

Estimation of Local Fiscal Extractive Capacity in Guangdong Province and Analysis of Influencing Factors

—An Empirical Study Based on 21 Prefecture-Level Cities

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Abstract

Fiscal Extractive Capacity is an important component of national capacity, and its inadequacy will drive local governments to raise funds through non-standard channels and bring negative effects on national governance. In this paper, we define the fiscal extractive capacity through the fiscal extractive scale, fiscal extractive degree of self-sufficiency and fiscal extractive sustainability, and we use the fixed-effect model and factor analysis method to calculate and draw the empirical analysis of the fiscal extractive capacity of the prefecture-level cities in Guangdong Province from 2008 to 2014, and the results show that fiscal expenditure decentralization, economic factors and population factors have significant impact on fiscal extractive capacity. Therefore, it is suggested that we should divide the fiscal power of the prefectural city reasonably, promote the optimization and upgrading of the industrial structure, and strengthen the financial guarantee to the prefectural government through the reform of the transfer payment system.

Keywords

Fiscal Extractive Capacity, Fiscal Expenditure Decentralization, The Factor Analysis, Empirical Analysis

1. Introduction

Government revenue is the financial guarantee for the government to perform its functions and maintain the long-term peace and good order of the country.

According to the data from statistical yearbook of Guangdong province, since we followed the policy of reform and opening, China's total government revenue has also increased from 113 billion 236 million yuan in 1978 to 140,350 billion yuan in 2015. As the province who has the largest economic aggregate of China, Guangdong has achieved the general budget revenue of 936 billion 476 million yuan in 2015. The 18th CPC National Congress's strategic arrangement for deepening the reform strategy in an all-round way and progressive implementation of accelerating the transformation of government functions, has loomed the significant importance of local governments to provide public services.

It is necessary to evaluate reasonably the local government fiscal extractive capacity to assess local financial difficulty. Therefore, this research is worth promoting.

2. Literature Review

In current research there are three main types of research on fiscal extractive capacity. The first one is to put the fiscal extractive capacity as a dimension to analyze fiscal capacity, and the most commonly used method is factor analysis. Factor analysis is a kind of dimension reduction analysis method, which can be used to comprehensively analyze several variables and extract the principal component factors, and use fewer factors to explain most information in the original variables. Such as Yuan Xiaoyan [1] has measured fiscal capacity from three layer of interpretations, including fiscal revenue capacity, financial expenditure capacity and fiscal self-sufficiency capacity. The second kind of research is to operate factor analysis on the interpretive layers on by one. Luo Yan, Jiang Tuanbiao and Chen Ping [2] explained to measure the fiscal capacity from fiscal extractive capacity, fiscal expenditure level and expenditure benefit, in which method they could obtain the comprehensive score of fiscal capacity on a single interpretive layer. This method is to overcome the shortcoming of the factor analysis method, which does not consider the layer of interpretations. These two types of research are in similar that fiscal extractive capacity is not the subject of the study, but only as a level of analysis. The third study to empirically study on the correlation of fiscal extractive capacity. The domestic literature about this kind of research is few now, and mainly focuses on the level of the province. Existing studies like Jia Zhilian [3], Chen Du, Chen Zhiyong [4] are all empirical analysis on China's 31 provinces. Zhou Pinglu, Cui Zhiwen, Yang Jie [5] analyzed the fiscal extractive capacity of Silk Road Economic Belt, based on the DEA model.

The author believes that there are differences between the provincial levels in the ways like humanistic quality, cultural philosophy and even historical factors, which have impact on the fiscal extractive capacity. However most of the literature did not consider this issue in the selection of indicators. As the first-line managers, the operation effects of provincial government's functions also have very important influence on country governance. Therefore, it is significant to study the fiscal extractive capacity of the regions below the provincial level. This

paper uses the 21 prefectural-level cities in Guangdong Province as the research samples of fiscal extractive capacity, and operate related research about influencing factors, trying to overcome the problems of vague, as well as the lack of basis in previous studies.

3. Data Sources and the Statistical Software

In this paper, we take the prefecture-level cities in Guangdong Province from 2008 to 2014 as the sample. The data is from the statistical yearbook of Guangdong province and the financial statistical yearbook of Guangdong. Besides, the two statistic methods of the paper are factor analysis and fixed effect panel model. The statistic software used for factor analysis in this paper is IBM SPSS Statistic 19. The other statistic software for fixed effect panel model is Eviews 6.

4. Fiscal Extractive Capacity: Index System and Calculation

4.1. Index System

Fiscal extractive capacity is intuitively expressed as the amount or degree of the government revenue, and many scholars such as Chen Du [4] use fiscal revenue per capita as an indicator of fiscal extractive capacity in empirical analysis of fiscal extractive capacity. The per capita fiscal revenue excludes the influence of population factors, and to a certain extent, it reflects the direct output level of the local governments' income. But the higher the local government income does not mean that the local government's ability of fiscal extractive capacity is stronger.

On the one hand, there are differences in the level of fiscal expenditure between regions, and in principle, the local governments that require high fiscal expenditure should also have higher financial income to avoid a big funding gap. On the other hand, there are normative problems in the channels for local governments to obtain income, and if they aim at obtaining higher fiscal revenue, they will encourage government officials to increase the access to non-tax revenues such as fined income, administrative fees and so on, and it will exacerbate local land finance, investment and financing platform, financing and debt and other issues, as well as the financial income which they obtain through these channels is often unsustainable or it can be said as "overdraft" access.

Therefore, in terms of the index of fiscal extractive capacity, the fiscal revenue scale represented by per capita fiscal revenue can be used as one of the measurement angles. In addition, we introduce two explanatory layers: fiscal self-sufficiency and fiscal sustainability. Fiscal self-sufficiency mainly reflects the degree of self-supply of fiscal revenue to local governments, that is, the extent to which local governments obtain financial resources to meet the supply of local public goods and services. In general, local governments with high fiscal expenditure need high financial income to support, with reference to the traditional literature, we take the ratio of local finance general budget income and general budget expenditure to express financial self-sufficiency. In terms of financial

sustainability, tax revenues are generally considered to be relatively stable and sustainable, and the access to non-tax revenues is more prone to irregularities and uncertainties. Therefore, we take the ratio of the tax revenue and the general budgetary revenue to express the fiscal extractive sustainability. Three levels of relevant indicators as shown in **Table 1**.

4.2. Factor Analysis Processing

Table 2 shows the results of the factor analysis on the three levels of indicators. It can be seen that the P-value (the statistical significance of the Bartlett Spherical Tests) of the sample between 2008 and 2014 is less than the significance level of 0.05, thus we reject the null hypothesis and perform factor analysis.

4.3. Evaluate and Analyze Results

There is only one principal component factor of the factor analysis from 2008 to 2014 explaining the total variance of the initial eigen values which are greater than 1, and the variance contribution rates are all 70% or more. Taking the variance contribution rates of the extracted principal component factors as the weight, we can get the fiscal extractive capacity's scores of 21 prefecture-level cities in Guangdong Province from 2008 to 2014 (**Table 3**).

It can be seen from the score table, the highest average composite score from 2008 to 2014 is Shenzhen, followed by the next six cities of Zhuhai, Guangzhou, Zhongshan, Foshan, Dongguan and Huizhou which are all in the Pearl River

Table 1. Explanation layer and index selection.

Aim	Explanation Layer	Index Selection
Fiscal Extractive Capacity	fiscal extractive scale	per capita fiscal revenue
	fiscal extractive degree of self-sufficiency	local finance general budget income/general budget expenditure
	fiscal extractive sustainability	tax revenue/the general budgetary revenue

Table 2. Annual factor analysis tests and explains the total variance.

Year	KMO analysis	Bartlett Sphericity	Extract ingredients		
			Initial characteristic root value	The percentage of Variance (%)	Cumulative percentage (%)
2008	0.645	0.000	2.216	73.850	73.850
2009	0.707	0.000	2.336	77.872	77.872
2010	0.709	0.000	2.303	76.776	76.776
2011	0.709	0.000	2.325	77.493	77.493
2012	0.707	0.000	2.371	79.042	79.042
2013	0.694	0.000	2.468	82.268	82.268
2014	0.690	0.000	2.339	77.959	77.959

Table 3. Fiscal extractive capacity's scores of 21 prefecture-level cities in Guangdong Province from 2008 to 2014.

prefecture level city	2008	2009	2010	2011	2012	2013	2014	Mean	Rank
Guang-zhou	1.014138	1.047448	1.024384	0.960038	0.896052	0.789804	0.987374	0.959891	3
Shenzhen	1.710986	1.706074	1.680796	1.825681	2.01863	1.501951	1.873721	1.759691	1
Zhuhai	1.056579	1.023254	0.995508	1.008261	0.989053	0.829477	1.250501	1.021805	2
Shantou	-0.25388	-0.28856	-0.27603	-0.37364	-0.41307	-0.30739	-0.37171	-0.32633	10
Foshan	0.411795	0.828543	0.710639	0.795396	0.799415	0.654356	0.729041	0.704169	5
Shaoguan	-0.24602	-0.39353	-0.35856	-0.42506	-0.46142	-0.34969	-0.38945	-0.37482	12
Heyuan	-0.47776	-0.53064	-0.47364	-0.46832	-0.44054	-0.38528	-0.5115	-0.46967	14
Meizhou	-0.53597	-0.55851	-0.58469	-0.64955	-0.55317	-0.53438	-0.41208	-0.54691	17
Huizhou	0.279005	0.39858	0.306843	0.480844	0.463241	0.395581	0.362081	0.383739	7
Shanwei	-0.87741	-0.82834	-0.72512	-0.70536	-0.65236	-0.58029	-1.03438	-0.77189	19
Dongguan	0.623759	0.665175	0.691253	0.677847	0.772003	0.557651	0.875261	0.694707	6
Zhongshan	1.003533	1.035207	1.167356	0.904436	0.774983	0.744062	0.800686	0.918609	4
Jiangmen	0.380977	0.357869	0.390713	0.373191	0.374564	0.307017	-0.27397	0.272909	8
Yangjiang	-0.46772	-0.68026	-0.6404	-0.51589	-0.51598	-0.42442	-0.42028	-0.52356	16
Zhanjiang	-0.64217	-0.65387	-0.63383	-0.74567	-0.85877	-0.61345	-0.75553	-0.70047	18
Maoming	-0.82417	-0.89791	-0.97059	-0.92166	-0.89216	-0.75823	-0.7197	-0.85492	21
Zhaoqing	-0.44421	-0.51463	-0.459	-0.39197	-0.31603	-0.32246	-0.29841	-0.39239	13
Qingyuan	-0.26672	-0.32308	-0.39112	-0.337	-0.39014	-0.27724	-0.3394	-0.3321	11
Chaozhou	-0.02933	-0.03176	-0.15825	-0.08415	-0.1461	-0.06923	-0.22497	-0.10626	9
Jieyang	-0.5421	-0.48707	-0.48725	-0.52631	-0.62973	-0.43298	-0.48	-0.51221	15
Yunfu	-0.8733	-0.874	-0.809	-0.8811	-0.81848	-0.72486	-0.64727	-0.804	20

Delta Region. The last three cities are Shanwei, Yunfu and Maoming. It can be preliminarily judged that the aggregate level of a region has a great impact on fiscal extractive capacity.

In addition, in the division of east-wing, west-wing and mountain regions, although Zhaoqing is included in the Pearl River Delta Region, its fiscal extractive capacity is much lower than the other eight prefecture-level cities. While the fiscal extractive capacity of Shantou and Chaozhou in the eastern region is better than its of Jieyang and Shanwei to great extent. As can be seen, there may be large differences in the same region of the prefecture-level cities in fiscal extractive capacity.

5. An Empirical Test Based on Fixed Effect Panel Model

5.1. Selection of Indicators and Sources of Data

We have used the factor analysis method to analyze the three levels of factor analysis including the fiscal extractive scale, fiscal extractive support, and fiscal extractive sustainability, and obtained the scores of fiscal extractive capacity of the prefecture-level cities from 2008 to 2014. There are relatively few studies on

the empirical study of fiscal extractive capacity in the existing literatures. This paper selects three influencing factors as explanatory variables, including political factors, economic factors and demographic factors. And fiscal decentralization is the representative index of the political factor. The balance between decentralization and centralization can not only alleviate the local financial pressure, but also improve the efficiency of public goods supply, and it can have some impact on the fiscal extractive capacity to a certain degree. In this paper, the fiscal decentralization is measured by the per capita municipal expenditure/(per capita municipal expenditure + per capita provincial expenditure + per capita central fiscal expenditure), comprehensive the point of view of Dai Yongan, Zhang Shuxiao [6] and Guo Qingwang [7]. On the one hand, it excludes the size of the population factors, and on the other hand, it reduces the impact of transfer payments to a certain extent. In order to describe this explanatory variable more accurately, we call it decentralization of fiscal expenditure.

On the level of the economic factors, we mainly consider the level of economic development, industrial structure and trade openness. And we use per capita GDP excluding population factors to represent the economic level. In the selection of indicators of industrial structure, because the capacity of manufacturing surplus value by the primary industry is weak, and the local government obtain less revenue in the primary industry, we only selected the proportion of the secondary industry and tertiary industry. The degree of trade openness is expressed as the ratio of the total value of local imports and exports to the local gross domestic product (GDP). Because of the large differences in urbanization among the prefecture-level cities in the province, such as the high degree of urbanization in developed Pearl River Delta region, and there is no rural population in Shenzhen area, it is unreasonable to consider the urbanization factor in the level of the prefecture-level cities in the province.

The population factor takes the population density as the measurement target. We generally believed that the concentration of the population can affect the governance of local governments, and the sparsely populated areas are more difficult to manage than the areas with high population densities. In the absorption of financial revenue, a higher population density can reduce the collecting cost of government departments and improve extraction efficiency. Therefore, it has great importance to explore its impact on the local fiscal extractive capacity at the population factor level. The specific indicators are selected as shown in **Table 4**.

5.2. Model Construction

According to the variables selected by the three explanatory layers, we assume that there is a linear relationship between variables, and we establish a multiple regression model to verify the impact of each variable on the fiscal extractive capacity of prefecture-level cities. The specific model is as follows:

$$fbb_{it} = \beta_0 + \beta_1 fd_{it} + \beta_2 \ln gdpp_{it} + \beta_3 sec i_{it} + \beta_4 teri_{it} + \beta_5 open_{it} + \beta_6 \ln dop_{it} + \varepsilon_{it}$$

where the explained variable fbb represents the fiscal extractive capacity of the

Table 4. Relevant factors of financial extractive capacity of prefecture-level cities.

Aim	Interpretation layer	Indicator level	Indicators Abbreviations	Definition of Indicators
Fiscal Extractive Capacity	Political Factors	Decentralization of Fiscal Expenditure	fd	per capita municipal expenditure/(per capita municipal expenditure + per capita provincial expenditure + per capita central fiscal expenditure)
		The level of economic development	lngdpp	the logarithmic form of per capita GDP
	economic factors	Industrial structure	seci teri	the proportion of the secondary industry and tertiary industry
		Trade openness	open	the ratio of the total value of local imports and exports to the local GDP
	Demographic factors	Population density	lndop	The number of people/quare kilometer, logarithmic form

prefecture-level city, and the explanatory variable lngdpp means the per capita GDP, seci shows the proportion of the secondary industry, teri shows the proportion of the tertiary industry, open expresses the openness of trade, β_0 refers to the constant term, $\beta_1 \beta_2 \beta_3 \beta_4 \beta_5 \beta_6$ refers to each index coefficient, respectively, and i below the variable index represents the i -th prefecture-level city, and t means the t -th year. ε denotes the random interference term, and covers other influencing factors besides the above explanatory variables.

5.3. Empirical Results and Analysis

The results of the fixed-effect model regression are shown in **Table 5**. With the increase of explanatory variables, the fitting degree of the model also increases. In the regression model of political factors, economic factors and population factors, six explanatory variables in total, the fitting degree reaches 94.18%, which indicates that the model has a high ability of explanation. While the explanatory variables are significant at the 1% level except for the logarithm of population density, which is significant at the 5% level.

The regression result in (6) shows that the degree of fiscal expenditure decentralization has a positive effect on the fiscal extractive capacity of 21 prefecture-level cities. In the existing literatures, there are differences in the results of regression analysis because of differences in fiscal decentralization indicators. Different from the provincial governments, the autonomy of the municipal governments in the financial revenue is weak, this paper selects the expenditure index of the expenditure indicators to further refine and clarify the significance of indicators. The regression results show that decentralization in fiscal expenditure can promote the government's ability to increase its fiscal extractive capacity, and a 1% increase in fiscal expenditure will result in an increase of fiscal extractive capacity by 0.02%. Decentralization of fiscal expenditure will inevitably affect the quality of government, the efficiency of public goods supply, and so on, but the specific impact mechanism is still a question worthy of study.

Table 5. The regression results of the influencing factors of the financial extractive capacity of prefecture-level cities.

Explanatory variables	Explained variable: Financial Extractive Capacity of Prefecture-level City (fbb)					
	(1)	(2)	(3)	(4)	(5)	(6)
c	-1.9302***	-9.5882***	-8.9407*** (0.5831)	-8.2500*** (0.4726)	1.7941*** (0.4674)	-7.4217*** (0.4941)
fd	0.0572***	0.0159	0.0237*** (0.0036)	0.0221*** (0.0029)	0.0166*** (0.0032)	0.0206*** (0.0035)
lngdpp		0.8630***	0.6950*** (0.7017)	0.3775*** (0.0666)	0.3885*** (0.0637)	0.3403*** (0.0670)
seci			1.7180*** (0.2917)	4.0207*** (0.3493)	3.4310*** (0.3688)	3.1299*** (0.3916)
teri				3.8528*** (0.4352)	3.3960*** (0.4331)	2.8904*** (0.4901)
open					0.9832*** (0.2619)	0.8002*** (0.2727)
Indop						0.5080** (0.0227)
R-squared	0.7274	0.8674	0.8942	0.9328	0.9392	0.9418
F-Test	52.9852 (0.0000)	112.8339 (0.0000)	128.6354 (0.0000)	188.9922 (0.0000)	189.6365 (0.0000)	178.6613 (0.0000)
HausmanTest	47.5010 (0.0000)	106.5722 (0.0000)	122.7326 (0.0000)	95.1818 (0.0000)	66.7918 (0.0000)	61.2692 (0.0000)

Note: The numbers in parentheses are the standard deviation; *, **, *** indicate that the explanatory variables are significant at 10%, 5%, 1% respectively.

On the level of economic factors, we can see that the logarithm of GDP per capita, the ratio of the second and third industries, and the level of foreign trade have a positive effect on the fiscal extractive capacity of the prefecture-level cities. The secondary industry and the tertiary industry accounted for the most significant impact, while it reflects that the primary industry have a negative impact on the fiscal extractive capacity. The proportion of the secondary industry is slightly larger than that of the tertiary industry, and the increase of 1% in the industrial sector will result in an increase of 3.12% and 2.89% of the fiscal extractive capacity respectively. This illustrates the importance of the industrial structure for a region's fiscal extractive capacity. The logarithm of GDP per capita and the proportion of imports and exports to local GDP have a positive impact on local fiscal extractive capacity. This is mainly because the more developed the economic level of a region, the more revenue sources the region has. Therefore, the prefecture-level municipal governments should consider promoting regional openness and promoting regional trade to improve local fiscal

extractive capacity.

The impact of demographic factors on fiscal extractive capacity is based on the perspective of government governance. It is generally believed that a high degree of the population concentration facilitates the management of the government, which is conducive to improving the efficiency of government administration and the fiscal and tax collection costs, and to a certain extent, improving the fiscal extractive capacity. The regression results show that the higher the population density is, the better the local fiscal extractive capacity is, which is consistent with our expected hypothesis, on the entire Guangdong Province level.

6. Summary and Enlightenment

On the national governance level, improving the prefecture-level city's fiscal extractive capacity is conducive to the implementation of government functions and regional construction. In this paper, panel data of 21 prefecture-level cities in Guangdong Province from 2008 to 2014 are used to measure the fiscal extractive capacity and have an empirical study on the influencing factors by using an empirical test with fixed effects model and the factor analysis. The results show that the economic level, the proportion of the second and third industries, the degree of trade liberalization and population factors have a significant positive impact on the fiscal extractive capacity at the level of the prefecture-level cities. But for the Pearl River Delta and non-Pearl River Delta regions, those cities have significant differences. On the economic level, the higher the per capita GDP is, the more the source of government revenue is available, and the more favorable the government's ability is to increase its fiscal extractive capacity. From the industrial structure point of view, improving the proportion of the second and third industry is conducive to improve the fiscal extractive capacity, especially in the traditional agriculture-based less developed areas. However, overall, Guangdong Province, as the country's major economic province, the second industry is the leading industry in many prefecture-level cities. In accordance with the current tax system, manufacturing and construction which belong to the secondary industry provide a rich source of tax for the government and make a great contribution to the regional economy. However, the secondary industry in one region may be limited by the development bottleneck, so it is difficult to further increase the proportion of the secondary industry. Therefore, it is necessary to promote the optimization and upgrading of the secondary industry through the introduction of high-tech and high-quality talents and increase the development of the tertiary industry.

While the decentralization of fiscal expenditure has a significant impact on fiscal extractive capacity, the decentralization may be difficult to change in the short term. But from another point of view, the infrastructure construction of people's livelihood expenditures such as education, health care, social security and other areas which are closely related to people's daily life should have better protection, but the local government due to the financial difficulties in the expenditure level is often stretched. To consider the problem of the division of the

responsibilities for the expenditures of the local government, the provincial government and the central government, the central government should recover some part of the responsibilities for the expenditures such as pension, land planning, judicial and other areas to reduce the local government financial pressure. At the same time, through the reform of transferring payment system, it is able to strengthen the financial guarantee of the local government's basic public services and optimize the decentralization of the local government expenditure, which will help to improve the local fiscal extractive capacity, thus forming a virtuous circle to promote the coordinated development of regional finances.

However there are still some shortcomings in the paper. First, it lacks of innovation in the statistic method. Factor analysis is the most popular method in the study of fiscal ability and this paper follows the way. Besides, the standard of the index selection is not specific. It needs to make more effort to complete this index system and figure out more convincing conclusions.

References

- [1] Yuan, X.Y. (2011) A Research on Assessment and Promotion Measures of Financial Capacity of Local Government in Shandong Province. Ocean University of China.
- [2] Luo, Y., Jiang, T.B. and Chen, P. (2012) Comparison Research of Government Fiscal Capacity in 15 Deputy Provincial Cities in China. *Leadership Science*, **26**, 17-21.
- [3] Jia, Z.L. (2011) An Empirical Study on Fiscal Extractive Capacity of Local Government from Multi-Angle—Based on Empirical Analysis of the Provincial Panel Data. *Journal of Lanzhou Commercial College*, **6**, 64-72.
- [4] Chen, D. and Chen, Z.Y. (2016) Empirical Study of China's Local Government Fiscal Extractive Ability—Based on Empirical Analysis of the Provincial Panel Data from 2003 to 2013. *Hubei Social Sciences*, **2**, 98-102.
- [5] Cui, Z.W., Zhou, P.L. and Yang, J. (2015) Analysis of Fiscal Extractive Capacity in China Silk Road Economic Belt Region—Based on Malmquist Index Method of DEA Model. *Friends of Accounting*, **24**, 125-129.
- [6] Zhang, S.X. and Dai, Y.G. (2012) Heterogeneity, Fiscal Decentralization and Economic Growth of The City—Based on the study of panel Quantile Regression Model. *Journal of Financial Research*, **1**, 103-115.
- [7] Guo, Q.W. and Jia, J.X. (2010) Fiscal Decentralization, Government Organization Structure and the Scale of Local Government Spending. *Economic Research Journal*, **11**, 59-72+87.

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