The Impact and Analysis of Urban Entrepreneurship Activity on Municipal Economic Development

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Abstract: In order to better promote the development of modernization and raise the level of economic and political development in our country, this paper analyzes the impact of urban entrepreneurial activity on the development of municipal economy. By using the evaluation algorithm of urban entrepreneurial activity, the entrepreneurial activity of three cities in a province is counted and calculated, and the correlation coefficient of sample variables between the evaluation results of entrepreneurial activity and the local municipal development is compared. Finally, the conclusion is drawn that the urban entrepreneurial activity has a positive correlation with the municipal economic development value. In the process of development, the urban entrepreneurial activity is conducive to the development and improvement of the municipal economy, while the development of the municipal economy is conducive to the improvement of the urban entrepreneurial activity.

Keywords: Urban entrepreneurship; Entrepreneurial activity; Municipal economy

1. Introduction

In the report of the 18th National Congress of the Communist Party of China, it was explicitly proposed to solve the employment problem through entrepreneurial activities, thus pointing out clear directions and ways to promote the in-depth development of China's market economy and expand employment. In the 12th Five - Year Plan of the CPC Central Committee, the policy of " encouraging self-employment and promoting full employment" was clearly pointed out. This proposal shows that the Chinese government is eager to ease employment pressure by encouraging entrepreneurship[1]. It can be seen from this that starting a business is not only the individual behavior of entrepreneurs, but also the focus of government work. Whether entrepreneurship is active or not has a great impact on the national macro - economy. On the one hand, the small and medium-sized enterprises formed in the initial stage of entrepreneurship are the main economic foundation of a country or region, and the active entrepreneurial environment will expand the scope and scale of economic growth. In developed countries, the number of such enterprises has even reached more than 95 %. On the other hand, entrepreneurial activities can promote employment in large numbers, which is one of the most effective ways to solve the employment pressure problem. Entrepreneurial enterprises can often create huge job space, so all countries actively encourage and support entrepreneurial activities and incorporate them into the policy framework of revitalizing the economy. Data show that nearly two-thirds of workers in Europe and the United States are employed by small and medium-sized entrepreneurial enterprises[2]. Private enterprise is an important mechanism to promote economic development, relieve employment pressure and realize innovation, and also an important way to promote diversified economic development. Since the reform and opening up, China's small and medium-sized private enterprises have become the most growing group in the national economy. In order to encourage entrepreneurship and expand employment, the state and municipalities have formulated and implemented a series of preferential policies, but the policy effect shows that the eastern region pays more attention to entrepreneurship than the western relatively backward region. Therefore, the development of start-up enterprises is particularly important to areas where the economy is relatively backward.

2. Calculation of Urban Entrepreneurial Activity

Based on the needs of actual economic analysis, combined with panel data model, the evaluation algorithm of the impact of urban entrepreneurial activity on municipal economic development is improved. The variables of panel data model have duality of time series and cross sections. It combines the information of time series and cross section series, takes multiple cross sections on time series, and selects indicators on these cross sections to form sample data, which is a measurement method with good application value[3-4]. Compared with the general linear regression model, the advantage is that it not only considers the commonness of cross-sectional data, but

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also analyzes the individual special effects of cross-sectional factors in the model. Based on the panel data model, the regression vector error algorithm in the evaluation algorithm of the impact of urban entrepreneurial activity on municipal economic development is:

$$y_{it} = \gamma_i + x_{it}{}'\beta_i + \delta_{it} \quad (i = 1, 2, \ldots, N; t = 1, 2, \ldots, T) \quad (1)$$

Among them, γ_i it is a random variable of entrepreneurial activity, and its change depends on the support range of the city policy $x_{it}{}'$, which is the regression quantity of $x_{it}{}'$ economic participation and development of urban entrepreneurial activity. If the distribution range of $x_{it}{}'$ is not limited. Then the model can be expressed in terms of the cross-sectional distance $c_i(i = 1, 2, \ldots, n)$ that varies across the cross - section, and the economic individual influencing factors on the cross-sectional unit can be deduced by ci, and the exit number can be used to indicate the degree of variation of the individual influencing factors on the overall structure with the coefficient vector $K_{it}(i = 1, 2, \ldots, n; t = 1, 2, \ldots, T)$. In addition, in order to study the contribution of urban entrepreneurial

enterprises to economic development, it is necessary to study the relationship between the input cost f (x) and the output f (y) of entrepreneurial enterprises. therefore, using Cobb - Douglas production function for reference, an index function panel regression model is established, and in order to simplify the model, the comprehensive technical level is incorporated into the random variable u. The basic model is as follows:

$$f(x) = [c_i\gamma_i + \alpha_i \ln K_{it} + \beta i \ln L_{it} + \delta_{it}] / \sum_{i=1}^{t} Y_{it} \quad (2)$$

$$(i = 1, 2, \ldots, N; t = 1, 2, \ldots, T)$$

$$f(y) = \overline{u_{it}}[\alpha_i \ln K_{it} + \delta_{it} i \ln L_{it} + 1] / \sum_{i=1}^{t} Y_{it} \quad (3)$$

$$(i = 1, 2, \ldots, N; t = 1, 2, \ldots, T)$$

Combined with the above algorithm, a theoretical model for detecting and analyzing urban entrepreneurial activity is proposed, which includes a mechanism module for promoting entrepreneurial economic growth. The specific structure is shown in the following figure:
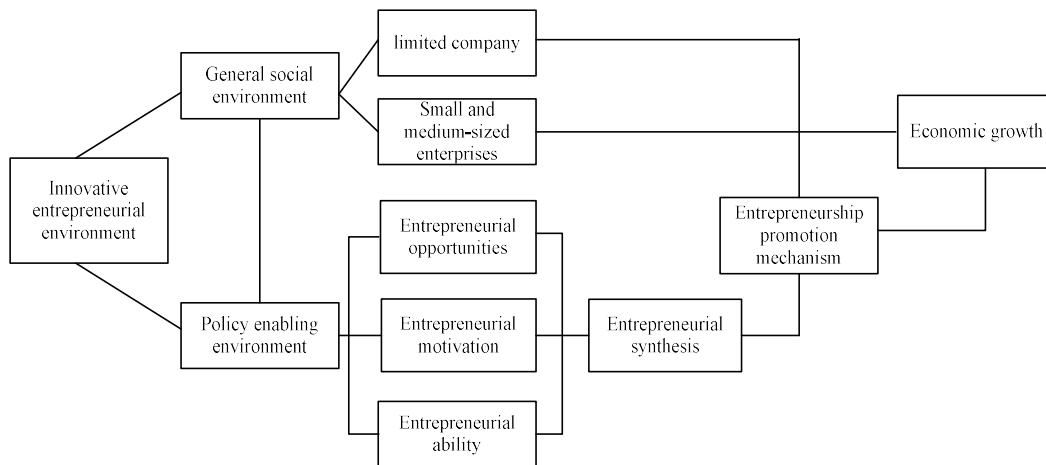

Figure 1. Model for detecting and analyzing urban entrepreneurial activity

Through the above model, combined with the method of theoretical research and empirical analysis, this paper takes a province in the southeast coast of China as an example to make a comparative empirical analysis, and tries to explore the influence of the development degree of various dimensions on entrepreneurial activity and the contribution of the comparative influence[5]. The survey found that with the improvement of entrepreneurial environment conditions, the international competitiveness of existing large enterprises will also be improved. They will create more demand for products and services for the home country economy, thus providing more small and medium-sized enterprises with market opportunities and promoting the growth of national economy and employ-

ment opportunities. Entrepreneurial environmental conditions refer to the social or cultural environment directly related to the production and expansion of entrepreneurial enterprises[6]. In addition, this mechanism is divided into two parts: the emergence of entrepreneurial opportunities and the ability of entrepreneurs. When the market environment is in a turbulent state of change, it is easier for enterprises to succeed when their innovation, creativity and response speed to market changes reach a higher level. At the same time, entrepreneurial activities play a more significant role in promoting economic growth. The two sets of mechanisms in the model are both independent and complementary to each other.

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3. Comparison of Urban Entrepreneurial Activity and Municipal Economic Development

Take a province in the southeast coast of China as an example to investigate. This paper makes a comparative empirical analysis of the municipal economic development of A city with relatively high entrepreneurial activity and B city with normal entrepreneurial activity, and compares the basic data of entrepreneurial development, the growth of small and medium-sized private entrepreneurial enterprises and the urban economic development of the three cities.

Among them, City A is the provincial capital and also a national entrepreneurial city. Due to the large amount of funds and policy support invested by the local government, the entrepreneurial activity of small and medium-sized private enterprises in City A has been greatly developed under the guarantee of government policies and systems to encourage and support entrepreneurship. The scale and road of entrepreneurial activities are basically developed, and the operational development and service concept of relevant entrepreneurial enterprises are relatively perfect, while the relevant government supervision is relatively strong[7]. Venture capital support is strong, and it has gradually poured into the ranks of the national entrepreneurial mainstream cities, and the city's entrepreneurial industry and activity are always in a state of rapid growth, with a good overall entrepreneurial development environment. This paper investigates the influencing factors of private entrepreneurial activity of entrepreneurial enterprises in A city in the past ten years. The investigation focuses mainly on the growth trend of the number of entrepreneurial households, the number of employees, registered capital, gross domestic product, sales revenue and retail sales of social consumer goods in A city. The development trend of start-up enterprises can be explained by the statistics of the relevant data of start-up enterprises in private enterprises in A city. The statistics are as follows:

Table 1. A survey of entrepreneurial activity index and entrepreneurial enterprise development data in A city

Increase Amount	Indicators of Entrepreneurial Activity%			Survey on Average Data of Entrepreneurial Enterprises			
	2008 (In thousands)	2008 (In thousands)	Entrepreneurial activity increased by %	2008	Growth %	2018	Growth %
New number of entrepreneurs	11	82	70.85	4797	13.46	16502	35.54
Number of employees	11	87	70.82	22616	9.47	133227	46.92
New registered capital	26	94	40.37	565591	61.74	1981460	73.53
New gross output value	34	84	20.42	37957.34	3.47	250641.14	33.42
Sales or operating income	48	91	20.21	252609.9	99.45	1254998.63	0.95
Total retail sales of social consumer goods	33	96	30.86	112785.5	16.83	1837549.3	21.96

From the data analysis in the above table, it can be seen that the entrepreneurial activity in city a shows a steady growth trend compared with the activity, the number of people participating in entrepreneurship in the city increases year by year, and the overall entrepreneurial activity and entrepreneurial awareness are relatively high[8].

Although City B is an important development city in the province, it borders City A, and its population size is similar to that of City A In recent years, B City has made great progress in entrepreneurship, and relevant government departments have also provided corresponding policy support for entrepreneurial activities. However, objectively speaking, the entrepreneurial activity in B City is still low, and the scale and impact of entrepreneurial activities are still far behind those in developed cities. This is mainly reflected in the relatively single business support system, imperfect service concept and inadequate supervision. Financing difficulties and expensive financing are still the most difficult problems for the city and even the whole country to solve in raising venture capital. It is difficult to obtain guarantee for political and economic loans, the amount is small, and it is difficult to adapt to the rising venture capital[9]. Looking at the entrepreneurial activities of various cities in the country, Jiangxi is in an inactive area. Although it has maintained a growth trend, the growth rate is not obvious. Its entrepreneurial form is not optimistic and there is no small gap with the area with high entrepreneurial activity. The data of new ventures in private enterprises in B city are shown in the following table.

Table 2. Survey of B city's entrepreneurial activity index and entrepreneurial enterprise development data

Increase Amount	Indicators of Entrepreneurial Activity%			Survey on Average Data of Entrepreneurial Enterprises			
	2008 (in thousands)	2018 (in thousands)	Entrepreneurial activity increased	2008	Growth %	2018	Growth %

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			by %				
New number of entrepreneurs	9	74	60.15	3487	13.46	51510	35.54
Number of employees	4	72	66.22	20454	9.47	52120	46.92
New registered capital	13	80	68.34	40212	61.74	752150	73.53
New gross output value	21	76	67.43	25152	3.47	8156515	33.42
Sales or operating income	30	81	64.75	25000.3	99.45	15615613	0.95
Total retail sales of social consumer goods	26	71	24.49	112785.5	16.83	137549.3	21.96

According to the information in the table, compared with the entrepreneurial activity in A city, the indicators of entrepreneurial activity in B city and the development data of entrepreneurial enterprises have decreased significantly, but the overall development trend is still on the rise.

The level of entrepreneurial development in city C lags far behind that in cities A and B. No matter in the face-to-face comparison of political and economic scale, political and economic added value, or in the comparison of political and economic intermediary and economic product diversification, it is in a backward position in the province. Moreover, the city's regional development level and population size are obviously insufficient compared with those of A and B cities, the deepening degree of political and economic structure is not perfect, the economic structure is not reasonable, and the industrial transformation is relatively lagging behind, resulting in slow economic growth. If the policy support is not strong enough, the city's economic marketization is still in its initial stage. If the policy support is not strong enough, it will easily lead to a vicious cycle of economic development restricting political and economic development, leading to a sharp drop in the number of political and economic service organizations. On the contrary, it has inhibited the political and economic development of the region. However, as the province has a good economic growth situation, it has a certain promotion effect on the entrepreneurship and development of city c, so the city's real economy as a whole is still at a relatively healthy and stable level of development, so that the political and economic industries can allocate social resources continuously and efficiently without generating a bubble economy. therefore, this benign economic development model has a positive impact on the economic development and deepening of the city[10]. The survey results of entrepreneurial activity index and entrepreneurial enterprise development data in C city are as follows:

Table 3. Survey of entrepreneurial activity index and entrepreneurial enterprise development data in C city

Increase Amount	Indicators of Entrepreneurial Activity%			Survey on Average Data of Entrepreneurial Enterprises			
	2008 (in thousands)	2018 (in thousands)	Entrepreneurial activity increased by %	2008	Growth %	2018	Growth %
New number of entrepreneurs	3	48	40.24	807	10	1841	25.76
Number of employees	1	42	13.12	1454	8.0	45117	36.45
New registered capital	10	51	45.45	4542	7.5	67297	43.28
New gross output value	17	54	51.83	21152	2.12	754116	23.40
Sales or operating income	18	45	43.43	18420.3	5.0	467211	1.74
Total retail sales of social consumer goods	19	41	12.17	92070.5	4.84	49721	24.46

Comparing the economic development of the above three cities, the survey results are obtained by calculating the urban entrepreneurial activity through the previous algorithm to obtain the urban entrepreneurial activity value and the urban economic development data, and the following results are obtained by plotting.
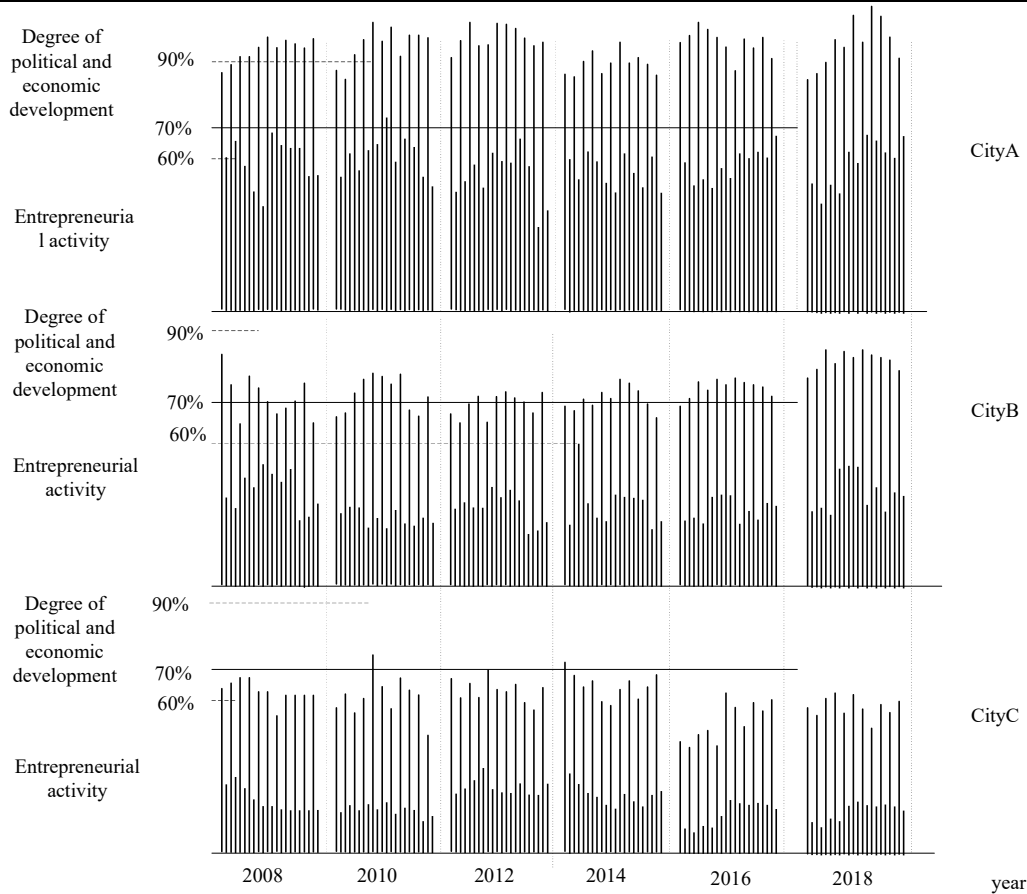
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Figure 2. Comparison of entrepreneurial activity and urban political and economic development in the three cities

According to the above survey results, the activity of urban innovation is positively related to the development of municipal economy and has an important impact on the development of municipal economy.

4. The Relationship between Entrepreneurial Activity and Urban Political and Economic Development

Combined with the above survey results, the impact of entrepreneurial activity on urban economic development was analyzed and studied. Usually, in order to verify the degree of correlation between the two variables, a correlation analysis should be done before the demonstration. If there is multiple collinearity between the variables Q and R, it may have a certain impact on the results of the demonstration regression, resulting in the phenomenon of " pseudo - regression". Therefore, in order to remove the possibility M that the collinearity between variables will affect the results, it is necessary to check the correlation between variables before regression. The algorithm is:

$$\Delta E = 2^{i} Q \rightarrow (1 + \frac{\delta}{2^{it}})^{m} R * \prod_{i=1}^{t} : f(x) f(y) \qquad (4)$$

Combined with the above algorithm, according to the economic activity index of A, B and C cities, the influence parameters of urban political and economic development are counted, and the correlation coefficients of information sample variables of the three cities are calculated and recorded to obtain the following data:

Table 4. Correlation coefficient of sample variables in A city

	m	Q	R	(xit, yit)	(xit, yit)	f(x)	f(y)
FSIZE	1	-	-	-	-	-	-
FSTRUC	0.421***	2	-	-	-	-	-
FEFFIC	0.545***	0.515***	1	-	-	-	-
GEPR	0.647***	0.524***	-0.061***	1	-	-	-
PORT	0.614***	0.514***	-0.035***	1.025***	0	-	-
GB/T	0.481***	0.491***	-0.029***	0.942***	0.034***	1	-

HK.NCCP

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	m	Q	R	(xit, yit)	(xit, yit)	f(x)	f(y)
CPI	0.490***	0.842***	-0.016***	0.914***	0.041***	0.024***	2

Table 5. Correlation coefficient of sample variables in B city

	m	Q	R	(xit, yit)	(xit, yit)	f(x)	f(y)
FSIZE	1	-	-	-	-	-	-
FSTRUC	0.456***	2	-	-	-	-	-
FEFFIC	0.423***	0.489***	1	-	-	-	-
GEPR	0.489***	0.753***	-0.078***	1	-	-	-
PORT	0.453***	0.587***	-0.087***	1.860***	0	-	-
GB/T	0.549***	0.483***	-0.013***	0.912***	0.021***	1	-
CPI	0.596***	0.789***	-0.023***	0.815***	0.023***	0.041***	2

Table 6. Correlation coefficient of sample variables in C city

	m	Q	R	(xit, yit)	(xit, yit)	f(x)	f(y)
FSIZE	1	-	-	-	-	-	-
FSTRUC	0.831***	2	-	-	-	-	-
FEFFIC	0.894***	0.286***	1	-	-	-	-
GEPR	0.765***	0.345***	-0.046***	1	-	-	-
PORT	0.889***	0.258***	-0.082***	1.198***	0	-	-
GB/T	0.753***	0.260***	-0.042***	0.047***	0.061***	1	-
CPI	0.796***	0.369***	-0.056***	0.048***	0.043***	0.015***	2

According to the above survey results, among the sample variables of the three cities in the province, the average correlation coefficient between the political economy scale index and the political economy structure index among the explanatory variables reached 0.702, and the correlation coefficient between the economic growth rate of the average control variable and the average explanatory variable was 0.529, all exceeding 0.5, possibly resulting in multiple collinearities. From the table, it can be seen that the correlation between the C municipal economic scale index and entrepreneurial activity is not obvious, while the political and economic structure index and economic efficiency index show a significant positive correlation with entrepreneurial activity. The goodness of fit of the two cities A and B is 0.814 and the adjusted goodness of fit is 0.760, indicating that the model has a good goodness of fit, which can reflect that the development of the economic structure and economic efficiency of the two municipalities has promoted the entrepreneurial activity in the region and has a great impact on the development of the city's political and economic scale. The survey found that both the total amount of deposits at the end of the year by political and economic organizations and the total amount of loans at the end of the year by political and economic organizations, the data of city A are larger than that of city B, and similarly, city B is lower than city C, especially after 2010. This shows that city a is slightly better than city b and city b is obviously better than city c in terms of the total size of the political economy, thus having more advantages in the source of optimal allocation of funds. From the perspective of growth trend, the amount of loans and deposit balances of the provincial government and economic institutions has obviously increased since 2008, and has increased even more rapidly since 2010. However, the similar indicators in C City showed an obvious upward trend only after 2014. This shows that in terms of optimal allocation of funds, City A is ahead in time, seizing the first-mover advantage, and City B is immediately behind. After 2014, City A has fully implemented the supervision of the political and economic market, which has played a strong role in promoting the standardization and procedure of the political and economic market, and has increased the on-site inspection efforts, so that the provincial political and economic industry has maintained a good overall operational situation. During this period, the deposit volume of the political and economic organizations grew rapidly, while the relative loan volume was slightly inferior, which also illustrates the low utilization rate of funds absorbed by the political and economic organizations. From the point of view of capital market, the number of listed companies in city c has not always been large, and even dropped sharply in 2010 and did not increase in several years. On the other hand, in provinces A and B, the number of listed companies has increased almost every year since 2008, reaching 254 and 196 respectively in 2014, more than three times the number in C city. The following is the number of listed companies in the three cities over the years.

Figure 7. Number of listed companies in three cities in past years

	2008	2010	2012	2014	2016	2018
CityA	60	80	120	186	202	254
CityB	40	70	100	164	180	196
CityC	20	16	18	20	21	20

Figure 8. Survey on the impact of listed companies on urban politics and economy in three cities in past years

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	2008	2010	2012	2014	2016	2018
CityA	0.32	0.34	0.36	0.40	0.44	0.46
CityB	0.39	0.30	0.34	0.36	0.38	0.40
CityC	0.22	0.20	0.22	0.20	0.21	0.20

According to the data in the table, although the number of listed companies in A and B cities is relatively large, the number and operation of listed companies are not the key factors in the process of urban political and economic development, and the impact of urban entrepreneurial activity on urban political and economic development is relatively higher.

To sum up, a survey of the city's entrepreneurial activity and the impact of politics on economic development shows that there is a big gap between the development level of municipal economy A and that of city C, and the reasons for this gap are various. Research shows that the economic development of the three cities is not in the same comparative level and plays a decisive role. As the economic development of City C is relatively lagging behind, the industrial adjustment and upgrading is relatively slow, and the economic structure is not reasonable enough, the level of political and economic development in the region will inevitably be affected from the perspective of economic development. However, according to the concept of " political and economic deepening theory", political and economic development to a certain extent will restrict economic development, leaving the development of the real economy to excessively develop political and economic industries, which will lead to a reverse trend in the regional economy. Secondly, judging from the supply and demand of venture capital, the most important political and economic tool in China's venture capital financing channels is still loans from political and economic institutions, and the main source of loan funds is political and economic deposits. The survey found that the deposit amount and growth rate of municipal economic organizations A is slightly higher than that of city B and city B is far higher than that of city C, which provides sufficient funds for political and economic loans and can more fully meet the demand for corporate loans, so city A is more reasonable from the perspective of capital supply and demand. Local government actions will interfere with the development of politics and economy. Administrative intervention will affect the decision-making behavior of political and economic institutions, especially the banking industry with state-owned assets background and the government's working concept of " GDP first" will also affect social resources and economic structure. Due to the weak entrepreneurial activity and economic development in city c, the government needs to use multiplier effect to increase government spending and thus speed up economic growth.

5. Concluding Remarks

The level of political and economic development is often closely related to the economic development of the region, and the current level of regional development is directly affected by the city's entrepreneurial activity. Regions in good condition need good real industries to support, and real industries cannot do without the support of political and economic services. Therefore, the high level of political and economic development can reflect the trend of the economic environment in the region in a certain way, and according to the " entrepreneurial entrepreneur effect" hypothesis, the environment of economic prosperity can promote the increase of entrepreneurial activities. It can be seen that the level of political and economic development has an impact on entrepreneurial activity. When supporting innovation in politics and economics of small and medium-sized enterprises, the government believes that giving full play to and making full use of private politics and economics can make a great contribution to the financing activities of small and medium-sized enterprises, and suggests that the characteristics of private lending, such as multiple types, large scale, low cost, simplicity and quickness, are conducive to the capital, politics and economics of start-up enterprises or small and medium-sized enterprises, and can better promote the development of the national economy. Overall, political and economic development can promote the economic development of a country or region. By virtue of the excellent environment created by the benign development of politics and economy, it can arouse the entrepreneurial spirit of entrepreneurs, stimulate their willingness to start a business, and reduce many difficult problems faced in entrepreneurial activities, especially in the initial stage of starting a business, so as to effectively promote the healthy development of the municipal economy.

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