Study on the Influence of Tax System Structure on the High Quality Development of Chinese Economy

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Abstract

Since reform and opening up, China has initially formed an economic development model that is compatible with the socialist market economy. Remarkable achievements have been made in development, and the living standards of the Chinese people have significantly improved. Although the traditional over-reliance on resources economic development model has achieved rapid economic growth, it also leads to a series of outstanding problems such as economic structure imbalance and ecological environment deterioration, which restrict the further development of China's economy. As an important means of regulation and control in the national governance system, tax revenue has extensive and far-reaching influence on promoting the High-quality development of China's economy. Optimize the structure of the tax system, deepen the reform of the tax system, guide the innovation-driven development of the whole society from the perspective of taxation, improve the consumption environment, change the mode of economic development, and then promote High-quality economic development. According to the empirical regression results, tax system pairing has a significant impact on the High-quality development of China's economy. From the perspective of tax system, increasing the proportion of direct tax will have a significant promotion effect, while increasing the proportion of indirect tax will have a reverse inhibition effect. Further analysis from the perspective of different taxes shows that both corporate income tax and consumption tax show significant positive effects, while other taxes such as personal income tax also show positive correlations, but the results are not significant.

Keywords

Tax System Structure; High-quality Economic Development; Entropy Method; System GMM.

1. Research Background

As an important means for the government to carry out macro-control, taxation plays an important role in China's economic development and has an important impact on High-quality economic development. Targeted fiscal and taxation tools can effectively take into account the speed and quality of economic growth. Tax structure arrangement plays an important role in economic development, especially in economic growth. Effective economic growth should have dual connotations of "quality" and "efficiency". Existing related studies have found that it is not scientific and accurate to measure the level of regional economic growth only by the growth rate of GDP, and economic growth without quality is extensive and unsustainable. Continued High-quality issues are imminent. As the reform of the fiscal and taxation system is an important starting point for the High-quality development of China's economy, it is very necessary to deeply analyze the impact of changes in the tax system structure on China's current High-quality economic development. The distribution pattern of tax burden among regions, industries and individuals depends on the current economic tax system structure. In order to better play the role of taxation in promoting High-quality economic development, it is necessary to adjust the tax system structure to adapt to the needs of the people for a better life. .

In view of this, this paper measures the impact of the tax system structure on China's High-quality economic development, analyzes the dynamic evolution trajectory of its governance efficiency, and provides a reference for China's High-quality economic development. Combined with the modernization requirements of the national governance system and governance capacity, in response to the "five-in-one" development layout, summarize and form an effective evaluation system for governance, and provide a reference for shaping a new situation of governance and empowering the formation of governance efficiency.

2. Measurement and Analysis of High-quality Economic Development

Based on the new development concept and the "five-in-one" general layout, systematically review the existing research methods for measuring the quality of economic growth. Quantitative analysis of the quality of local economic growth in China. The construction of this comprehensive index system will be based on the "five development concepts", combined with the benefit level of economic development, to interpret the benefits, innovation, coordination, ecology, openness, sharing and other aspects of economic development. According to the existing research, the appropriate sub-indices are selected and the entropy method is used to synthesize the final comprehensive indicators of economic growth quality, and a descriptive study is carried out on the six dimensions of China's High-quality development.

2.1. Standardization Processing(Yij)

In order to eliminate the different orders of magnitude and dimensions of different indicators, first of all, the range method is used to standardize the indicators in the indicator system of China's High-quality economic development.

$$
Y_{ij} = \begin{cases} \dfrac{X_{ij} - \min(X_{ij})}{\max(X_{ij}) - \min(X_{ij})} & X_{ij} \text{ is a positive index} \\ \dfrac{\max(X_{ij}) - X_{ij}}{\max(X_{ij}) - \min(X_{ij})} & X_{ij} \text{ is a negative index} \end{cases}
$$

Where, I represent 30 provinces and cities in China, J represents specific indicators of High-quality development, Xij represents raw indicator data without processing, and Yij represents indicators standardized by the above formula.

2.2. Calculate the Information Entropy(Ej)

$$
E_j = -\ln\frac{1}{n} \ \sum_{i=1}^{n}\left[Y_{ij}/\sum_{i=1}^{n}Y_{ij} \ \ln(Y_{ij}/\sum_{i=1}^{n}Y_{ij}) \right]
$$

2.3. Determine the Weight of Each Indicator(Wj)

$$
W_j = (1 - E_J)/\sum_{j=1}^{m}(1 - E_j)
$$

2.4. Determine the Comprehensive Score of Each Province and Year(Ci)

$$C_i = \sum_{j=1}^{m} W_j \times Y_{ij}$$

Among them, the relative proximity Ci is between 0 and 1. The larger the Ci value is, the closer the value is to 1, indicating that the High-quality economic development level of the region is higher. Conversely, the closer the value is to 0, the lower the level of High-quality economic development in the region.

3. Empirical Analysis

3.1. Model Setting

This section will use panel data model to study the impact of tax structure on High-quality economic development. Compared with simple time series data or cross section data, panel data has the following advantages: First, by combining the observed values of elements with different sections at different times, the degree of freedom is increased and the collinearity between variables is reduced, so the estimation effect is more effective. Second, the large sample size of panel data can improve the accuracy of estimation. Third, the dynamics of changes in economic behavior can be better studied by repeated observations of units with the same cross-section.

$$Quality_{i,t} = \alpha_0 + \alpha_1 Quality_{i,t-1} + \alpha_2 SZJG_{i,t} + \alpha_3 Control_{i,t} + \varepsilon_{i,t}$$

Where, I and T represent province and time respectively. α_0 represents the constant term, and α_1, α_2 and α_3 represent the coefficients of each variable respectively. The explained variable Quality is the comprehensive score of China's High-quality economic development calculated by the entropy method above. Because the High-quality development of regional economy is not achieved overnight, it will be affected by the previous level of development and is a continuous accumulation process. Therefore, this paper introduces the T-1 lag ($Quality_{i, t-1}$) of China's economic development quality into the econometric model to test the time impact of economic development quality. Tax system structure is the core explanatory variable of this paper, which is represented by the letter SZJG in the above formula. Control represents the four Control variables selected in this paper; ε I and t represent the random error term in the model.

3.2. Variable Selection

Explained variable: The comprehensive score of high quality economic development of all provinces in China from 2007 to 2020 calculated based on the entropy method formula is the explained variable of this paper.

Explanatory variable: Due to the unavailability of tax data in some provinces and the convenience of research, based on the above definition of tax structure, this paper will measure China's tax structure from the following two levels: One is based on the macro tax system structure. The ratio of direct tax revenue to total tax revenue is adopted as the main indicator to measure the provincial tax structure in China, where direct tax revenue is replaced by the sum of individual income tax, corporate income tax and real estate tax. At the same time, in order to further test the accuracy of index selection, this paper adopts the second indicator to measure China's provincial tax structure (namely, the proportion of China's indirect tax revenue) for comparative verification analysis. The second is based on the micro tax structure. Tax structure refers to the specific tax structure covered in each tax series, as well as the

restriction and coordination between the primary and secondary taxes, which is a relatively micro level of tax structure.

Control variables: First, the degree of economic openness. In this paper, the local economic openness is measured by the ratio of the total amount of local import and export commodities to the GDP of each province, in which the total amount of import and export commodities is converted by the average annual exchange rate of USD to RMB. Second, the average level of education. The specific indicators can be calculated by comparing the educational structure of each province with the total population over the age of six, in which the educational structure is measured by the number of years of schooling for the corresponding education, such as 6 years for primary education, 9 years for junior high school education, and so on. Third, industrial structure. This paper quantifies the change of China's industrial structure by comparing the added value of tertiary industry and secondary industry in different provinces and cities. Fourth, the level of urbanization. This paper uses the ratio of urban population and total population of each province to measure.

3.3. Baseline Regression Analysis

Table 1. Impact of tax structure on High-quality economic development

variable	(1)	(2)	(3)	(4)
The lag of economic development quality period	0.814***	0.859***	0.847***	0.771***
	(17.61)	(33.70)	(32.24)	(5.51)
Proportion of direct tax	0.214*	0.040**	0.049**	
	(1.79)	(1.96)	(1.99)	
Proportion of indirect tax				-0.321**
				(-2.02)
Degree of economic openness		-0.020**	-0.026***	-0.069**
		(-2.10)	(-2.95)	(-2.13)
Education Level		0.015	0.002	0.196
		(0.63)	(0.09)	(1.04)
The industrial structure			-0.304	2.349*
			(-0.97)	(1.81)
Level of urbanization			0.043*	-0.129
			(1.66)	(-1.34)
Constant	-0.004	0.013	0.010	-0.187
	(-0.11)	(0.20)	(0.13)	(-0.43)
Time effect	YES	YES	YES	YES
Individual effect	YES	YES	YES	YES
AR(1)	0.001	0.000	0.000	0.002
AR(2)	0.330	0.271	0.253	0.569
Hansen test	1.000	1.000	1.000	1.000
observations	390	390	390	390

Note: T statistic in parentheses; *, ** and *** represent significant levels of 10%, 5% and 1% respectively; AR (1), AR (2) and Hansen test give P values corresponding to statistics. The same below.

On the one hand, the economic development of the quality of ascension requires the accumulation of a certain period of time, not instantly, followed by a year the development of quality to a great extent affected by last year, so by building dynamic panel data model, this paper will be explained variable lag issue as explanatory variables in the model, in order to show the time changes impact on the quality of China's economic development. However, this

is likely to lead to the correlation between lag variables and disturbance terms, thus affecting the accuracy of measurement results. On the other hand, there may be mutual interaction and mutual influence between tax structure and economic development quality, which leads to the endogenous problem of the model. In order to solve the above measurement problems, this paper intends to use system generalized moment estimation (SYSTEM GMM) to perform regression estimation on the modified measurement model. A large number of scholars have found that system GMM can effectively solve the correlation and endogeneity problems mentioned above, and to a large extent overcome the "endogenous variable bias" generated by OLS or fixed effect model regression estimation.

Model (1) is the regression result without control variables. On the basis of Model (1), model (2) adds two control variables of economic openness and per capita education, while model (3) further adds two control variables of industrial structure and urbanization level. Models (1) to model (3) use the proportion of direct tax as a variable to measure the tax structure, and the results show that the tax structure has a significant impact on the quality of China's economic development. The coefficient of model (3) is estimated to be positive at the significance level of 5%, indicating that increasing the proportion of direct tax revenue has a positive effect on improving the quality of China's economic development. Direct tax on income and property of a taxpayer indirectly influence the supply of social public service, enterprise management decision-making and the residents' personal income distribution, to promote the optimization and upgrading of industries and industry to optimize enterprise resource allocation efficiency, strengthen the cultivation of enterprise innovation ability to promote the optimization of development of the enterprise, thus promote the economic development of quality improvement. According to the regression results of model (4), its coefficient is estimated to be negative at the significance level of 1%, indicating that increasing the proportion of indirect tax will hinder the improvement of the quality of China's economic development, which also indicates that the tax structure does have a significant effect on the quality of China's economic development. Although indirect tax has a good effect in raising government fiscal revenue and promoting the adjustment of enterprises' production and operation decisions, on the one hand, the tax burden of indirect tax is easy to be transferred, so that enterprises have a low perception of its tax burden, which is not conducive to play its due role in enterprises. On the other hand, taxation based on the selling price and turnover of goods not only harms consumers' enthusiasm for consumption, but also is not conducive to adjusting income distribution, which has a strong negative effect.

3.4. Further Analysis of the Impact of Tax Structure

In order to further analyze the impact of tax structure on the quality of economic development, this paper replaces tax structure with the change of the proportion of major taxes, and then analyzes its impact on the quality of economic development from the micro tax structure.

First, in the proportion of enterprise income tax in the model (7) regression analysis was carried out on the quality of our country economy development level, its coefficient is estimated at 5% significance level shows positive, shows that the enterprise income tax on high quality and economic development has a positive role in promoting, improve enterprise income tax proportion helps to improve the quality of economic development in our country. Second, in model (8), the proportion of personal income tax is used to make regression with the High-quality development level of China's economy. The regression results show that the proportion of personal income tax is positively correlated with the High-quality development of China's economy, but this result does not pass the significance test. This is because although individual income tax can adjust social income distribution and optimize income distribution structure through differential progressive tax rate, the share of individual income tax is relatively low compared with other major taxes in China, which restricts its role in promoting High-quality

economic development in China. Thirdly, in model (9), the proportion of real estate tax is used to regression the quality of China's economic development. The result shows that the proportion of real estate tax is positively correlated with the High-quality development of China's economy, but this result does not pass the significance test. Fourthly, in model (10), through the regression of the proportion of value-added tax, it is found that the proportion of value-added tax is positively correlated with the High-quality development of China's economy, but this result also fails the significance test. Fifthly, as the data of provincial consumption tax in each region are only collected until 2019, and the data of subsequent years are not available, this section recalculates the scores from 2007 to 2019 on the basis of the High-quality development indicator system of China's economy constructed above, and conducts regression analysis. As can be seen from the regression results of the proportion of consumption tax and the quality of economic development in Model (11), its coefficient is estimated to be positive at the significance level of 5%, indicating that consumption tax has a positive role in promoting High-quality economic development, and increasing the proportion of indirect tax will promote the improvement of the quality of China's economic development.

Table 2. Further analysis of the impact of tax structure on High-quality economic development

variable	(7)	(8)	(9)	(10)	(11)
The lag of economic development quality period	0.848***	0.844***	0.847***	0.845***	0.789***
	(31.55)	(31.36)	(30.53)	(30.80)	(22.43)
Proportion of enterprise income tax	0.059**				
	(2.03)				
Proportion of individual income tax		0.071			
		(0.99)			
Proportion of property tax			0.041		
			(0.43)		
Proportion of value-added tax				0.022	
				(1.11)	
Proportion of consumption tax					0.026**
					(2.03)
Degree of economic openness	-0.027***	-0.024**	-0.026***	-0.025***	-0.038***
	(-3.13)	(-2.34)	(-3.05)	(-2.70)	(-2.86)
Education Level	0.004	0.003	0.004	0.003	0.002
	(0.17)	(0.12)	(0.18)	(0.13)	(0.08)
The industrial structure	-0.281	-0.320	-0.308	-0.301	-0.004
	(-0.87)	(-0.98)	(-0.92)	(-0.94)	(-1.38)
Level of urbanization	0.037	0.038	0.033	0.035	0.001
	(1.50)	(1.48)	(1.38)	(1.64)	(0.04)
Constant	0.016	0.027	0.033	0.027	0.106
	(0.21)	(0.35)	(0.45)	(0.39)	(1.18)
Time effect	YES	YES	YES	YES	YES
Individual effect	YES	YES	YES	YES	YES
AR(1)	0.000	0.000	0.000	0.000	0.001
AR(2)	0.260	0.250	0.248	0.245	0.336
Hansen test	1.000	1.000	1.000	1.000	1.000
observations	390	390	390	390	360

4. Policy Suggestions

4.1. Optimize the Tax Structure and Increase the Proportion of Direct Tax

At the beginning of the China's economic development, people's income is not high, with a limited stock of wealth, give priority to with the income tax of direct tax cannot get enough tax sources provide financial support for the government, and therefore the proportion of indirect tax is higher than the proportion of direct tax tax structure is in line with the efficiency first principle of economic development in our country, promoted our country economy high speed increase. However, in the long run, China's economy has shifted from the past development mode of efficiency first and focusing on growth to a new stage of promoting all-round High-quality economic development, so the traditional tax structure can no longer meet the current practical needs. At present, the income level and wealth of residents have been greatly enriched, so direct tax is needed to adjust the income distribution of residents and promote social equity.

4.2. Promote Consumption Tax Reform and Improve the Consumption Environment

In the outline of the 14th Five-year Plan, the focus of the future consumption tax reform is to move its collection link later, and transfer part of its tax revenue to local government departments, to relieve the pressure of local financial funds. The above reform will change some commodities to be taxed in the retail link, which will reduce the pressure of capital and inventory in the production link of enterprises, greatly improve the operating conditions of enterprises and promote the development of enterprises. Promote the development of enterprises. At the same time, transferring part of the consumption tax revenue to local governments can help local governments ease their excessive dependence on VALUE-ADDED tax, cultivate new tax sources for local governments and expand local tax revenue, thus enabling local governments to obtain more financial support and providing new drivers for High-quality development of local economy.

4.3. Deepen VAT Reform to Improve the Quality of Economic Development

As the most important tax in China at the present stage, the deepening reform of VALUE-ADDED tax is of great significance to the improvement of the quality of China's economic development. After the comprehensive implementation of "replacing business tax with VALUE-ADDED tax", the problem of repeated taxation in China's traditional tax structure has been effectively improved. However, the problem of multiple tax rates of VALUE-ADDED tax still exists, which hinders the refinement of industrial division of labor and is not conducive to the interactive connectivity between upstream and downstream enterprises. Value-added tax is levied on the value added of goods and services, which has the characteristics of universal collection. Therefore, it should not take on the function of regulating market economic activities too much, but take improving efficiency as the key direction of its future development. Therefore, simplifying the VAT rate and changing the taxation from multiple brackets to two or one bracket is more conducive to giving full play to the tax neutral advantage of VAT.

4.4. Attach Importance to Auxiliary Taxes and Levy New Taxes Timely

In order to construct a system of tax system that ADAPTS to the high quality development of China's economy, it is necessary to give full play to the positive role of various auxiliary taxes in addition to the targeted adjustment of main taxes such as income tax and value-added tax. However, from the perspective of the overall tax structure, at present, China pays less attention to the auxiliary taxes, and its tax revenue accounts for a relatively low proportion, which makes it difficult to fully play its due role in tax regulation. Therefore, the proportion of various auxiliary taxes in China should be adjusted flexibly, and new taxes should be introduced timely to fully mobilize the positive impact of various taxes on promoting China's economic

development and further improve the quality of economic development. Perfect our country property tax system construction, make the property tax step by step to rationalization, legalization.

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