

Measurement and Evaluation of the Business Environment in Large and Medium-Sized Cities in China

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Abstract: The comprehensive development level of the business environment reflects the quality of a region's economic development, and a good business environment will give a city a strong vitality. This paper uses the entropy method to measure and evaluate the business environment of 106 large and medium-sized cities in China from 2017 to 2021. The results show that: From the spatial point of view, the business environment index of China's cities shows a gradually decreasing pattern from east to west and from south to north. The balance of the business environment of large and medium-sized cities in China is divided into four levels according to the standard deviation of the ranking of each sub-index. The greater the standard deviation, the more unbalanced the overall development of the business environment in the region. Finally, this paper put forward countermeasures and suggestions to further optimize the business environment.

Keywords: Business environment; Evaluation system; Entropy evaluation method

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1. Introduction

According to the World Bank's "Ease of Doing Business" report ranking, China's business environment rose from the 90th place in 2015 to the 31st place in 2020, ranking 7th in East Asia, with positive growth for six consecutive years. Why is optimizing the business environment so important that the Chinese government has repeatedly emphasized it? Different scholars have different opinions, but the views are similar and the emphasis is different. A good business environment is a depression where factors gather, a highland where talents aspire, a basin where costs are reduced, and a blessed place where benefits are improved ^[1]. A good business environment promotes productive investment and increases entrepreneurial activity, thereby enabling high-quality economic development ^[2]. Since 2015, the growth rate of China's economic development has shown a downward trend, but the quality of economic development has steadily improved. China's economy, like a giant ship sailing in a stormy sea, must be steady to achieve a steady future. Under the current domestic and international situation, optimizing the business environment is to liberate and develop productive forces. Only when the productive forces are released, can the production relations be further improved and the economic and

social development be better.

2. Literature review and theoretical analysis

In November 2022, the World Bank released a new business environment system B-READY, which includes 10 first-level indicators including market access, access to business premises, municipal public infrastructure installation, employment, access to financial services, international trade, taxation, settlement of commercial disputes, promotion of market competition and handling of bankruptcy [3]. The China Council for the Promotion of International Trade is one of the earliest institutions to conduct a national business environment survey and assessment and has now formed a comprehensive index system with unique Chinese characteristics. The system consists of 12 first-level indicators and 51 second-level indicators, such as fair competition environment, human resources environment, infrastructure environment, social credit environment, enterprise establishment, and exit environment [4]. Li constructed China's business environment evaluation index system from seven dimensions. Through statistical analysis of the business environment data of 289 prefecture-level cities in China, he found that there were significant differences between the north and south, east and west, urban agglomerations, and sub-environments in China's urban business environment. Therefore, each city should focus on improving its sub-environment with comparative advantages and choose to make up for its inferior sub-environment [5,6]. Using a spatial metrology model and kernel density estimation, Huang and Zhang confirmed that the development level of the business environment at the urban level in China is a low level of agglomeration and medium-to-high level of dispersion [7]. Fan *et al.* started their research on the business environment from the perspective of "Internet + government service," revealed how government entities and market entities interact to optimize the business environment and found that there are two intermediary paths in the interactive governance of the two to reduce transaction costs and improve the efficiency of government services [8]. Qiu *et al.* evaluated the level of business environment from the two dimensions of the business environment and business living environment and used a variety of methods to analyze the regional differences and dynamic evolution trends of China's business environment development level from multiple perspectives, and believed that attention should be paid to the comprehensiveness and focus of business environment optimization [9].

3. Construction and research method of evaluation index system

3.1. Construction of evaluation index system

Based on the "Regulations on Optimizing the Business Environment" promulgated by The State Council and the research of Liu [5] and Qiu [9], and considering the comprehensiveness, scientificity, and data availability of the index system, this paper constructs a city-level business environment index system that includes 6 first-level indicators, 16 second-level indicators, and 26 third-level indicators. The first-level indicators are composed of the public service environment, market environment, innovation environment, financial services, rule of law environment, and government services.

3.2. Research method

To analyze and evaluate the contribution of each index to the urban business environment, this paper uses the entropy weight method to measure the development level of the business environment of 106 large medium-sized cities in China from 2017 to 2021. The specific steps are as follows: First, standardize the data, then calculate the proportion of sample value of the J index in cities I, then measure the entropy of the J index, then calculate the difference coefficient of the J index, determine the weight of the J index, and finally measure the

comprehensive evaluation value of business environment in each city.

4. Analysis of the development level of China's business environment

4.1. Overall analysis of business environment development

Based on the above methods, a comprehensive index of the business environment of each city is calculated. The comprehensive development level of the business environment in Beijing, Shenzhen, Guangzhou, and Chongqing is far ahead, located in the first echelon of A-level. Beijing and Shanghai have gathered high-quality resources in all aspects of talent, science and technology, finance, and so on, among which a “free port economy, simple tax system, professional services” are the core competitiveness of Shanghai's business environment. Shenzhen, Guangzhou, and Chongqing have several complete industrial chain systems, and the overall level of business environment has obvious advantages.

The business environment index of 15 cities, including Chengdu, Hangzhou, Suzhou, and Nanjing, is between 20–40 points and is in the second echelon of Grade B. Except for Wuxi, Dongguan, and Suzhou, the remaining cities are either separately planned cities or provincial capitals. In recent years, with the rise of the strong provincial capital strategy, various resources and policies have tilted to the provincial capital city, the agglomeration effect is obvious, and it is committed to building a metropolitan area and the development level of the business environment is higher^[10]. As the core and engine of urban agglomeration, the provincial capital plays a strategic role in the coordinated development of the regional economy.

The cities whose average business environment is between 13–20 points are in the third tier of Grade C, the 34 cities are Foshan, Nantong, Fuzhou, and so on. Among them, the representative cities selected by Jiangsu, Zhejiang, and Guangdong are all above grade C, which is enough to demonstrate the leading advantages of the business environment and economic development in the southeast coastal areas, while the rest are mostly sub-central cities in the northeast or central provinces.

The remaining 52 cities with an average business environment of 7.5–13 are ranked in the fourth tier of Class D, and the increment and increase of these medium-sized cities are relatively slow. However, from the dynamic point of view, some cities are still commendable, with Ganzhou city and Haikou city having the highest average annual growth rate.

4.2. A dimensional analysis of the business environment

The business sub-environment index of all Chinese cities has improved from 2017 to 2021. Since 2015, local governments in Chinese cities have paid more attention to the balanced development of the business sub-environment and resolutely prevented the emergence of the wooden barrel effect. Beijing, Shanghai, Guangzhou, and Shenzhen ranked in the top five in each sub-index. At the city level, the development of public services, market environment, and financial services is extremely uneven, gradually weakening from east to west^[11]. Public services have been significantly improved, market-oriented reform has continued to deepen, and governments at all levels have vigorously cut down on various administrative licenses and approvals in disguised forms, constantly unleashing market vitality.

Financial services are difficult to meet the needs of enterprises and technological innovation lacks vitality. Therefore, banking institutions need to continuously improve the level of financial services guided by the needs of enterprises. Continuously strengthening the supply of innovative talents, increasing investment in scientific research, and protecting intellectual property rights are necessary means to promote scientific and technological innovation^[12]. The quality of government environmental services is stable and rising, and the construction of the legal environment tends to be perfect.

4.3. Analysis of the balance degree of business environment in Chinese cities

In this paper, the standard deviation of the six sub-environmental rankings of each sample city in 2021 is used to measure the development balance of the urban business environment. A higher standard deviation means a worse equilibrium, and vice versa. The top four in terms of business environment balance are Beijing, Shanghai, Shenzhen, Chengdu, and Guangzhou, while Chongqing falls out of the top five. On the whole, the sub-environmental development of cities ranked among the top 20 in the Business Environment Index is mostly balanced, except for Ningbo City and Dongguan City^[13].

5. Policy recommendations

In terms of the market environment, it is crucial to unify basic system rules to stimulate the vitality of market players and build a modern circulation system to promote the flow of factor resources. The government should strengthen the coordinated application of innovation and build a modern market system.

Regarding the innovation environment, it is essential to strengthen the construction of scientific and technological innovation infrastructure and reform the innovation personnel training mechanism. Enterprises should enhance the construction of an innovation culture and actively promote collaboration between industry, universities, and research institutes.

For the public service environment, continuous improvement of the living environment for business personnel is necessary. This includes constantly improving the levels of medical care, health care, and education, as well as appropriately increasing the supply of cultural and entertainment services^[14].

Concerning government services, the government should continue to deepen the reform of “delegating management services,” promote the coordination and implementation of reform measures, and persist in advancing tax reduction, fee reduction, and the construction of the “Internet + government services” platform.

In terms of financial services, it is important to expand direct financing channels and smooth out indirect financing channels to address the financing difficulties and high costs faced by small and medium-sized enterprises. It is also necessary to improve the organizational system of multi-level inclusive financial institutions and enhance management levels.

Regarding the rule of law environment, it is important to promote the enactment, reform, repeal, and interpretation of business laws and regulations, and to strengthen the construction of the rule of law. Administrative law enforcement should be strictly regulated to ensure that no actions are authorized beyond the law, and legal boundaries are accurately maintained^[15].

Finally, the measurement and evaluation of the business environment should not focus on competing for rankings, but rather on identifying each city’s shortcomings and benchmarks. The aim is to leverage the function of “evaluation to promote construction” and strive for improvement based on these benchmarks.

Disclosure statement

The author declares no conflict of interest.

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