the largest graduates from vocational education in 2019 is Henan Province, reaching 0.54 million. There are few vocational education graduates in Xizang, Qinghai and other regions. The vast majority of the population can only receive less education, resulting in the slow development of the education level in these provinces and regions.

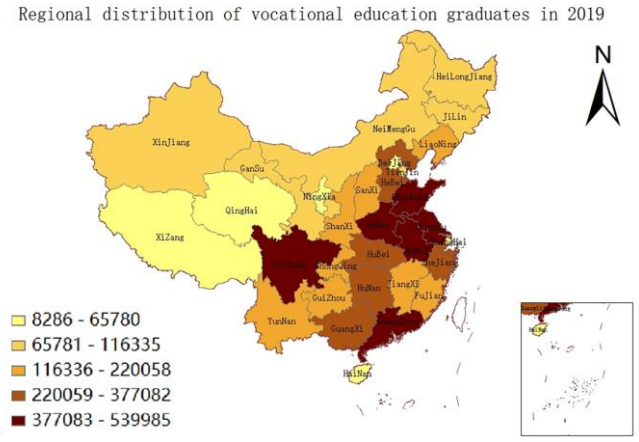

Figure 2 Regional distribution of vocational education graduates in 2019

Figure 2 shows the regional distribution of vocational education graduates in different regions of China in 2019. From the regional distribution map, we can more intuitively see the differences of vocational education levels in different regions of China. It shows that the education level in the eastern region is higher, while the education level in the western region is lower. There are still significant differences in vocational education among regions.

The Situation of Tobacco Economic Growth

Figure 3 shows the main business income trend of the tobacco industry from 2006 to 2019. As can be seen from Figure 3, the main business income of China's tobacco industry has shown an upward trend over the years. That is, the economic development level of tobacco industry has been continuously improved. The main business income of China's

tobacco industry increased from 317.424 billion in 2006 to 1113.497 billion in 2019. The main business income of the tobacco industry decreased slightly in 2016, and then continued to show a steady upward trend.

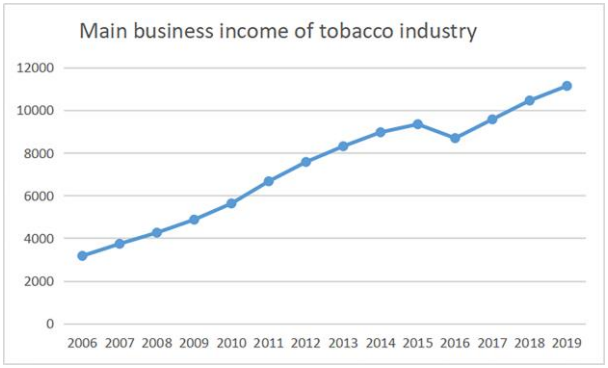

Figure 3 Trends in main business income of tobacco industry in China from 2006 to 2019

The main business income of the tobacco industry in all regions of the country has increased over time. And maintained a stable growth trend. However, regional differences are obvious.In 2006 and 2019, the main business income of the tobacco industry in Yunnan, Shanghai, Hunan and other provinces and cities ranked at a high level, which is an area with a high level of tobacco economic development. These areas are very rich in tobacco resources and have a rapid level of tobacco economic development. The main business income of the tobacco industry in Ningxia, Hainan and Xinjiang has been at a low level. There are still great differences in tobacco economy in various regions of the country.

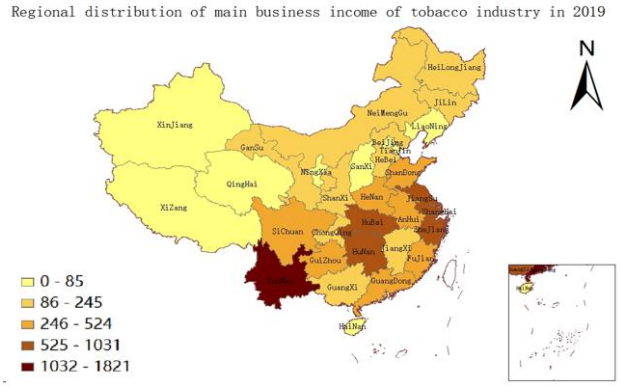

Figure 4 Regional distribution of main business income of China's tobacco industry in 2019

Figure 4 shows the main business income of the tobacco industry in various regions of the country in 2019. From the regional distribution map, we can more intuitively see the differences in the economic development level of tobacco industry in various regions of China. It shows that the economic level of the eastern region is high, while the economic level of the western region is low. There are still significant differences in the economic development level of tobacco industry in various regions.

An Analysis of the Correlation Between Vocational Education Talent Supply and Tobacco Economic Growth

This paper mainly studies the impact of talent supply of vocational education on the economic growth of tobacco industry from human capitalperspective. The investment of vocational education is to realize the economic growth of tobacco industry. Therefore, by analyzing the correlation between the talent supply of vocational education and the economic growth of tobacco industry. Therefore, through the analysis of the relationship between the talent supply of vocational education and the economy of tobacco industry. From a qualitative point of view, this paper analyzes the role of talent supply of vocational education in tobacco industry, and understands its development status.Figure 5 shows the development trend of talent supply of vocational education and main business income of tobacco industry in China.

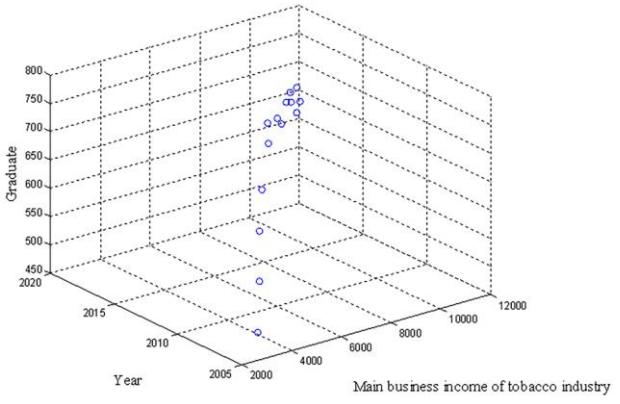

Figure 5 Development trend of talent supply of vocational education graduates and the main business income of the tobacco industry in China from 2006 to 2016

Figure 5 shows that the talent supply of vocational education graduates and the main business income of

the tobacco industry generally show an increasing trend year by year. Moreover, the curve before 2014 is less curved, indicating that the vocational education elasticity of economic growth is greater. The curve after 2014 has a large degree of bending. And the talent supplyof vocational education graduates shows a negative growth, that is, the vocational education elasticity of the economic growth of the tobacco industry gradually decreases. At the same time, the growth rate of the talent supply of vocational education graduates before 2007 was greater than that of the main business income of the tobacco industry. The growth rate of the number of vocational education graduates in 2007 and beyond is less than that of the main business income of the tobacco industry. On the whole, there is a synchronous development trend between vocational education and the economic growth of tobacco industry.

CONSTRUCTIONAND INDEX SELECTION OF SPATIAL EFFECT MODEL OF VOCATIONAL EDUCATION TALENT SUPPLY AND ECONOMIC GROWTH OF TOBACCO INDUSTRY

Based on Lucas human capital economic growth model, this paper makes an empirical analysis on the talent supply of vocational education and the economic of tobacco industry. Classical economy and neoclassical economy believe that labor force is one of the most basic input factors in the production process. Increasing the input of employment in economic production activities will promote sustainable economic development. Therefore, the total number of employees in the tobacco industry is selected to represent the labor level. This paper studies the relationship between the supply of vocational education talents and tobacco economy, that is, the impact of vocational education graduates on the economic benefits of tobacco industry.Therefore, the number of secondary vocational education graduates and higher vocational education graduates are selected to represent the talent supply level of vocational education.The existing literature mostly uses the average years of education to represent the level of educational human capital. Therefore, according to the calculation method of educational human capital, this paper calculates that the average number of years of education in China represents the level of educational human capital. Comprehensively consider the overall development of tobacco industry, the main business income of the tobacco industry is selected to represent the economic growth level of the tobacco industry. Since there are no tobacco related industries in Tibet and Qinghai, this paper mainly analyzes the economic development of the tobacco industry in the other 29 provinces and cities. To sum up, the main business income of the tobacco industry, the number of employed persons in the tobacco industry, the number of graduates of secondary vocational education, the number of graduates of higher vocational education and the per capita years of education of the 29 provinces in China from 2006 to 2019 all come from the China Statistical Yearbook, China Education Statistical Yearbook and China Industrial Statistical Yearbook. This paper constructs an econometric model (1).

$$\ln T_{it} = \alpha + \beta_1 \ln L_{it} + \beta_2 \ln SVE_{it} + \beta_3 \ln HVE_{it} + \beta_4 \ln E_{it} + \varepsilon_{it} \quad (1)$$

Where i(i=1 to 29) is 29 provinces, t(t=2006 to 2019) is 14 years α is constant, β_1、β_2、β_3、β_4 is the elastic coefficients of each variable, T_{it} is main business income of tobacco industry, L_{it} is employment in tobacco industry, SVE_{it} is the number of graduates of secondary vocational education, HVE_{it} is the number of graduates of higher vocational education, E_{it} is the years of education per capita, ε_{it} is stochastic error.

Considering the spatial interaction comprehensively, this paper considers the construction of spatial panel data model. Firstly, construct the spatial panel Dobbin model of the impact of vocational education talent supply on the economic development level of tobacco industry from the perspective of human capital (2).[18]

$$\begin{aligned} \ln T_{it} = {} & \alpha + \rho \sum_{i=1}^{31} W_{ij} T_{it} + \beta_1 \ln L_{it} + \beta_2 \ln SVE_{it} + \beta_3 \ln HVE_{it} + \beta_4 \ln E_{it} \\ & + \gamma_1 \sum_{i=1}^{31} W_{ij} \ln L_{it} + \gamma_2 \sum_{i=1}^{31} W_{ij} \ln SVE_{it} + \gamma_3 \sum_{i=1}^{31} W_{ij} \ln HVE_{it} + \gamma_4 \sum_{i=1}^{31} W_{ij} \ln E_{it} + \varepsilon_{it} \end{aligned} \quad (2)$$

Where γ_1、γ_2、γ_3、γ_4 isthe spatial auto-correlation coefficient ofthe total capital formation, the number of employed persons, the number of secondary vocational education graduates, the number of higher vocational education graduates, and the per capita year of education.

AN EMPIRICAL ANALYSIS ON THE SPATIAL EFFECT OF VOCATIONAL EDUCATION TALENT SUPPLY AND ECONOMIC GROWTH OF TOBACCO INDUSTRY

Index Variables Stationary and Co-integration Test

Before estimating the model, it is necessary to test the stationarity of each index variable. If all the index variables are stable, then the modeling can continue. If there is a non-stationary sequence, further co-integration test is needed. Modeling can be continued only when there is a long-term co-integration relationship between non-stationary index data. The stability and co-integration of panel data are tested by Eviews8.0 software.

The unit root test of the selected panel data is carried out. If the results show that the sequence is not stable, the logarithmic or differential processing of the data can be carried out. When the data of each index are stable in the same order, the co-integration test can be carried out. If the original hypothesis is rejected, the non-stationary index data has a long-term co-integration relationship, that is, the non-stationary data can continue to be modeled.Table 1 shows the stability test results.

Table 1
Stationary Test for Indicator Variables

Index	P(LLC)	P(IPS)	P(ADF)	P(PP)	Stationarity
Lnt	0.0000	0.0000	0.0000	0.0000	stable
Lnl	0.0000	0.0000	0.0000	0.0000	stable
Lnsve	0.0000	0.2063	0.1322	0.5245	unstable
Lnhve	0.0000	0.0000	0.0000	0.0000	stable
Lne	0.0000	0.1000	0.3382	0.0000	unstable
Dlnsve	0.0000	0.0000	0.0000	0.0000	stable
Dlne	0.0000	0.0000	0.0000	0.0000	stable

Table 1 shows the original data series of the main business income of the tobacco industry, the employed persons of tobacco industry and the talent supply of higher vocational education are stable. The talent supply of secondary vocational education and the per capita education level are non-stationary. For non-stationary series, co-integration test is also needed. Test whether the model established by non-stationary time series is pseudo regression, that is, test whether there is a stable relationship between variables. Only when all non-stationary index variables have co-integration relationship, the established model is meaningful.

If all variables are of the same order single-integral, or more than two of the highest-order explanatory variables above the order of the explained variable, there may be a co-integration relationship. Otherwise, if the explained variable is higher than the end of the explained variable, it is possible to produce pseudo-regressive. according to the results of table 1, it can be seen that the explanatory variable has two order one single whole sequences and three stationary sequences, while the explained variable is a stationary sequence, which conforms to the order co-integration condition of multivariate regression. therefore, it can be tested for co-integration. this paper adopts the johasen co-integration method, and the specific results are shown in table 2.

Table 2
Johasen Co-integration Test

Test Method	Statistic	Prob.	Weighted Statistic	Prob.
Panel v-Statistic	0.3864	0.3496	-0.6964	0.7569
Panel rho-Statistics	2.1495	0.9842	4.1908	1.0000
Panel PP-Statistic	-6.8189	0.0000	-19.62	0.0394
Panel ADF-Statistic	-7.2624	0.0000	-2.5835	0.0049
Group v-Statistic	6.2983	1.0000		
Group PP-Statistic	-3.1618	0.0008		
Group ADF-Statistic	-3.5494	0.0002		

Table 2 shows that the results are inconsistent. The significance level of three tests was greater than 0.05. The significance level of the other four tests was less than 0.05.The significance level of the other four tests was less than 0.05. We can think that each variable has a long-term equilibrium relationship. So the model can be estimated.

Selection of Spatial Econometric Models

Only when the index variables have spatial auto-correlation, can we use the spatial measurement model, especially the dependent variable economic growth index to test the spatial dependence. The geographical coordinates of 29 provincial capitals are obtained by inquiry, and the spatial weight value is obtained by using Geoda 0.9.5 software and using the method of specifying the threshold distance of particle coordinates. This paper selects Moran's I indexto determine the spatial auto-correlation of the level of tobacco economic development, because spatial correlation can only process cross-sectional data, so the spatial auto-correlation of Main business income of tobacco industryis tested separately. Using Geoda 1.6 software to calculate the main business income of tobacco industry Moran'sI for 2006-2019, the results are shown in table 3.

Table 3
Moran's I of Lnt for 2006-2016

Year	2006	2007	2008	2009	2010	2011	2012
Moran's I	-0.0427	-0.0419	-0.0572	-0.0526	-0.0485	-0.0467	-0.0558
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Moran's I	-0.0575	-0.0494	-0.0491	-0.0474	-0.0455	-0.0438	-0.0395

As can be seen from table 3, Moran's I indexes from 2006 to 2019 are between -0.03 ~ -0.06. It shows that the main business income of tobacco industry in various regions has a negative spatial auto-correlation. Therefore, in the process of

quantitative analysis of the economic development level of various regions in China, it is necessary to fully consider the spatial correlation of various regions.

Before establishing the spatial panel measurement model, we must first establish the ordinary panel model to determine whether we need to establish the spatial model. The regression results are calculated by MATLAB 2014a software. Table 4 shows the specific results.

Table 4
Normal Panel Regression Model

Index	Mixed regression	Spatial-fixed effect	Time-fixed effects	Spatial and time-fixed effects
Lnl	1.0518(0.000)	0.7253(0.000)	1.0367(0.000)	0.6608(0.000)
Lnsve	-0.4327(0.000)	-0.2632(0.000)	-0.2105(0.038)	0.0323(0.728)
Lnhve	0.5517(0.000)	0.4118(0.000)	0.3049(0.000)	0.0465(0.673)
Lne	2.0965(0.000)	5.2628(0.000)	1.7429(0.000)	0.1187(0.894)
C	-4.7508(0.000)			
Sigma^2	0.3936	0.1161	0.3517	0.0957
R^2	0.7871	0.6116	0.7883	0.1725
LogL	384.2958	136.9313	361.9280	97.6618
DW	1.9467	1.8988	2.0389	2.0485
LM-lag	24.7877(0.000)	32.9703(0.000)	3.2515(0.071)	0.6608(0.000)
RLM-lag	10.4995(0.001)	39.8110(0.000)	2.0481(0.152)	0.0323(0.7285)
LM-error	15.7648(0.000)	2.4187(0.120)	1.3112(0.252)	0.0465(0.6729)
RLM-error	1.4765(0.224)	9.2594(0.002)	0.1077(0.743)	0.1187(0.8936)

The LR-test test of spatialfixed effect (estimated value is 528.5324, freedom is 29, p=0.000) and LR-test test of time fixed effect (estimated value is 78.5391, freedom is 14, p=0.000) show that the original assumption that spatial and time fixed effect can simplify spatial fixed effect or time fixed effect model must be rejected. In summary, this paper selects the spatial and time fixed effect model for analysis. After determining the form of the ordinary panel model, it is also necessary to to judge which spatial panel model is suitable through LM Test. It can be seen from the test results that the four indicators significantly reject the non spatial model and support the spatial model, and which of the spatial model needs to be further judged.

According to the common panel data regression model, there are spatial effects in the panel regression model, that is, the spatial lag, spatial error model or spatial dobbin model can be established. Among them, the spatial dobbin model is the combination of spatial lag and spatial error model, that is, the spatial dobbin model can be established first. Then the Wald and LR tests whether the spatial dobbin model can be simplified.Therefore, the spatial fixed effect space panel dobbin model is further established. For comparison, this paper also establishes a random effect space panel dobbin model. The regression and test results are calculated by MATLAB 2014a software. Table 5 shows the specific results.

Table 5
Spatial Dobbin Panel Model

Index	Spatial and time fixed effect spatially Dobbin model	Random effect spatial Dobbin model
W*lnpgdp	-0.5981(0.001)	-0.8999(0.000)
Lnl	0.6835(0.000)	0.7991(0.000)
Lnsve	0.0150(0.884)	0.0010(0.991)
Lnhve	0.1154(0.347)	0.2092(0.055)
Lne	-0.2375(0.806)	0.2736(0.704)
W*lnl	0.6261(0.401)	0.8143(0.148)
W*lnsve	-0.2095(0.774)	-0.2697(0.693)
W*lnhve	0.8277(0.346)	0.7816(0.327)
W*lne	-5.1186(0.222)	-5.4861(0.073)
Sigma^2	0.1011	0.0973
R^2	0.9503	0.9409
LogL	91.3107	376.6526
Wald-lag	1.7589(0.7800)	4.8083(0.3075)
LR-lag	2.2403(0.6917)	
Wald-error	1.7345(0.7844)	3.9909(0.4072)
LR-error	2.0323(0.7298)	
Hausman	16.0951(0.064)	
Theat	0.1613(0.000)	

Table 5 shows the regression results of spatial dobbin model with spatial and time fixed effects and spatial panel dobbin model with random effects. Firstly, the model is tested by Hausman test, and the results significantly reject the original hypothesis that spatial effects are not related to explanatory variables. That is, we should select the fixed effect model. Wald and LR tests show that the spatial dobbin model can be simplified into a spatial lag model. Therefore, we select the spatial lag panel model for empirical analysis.

Table 6
Spatially Lag Panel Model

Index	Spatial and time fixed effect spatially lag panel model
W*lnt	-0.4629(0.000)
Lnl	1.0141(0.000)
Lnsve	-0.2045(0.043)
Lnhve	0.2864(0.002)
Lne	1.5608(0.000)
Sigma^2	0.3512
R^2	0.8144
LogL	359.1209

From the fitting effect, R^2 of the model is 0.8144. It shows that the model fitting effect is good. And the log likelihood is 359.1209. The value is also relatively large, indicating that the fitting result of spatial fixed effect spatial panel lag model is better. According to the spatial panel econometric regression coefficient, it can be seen that the role of employees in the tobacco industry on the economic growth of the tobacco industry is significantly positive. For every 1 percentage point increase in employment, the main business income of the tobacco industry will increase by 1.0141 percentage points. The coefficient of the talent supply of secondary vocational education is significantly negative. That is, every one percentage point increase in the talent supply of secondary vocational education will reduce the main business income of the tobacco industry by 0.2045 percentage points. The coefficient of the talent supply of higher vocational education is significantly positive. That is, every one percentage point increase in the talent supply of higher vocational education will increase the main business income of the tobacco industry by 0.2864 percentage points. This shows that higher vocational education plays an important role in promoting scientific research and innovation, and is more conducive to promoting the growth of tobacco economy. Finally, the index coefficient of human capital is significantly positive. That is, for every 1 percentage point increase in the level of education per capita, the main business income of the tobacco industry will increase by 1.5608 percentage points. It shows that the level of education has a great impact on tobacco economic growth in various regions. From the results of spatial spillover indicators, it can be seen that the tobacco economic development level has a negative spatial spillover effect,and it's significant. That is, every 1 percentage point increase in the level of tobacco economic development in this region will reduce the level of economic development in adjacent regions by 0.4629 percentage points.

CONCLUSION

According to the qualitative analysis results, the talent supply scale of vocational education and the economic development level of tobacco industry are in a growing trend. However, the regional distribution shows the phenomenon of uncoordinated regional development, showing that the eastern region is better than the western region. From the relationship between the talent supply of vocational educationand the economic growth of tobacco industry, it can be seen that there is a positive correlation between the supply of vocational education talents and the economic growth of tobacco industry. In other words, the talent supply of vocational education is main driving force to drive economic growth of tobacco industry.

According to the quantitative analysis results, it can be seen that the economic growth of tobacco industry in various regions of China has a significant negative spatial auto-correlation. There is a phenomenon that high tobacco economy and low tobacco economy, low tobacco economy and high tobacco economy gather in the region. The spatial panel lag model of spatial and time fixed effects is established. The empirical results show that tobacco economic growth has a negative effect on the tobacco economy of adjacent areas.Effective labor force of tobacco industry, per capita education level,

the talent supply of vocational education have significantly promoted the economic growth of the tobacco industry in the region. And the influence of human capital should be the influence of effective labor in tobacco industry. The talent supply of secondary vocational education has a significant negative impact on regional tobacco economic. Because secondary vocational education can only provide a simple labor force and has little effect on promoting regional tobacco economic growth. Therefore, what China needs at present is not the increase of labor force, but the improvement of labor quality. Therefore, we should improve the per capita education level, promote the improvement of human capital level, give play to the spillover effect of tobacco economic growth, and promote regional balance of human capital level. To raise the level of vocational education and play the role of higher vocational education in promoting tobacco economic. To promote the balance of vocational education. We will strengthenthe training of vocational education talents in the central and western regions. In turn, it promotes the balance of regional tobacco economy.

Author Declaration

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