

Research on the Construction of the Indicator System for the Operating Characteristics of Urban Business Environment

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Abstract: The construction of urban business environment operation characterization indicator system is an important hand to promote the dynamic perception of urban business environment in all time and space, promote the digital innovation of business environment, and build a first-class digital business environment. This paper analyzes the research results of various types of business environment evaluation index systems at home and abroad, proposes a four-stage urban business environment operation indicator system construction methodology (demand analysis - framework construction - indicator sorting - practical application), and constructs vitality, demand, industry, elements, Policy, Claims, Industry, Factor, Policy, Office, Regulation, Openness, Environmental Characteristics and other 10 first-level signs, 38 second-level dimensions, 59 third-level indicators of the general indicator system, and summarize the methodology of the construction of the indicator system.

Keywords: Business environment, operational signs, indicator system.

1. Introduction

The business environment is the soil for the survival and development of enterprises, the soft power of cities to compete with each other, and the hard core support to promote the high-quality development of urban economy. The Regulations on Optimizing the Business Environment stipulate the establishment and improvement of a business environment evaluation system oriented to the satisfaction of market participants and the public, and the leading and supervisory role of business environment evaluation in optimizing the business environment^[1]. General Secretary Xi Jinping has repeatedly emphasized the need to strengthen the construction of digital infrastructure, promote the dissemination and application of new technologies, and strive to build an open, fair and non-discriminatory digital business environment. Promoting the construction of a digital business environment is an important decision to implement the CPC Central Committee and the State Council's decision to promote the digital transformation of cities, which is conducive to stimulating market vitality and social creativity and promoting the high-quality development of cities.

At present, most of the evaluation systems of urban business environment are not able to reflect the operating characteristics of urban business environment in a timely and rapid manner, and there are still problems such as weak indicator system, insufficient monitoring timeliness, and low evaluation digitization, which cannot meet the increasing demand for automated monitoring, rapid command and dispatch, and digital business environment innovation. Therefore, it is of great significance to carry out the research on the indicator system of the operating characteristics of the urban business environment to monitor the operating status of the urban business environment in a comprehensive, objective and timely manner, to enhance the level of digitally-enabled business environment, and to promote the healthy development of the economy.

2. Literature Review

(1) Connotations of the Operational Characteristics of Urban Doing Business

With the requirement of high-quality economic development, the research on business environment has gradually increased. A good business environment can promote the development of all aspects of urban operation, and this part of the literature is organized from the connotation of business environment and urban operation characteristics.

① Studies on the meaning of business environment

The World Bank first introduced the concept of "Doing Business", defining it as the sum of the time and costs invested in starting a business, operating it, trading it, paying its taxes, liquidating its assets, and fulfilling its contracts.[1]. Kolasinski considers Doing Business to be the environment in which a business exists and grows, as well as the time and cost of complying with policies and regulations when producing, operating, and trading time and cost of complying with policy regulations in production, operation and trade[3]. Wei Shuyan and Sun Feng, after combing domestic and international literature, suggest that the business environment is a dynamic and organic system, which includes multiple dimensions such as the economy and market, the social and cultural environment, the political system, and government policies and regulations[4]. According to Song Linlin and He Chengxiang, Doing Business refers to a multi-dimensional and multi-initiative systematic reform of economy, rule of law, politics, and openness to the outside world implemented by the government of a given economy[5].

② Studies related to the connotation of urban operational signs

With the deepening of China's urbanization process and the gradual optimization of the urban governance system, the measurement and evaluation of urban development is becoming an important means of upgrading urban

construction. Approved by the State Administration of Market Supervision and Regulation, the "Evaluation Indicators of New Smart Cities" is based on the overall situation of urban development, with the goal of promoting the healthy and sustainable development of new smart cities, and is geared towards prefectural-level and above cities and county cities, constructing indicators of urban operation that cover services for the benefit of the people, precise governance, ecological livability, information infrastructure and other aspects. The Ministry of Housing and Urban-Rural Development (MOHURD) released the "Work Program of Urban Physical Examination"[6] Taking the identification of problems in urban development, urban planning, construction and management as the starting point, it proposes a system of urban operation indicators in eight aspects, including ecological livability, health and comfort, and safety and resilience, so as to promote the development of the urban living environment to a higher quality. The system is designed to promote the development of urban habitat to a higher quality.

Therefore, this paper's urban business environment operating characteristics is to reflect the dynamic changes and internal correlation status of various key elements and indicators of the comprehensive ecology of urban business, aiming to promote the modernization of urban governance and the healthy development of enterprises.

(2) Current status of research on the evaluation index system of the business environment at home and abroad

① Current status of foreign research

The current foreign business environment evaluation index system is dominated by the index system set by four international organizations: the World Bank (DB), the Economist Intelligence Unit (EIU), the OECD (OECD), and the Global Entrepreneurship Monitor (GEM).

In 2013, the World Bank published its first Doing Business report with 11 primary indicators covering 185 economic indicators. 2020 report further optimized the evaluation indicators with 10 primary indicators and 37 secondary indicators. 2023 report focuses on the whole life cycle of enterprises and establishes a new evaluation system (B-READY) around the three aspects of the regulatory framework, public services, and operational efficiency. Business Environment Evaluation System (B-READY). The Economist Intelligence Unit's Business Environment Indicator System is slightly weaker than the World Bank's in terms of frequency of application, and it publishes a report on the business environment once every five years, covering 10 first-level indicators, namely the political environment, macroeconomic environment, market opportunities, etc., which organically combines the macro-environment and market factors. Taking enterprises as the starting point, the OECD, by exploring the development cycle of startups, divides the entrepreneurial environment into three stages: determinants affecting startups, direct effects reflecting the development of enterprises, and social effects arising from the maturity of enterprises, thus forming a kind of environmental evaluation index system[7]. Global Entrepreneurship Monitor also focuses on the entrepreneurial environment level, forming a system of evaluation indicators for entrepreneurial financing, government policy (support), government policy (tax and bureaucracy), and government entrepreneurship programs.

② Current status of domestic research

The evaluation system of China's business environment is

mainly discussed and researched from two directions: the whole national business environment and the local business environment.

The National Development and Reform Commission (NDRC) has been carrying out the evaluation of the business environment since 2018, and on the basis of the indicator system of the World Bank's Doing Business Report, and in combination with the actual situation in different parts of China, it has established a multi-dimensional indicator system covering government services, market supervision, public credit, and ease of business start-up, which has to a certain extent realized the all-round and systematic monitoring of the business environment in China. Yang Zhihuang and other scholars study the evaluation system of business environment with Chinese characteristics, and propose to establish an all-fields and all-factors business environment measurement index system from the four pillars of political-military, economic-financial, social-cultural and natural ecology[8]. Based on the ecosystem theory, Li Zhijun and other scholars constructed a business environment evaluation system for Chinese cities from seven dimensions: public services, human resources, market environment, innovation environment, financial services, rule of law environment, and governmental environment[9]. Jiang Aihua et al. used principal component analysis to construct a complete set of evaluation index system of government procurement business environment, covering market access, procurement process management, problem handling, supervision and management, credit and rule of law environment, totaling 5 level 1 indicators, 27 level 2 indicators and 39 level 3 indicators[10]. Feng Shoudong and Wang Aiqing proposed an evaluation index system for China's tax business environment, which includes six first-level indicators of tax system quality, tax administration effectiveness, tax law compliance, tax judicial effectiveness, tax payment convenience and total tax burden rate, and 23 second-level indicators of tax system fairness and tax system efficiency[11].

In 2014, Foshan City of Guangdong Province was the first city to construct a business environment indicator system with internationalization, rule of law, and marketization as the first-level indicators, and 48 second-level indicators such as the degree of foreign economic and trade cooperation. Zhang Qia and Cao Yuchen took Shaanxi Province as the research object and constructed a set of systematic evaluation index system of business environment in Shaanxi under the background of "release management and service" reform by using quadratic weighted factor analysis and clustering analysis to select the indicators from the four dimensions of governmental environment, market environment, innovation environment and public service respectively[12]. Based on factor analysis, Li Jiayi et al. constructed the evaluation indexes of business environment in Liaoning Province from six dimensions: market, government affairs, rule of law, infrastructure, opening up to the outside world, and scientific and technological innovation[13]. Li Dan et al. used to construct the evaluation system of business environment in three dimensions of governmental and legal environment, economic and market environment, and education and innovation environment, and used Yaahp software to evaluate the business environment of Anhui FTZ[14].

In summary, many authoritative organizations and experts and scholars at home and abroad have conducted a lot of research on the evaluation index system of the business environment, and established the evaluation index system of

the business environment from different dimensions, but most of them focus on the surface indexes of the business environment, and there are fewer indexes designed and evaluated "under the ice surface" of the business environment, especially the specific index system research of the urban business environment is even more lacking. In particular, there is a lack of research on the specific indicator system of urban business environment. Based on the above background, this paper proposes a four-phase indicator system construction methodology to build an evaluation system of indicators of urban business environment operation characteristics to provide a "baton" for the high-quality construction of a first-class market-oriented, rule-of-law, and internationalized business environment.

3. Methodology of the System of Indicators of The Operating Characteristics of The Urban Business Environment

This paper focuses on the digital enhancement of the level of operating characteristics of the city's business environment and the long-term healthy development, and builds a four-stage indicator system construction methodology of "demand analysis - framework construction - indicator sorting - practical application".

In the stage of demand analysis, the necessity of constructing the indicator system of business environment at international, regional and city levels is analyzed to form the detailed demand for the construction of the indicator system of business environment in cities, and to point out the direction for the construction of the subsequent indicator system.

In the framework construction stage, taking the four scenarios of urban business environment, namely supply and demand control, centralized deployment of problems, joint promotion of reforms, and annual work evaluation, as the starting point, the principles of the indicator system construction are clarified, and the overall framework of the indicator system is constructed under the guidance of the objectives to clarify the dimensions and levels of content to be covered.

In the indicator sorting stage, taking the indicators of the national assessment of business environment, the new version of the WB indicators, departmental operational indicators, statistical departmental indicators, third-party agency indicators, etc. as the sources, selecting and drawing on the specific indicators that meet the needs of the indicator system construction and are in line with the overall design idea, and clarifying the types of connotation of the indicators, the way of calculating them, and the sources of data, etc., in order to lay the foundation for the application practice and optimization and upgrading of the indicator system.

In the stage of practical application, the indicator system is used to monitor the operation of the city's business environment, form a business environment evaluation system, strengthen the command and control of the business environment, and optimize and improve the quality of market services.

4. Construction of An Indicator System for The Operating Characteristics of The Urban Business Environment

(1) Needs analysis

In today's context of globalization and increasingly fierce regional economic competition, the advantages and disadvantages of the city's business environment have a direct impact on the survival and development of enterprises, the attractiveness of investment, as well as the overall economic vitality and competitiveness of the city. This paper discusses why it is necessary to construct a system of indicators of urban business environment from three aspects: international, regional and urban.

The first is the need to adapt to the development trend of economic globalization. The advantages and disadvantages of a city's business environment directly determine its status and attractiveness in global resource allocation. Global capital flows are becoming more and more frequent, and multinational enterprises will make a comprehensive comparison of the business environment of different cities when choosing investment destinations[15]. By constructing the index system, the competitiveness level of cities in the international arena can be clearly presented, helping cities to find their own positioning and adjust relevant strategies in time, so as to better attract foreign investment, integrate into the global industrial chain and supply chain system, participate in the international division of labor, and occupy a favorable position in the global economic pattern.

Secondly, it is the need to promote regional coordinated development. There are certain differences in the level of economic development among regions in China, and as the core nodes of the regional economy, the business environment of cities plays a key role in driving the synergistic development of the whole region[16]. A perfect indicator system can help analyze the advantages of the business environment accurately, and then radiate the successful experience to the neighboring cities, play the role of demonstration and leadership, and drive other cities in the region to improve the quality of the business environment, so as to form a regional development pattern with complementary advantages and synergistic progress.

Thirdly, it is the need to help the sustainable development of cities. The sustainable development of cities encompasses economic, social, environmental and other dimensions, and a good business environment is an important support for the realization of this goal. A system of indicators of the operating characteristics of the urban business environment can reflect the quality and vitality of the city's economic growth, promote the city's economy to maintain a healthy and stable development trend in the long term, and avoid over-reliance on traditional industries or short-term economic stimulus.

(2) Framework construction

① Application objectives

The construction of the Urban Business Environment Operational Indicator System is centered on enterprises to support the four scenarios of urban business environment: supply and demand control, centralized scheduling of problems, joint promotion of reforms, and annual work evaluation. The Urban Business Environment Operation Characteristics Indicator System provides a tool for the Urban Business Office to monitor the supply and demand relationship in the market. Through real-time monitoring, it ensures that the policy formulation matches the market

demand, and the government can adjust the policy in time to meet the needs of enterprises and the market. Government leaders establish a problem scheduling mechanism through the indicator system to ensure that problems faced by enterprises can be quickly responded to and solved, thereby optimizing the problem handling process and enhancing government service efficiency and enterprise satisfaction. The construction of the institutional system ultimately serves to optimize the business environment, and the process requires organic synergy between cross-departmental and cross-level, and ultimately promotes the participation of all relevant departments in the optimization of the business environment to ensure the systematicity and effectiveness of the reform measures of the business environment. The indicator system, characterized by scientific, systematic and standardized features, accurately gauges the current situation of the city's business environment, and carries out annual evaluation of the business environment with scientific and fair assessment methods, providing reference for policy formulation and government assessment. The third-party organization conducts inter-city benchmarking evaluation of the business environment through the indicator system of urban business environment operation characteristics, helping cities to clarify their own positioning, find the target of benchmarking, and improve the optimization strategy.

② Principles of construction

Adhere to the combination of demand-side and supply-side signs. Guided by the needs of market players and centered on the transformation of government functions, we set up both demand-measurement signs (market vitality, enterprise demands, etc.) and supply-side signs (industrial upgrading, factor allocation, policy supply, office service, market supervision, market opening, rule of law protection, environmental governance, etc.), and strive to comprehensively and dynamically reflect the core elements of the city's business environment.

Adhere to the combination of cost- and benefit-oriented indicators. On the basis of the systemic cost indicators of the business environment, such as time, links, cost and convenience, new efficiency indicators are added in terms of quantity, structure, quality and efficiency, aiming to reflect the effectiveness of the city's business environment in terms of quality optimization, structural optimization and efficiency optimization in all aspects.

③ General framework

This paper takes "high market vitality, responsive to

demands, excellent industrial environment, complete allocation of factors, strong policy supply, good office service, effective supervision, high level of openness, strong rule of law, excellent environmental governance" as the orientation, and decomposes the operating characteristics of urban business environment into ten major characteristics (first-level classification), namely, vitality, demands, industry, factors, policy, office, supervision, openness, rule of law, environment, etc. (Figure 1). The ten major signs (first-level classification) of the city's business environment are vigor, demand, industry, factors, policies, services, regulation, openness, rule of law and environment, as shown in Figure 1. Vitality signs are mainly used to measure the development vitality of market main body, including market main body vitality, enterprise upgrading quality, enterprise entrepreneurial ability, enterprise growth elasticity and other 4 dimensions.; demand signs mainly measure the government's ability to respond to the demands of the enterprise and the level of the demand, including handling number, handling costs, handling quality, handling efficiency and other 4 dimensions; industry signs mainly measure the level of the industrial ecological level, including the project startups, industrial capacity improvement, industrial investment and financing, project satisfaction and other 4 dimensions; factor signs mainly measure the level of factor supply, including space, capital, talent, technology, data and other 5 dimensions; policy signs mainly measure the level of policy supply capacity, including policy supply capacity, policy supply efficiency, policy satisfaction and other 3 dimensions; office signs mainly measure the level of business services, including the cost of office work, Office efficiency, office quality, through service effectiveness and other 4 dimensions; regulatory signs mainly measure the level of market supervision, including regulatory capacity, regulatory quality, regulatory efficiency and other 3 dimensions; open signs mainly measure the level of internationalization, including foreign using, foreign investment, foreign talent, foreign trade and economy and other 4 dimensions; law signs mainly measure the level of the rule of law, including Legal demands, bankruptcy liquidation, labor arbitration, civil litigation and other 4 dimensions; environment measures the level of public services, ecological environment, and travel services, including public services, ecological environment, ravel environment and other 4 dimensions.

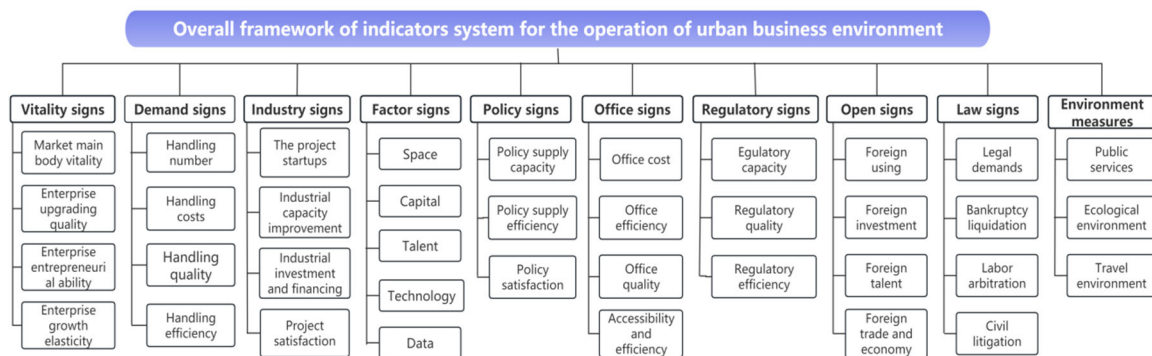


Figure 1. General structure of the system of indicators of the operating characteristics of the city's business environment

(3) Sorting out indicators

This paper follows the general framework system and

selects specific indicators of the operating characteristics of the urban business environment from the national

measurement indicators, the new version of the WB indicators, departmental business indicators, statistical department indicators, and third-party agency indicators.

The National Business Environment Measurement Indicator is a standardized evaluation system constructed under the leadership of the Coordination Group for the Reform of "Release Management and Service" in line with China's national conditions, in which systemic cost indicators, such as the time, links, costs and convenience of starting a business, play an important role in attracting investment and innovation resources to the market. On this basis, this paper forms specific indicators such as "the growth rate of accepting business cases" and "the rate of on-time completion of business affairs", and incorporates them into the "business characteristics" of "efficiency" and "efficiency". "Business Efficiency" dimension. The World Bank's Business Environment B-READY Evaluation Indicators have been significantly updated on the basis of the DB Evaluation Indicators, with the addition of business loans, e-payments, green financing, etc. to the financial services indicators, which can visualize the differences in the accessibility of financial services in different economies. This paper establishes the specific indicator of "growth rate of investment and financing events" and incorporates the dimension of "industrial investment and financing" in "industrial characteristics". By analyzing the indicator of "growth rate of market regulatory demands", market regulators can identify changes in the frequency of various problems in the market, as well as unfair relationships in market competition, which can provide a basis for policy formulation. In this paper, this indicator is included in the "regulatory capacity" dimension of the "Regulatory Characteristics". As a third-party evaluator of the business environment, Beijing Zero Market Research Co., Ltd. comprehensively evaluates the business environment of Sichuan in terms of the characteristic indicators of openness and cooperation, private economic development, etc. The indicator of "growth rate of actual utilized foreign capital" reflects its internationalization level and economic openness, which is incorporated into the dimension of "openness" in this paper. The index of "growth rate of actual utilized foreign capital" reflects its internationalization level and the degree of economic openness, which is included in the dimension of "Foreign Investment Index" of "Openness Characteristics" in this paper.

On this basis, this paper clarifies the connotation type, calculation method, and data source of each specific indicator, and finally forms an indicator system of urban business environment operation signs with 10 first-level signs, 38 second-level dimensions, and 59 third-level indicators.

(4) Practical applications

The urban business environment operation index system is mainly applied to three aspects: business environment operation monitoring, business environment work evaluation, and business environment command and dispatch.

① Business Environment Operational Monitoring

All government departments work together to collect basic data based on the government data sharing and exchange platform of each city. On this basis, the base period of the index is determined, the index trial calculation is carried out, and a series of analytical reports on the monitoring of the city's business environment are compiled. With respect to the relevant index data, we conduct monthly collection and in-depth analysis to gain precise insights into the current

operating conditions and future development trends of the city's business environment, focus on the existing problems and carry out targeted analysis, and output practical and feasible recommendations to build a solid support service system for decision-making and deployment in relation to the business environment.

② Evaluation of Doing Business efforts

Integrate the index system into the business environment evaluation system, and promote quarterly business monitoring and evaluation of the operating conditions of the city's business environment. With the help of the dynamic changes of the total index and sub-indexes, can accurately assess the effectiveness of the city's business environment, increase the frequency of business environment monitoring, and strengthen the overall evaluation effectiveness. To assist in the assessment of the business environment, we will formulate appropriate incentives to give grand commendations and generous rewards to those units and individuals who have performed well and achieved outstanding results in the process of optimizing and upgrading the business environment. Taking the business environment operation index system as a reference benchmark, and comparing with the national reform task list for optimizing the business environment, we will gather the strength of all parties, focus on the key points, make every effort to overcome the difficulties, and actively shape the highlights, so as to ensure that all the policies and all kinds of initiatives to optimize the business environment can be steadily put into practice and take root and see the results.

③ Doing Business command and control

Integrate the indicators and data systems related to the operating characteristics of the city's business environment into the monitoring system of the city's business environment, and with the data produced by the evaluation indicator system, provide powerful support for the comparison of indicators, reform quantification, efficiency assessment, supervision and inspection, and other application scenarios, and achieve a leapfrog transformation from purely "presenting the situation" to precisely "prescribing the right remedy". "The data produced by the system will provide powerful support for the application scenarios such as indicator comparison, reform quantification, efficiency assessment, and supervision. Fully utilizing artificial intelligence, big data and other cutting-edge means to build a business environment command and dispatch platform, converging industry, enterprise, supervision and other aspects of information, covering business environment index evaluation system, enterprise demand tracking and processing mechanism, as well as the key elements of the electronic file of market entities, through the business environment data collection, index analysis, visualization, reform assessment, complaints and reports of the complete process. In this way, it achieves the visualization and monitoring of the evaluation index system, and realizes the overall coordination and control.

5. Conclusion

To promote the construction of a digital urban business environment, we should give full play to the important role of the urban business environment operation indicator system in monitoring the city's status, comprehensive evaluation and development decision-making, and establish a four-phase methodology of "Demand Analysis-Framework Construction-Indicator Sorting-Practical Application". The four-phase methodology of "demand analysis - framework

construction - indicator sorting - practical application" is used to establish a system of indicators for the operation of the urban business environment, which will support the accurate quantitative assessment of the urban business ecology and help cities attract the convergence of resources and promote the high-quality development of the economy.

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