Research on the public economic problems of Harbin Urban Planning

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Abstract. The city is the inevitable thing of the historical development of a country and a nation, is a combination of economic development, social progress and civilization evolution, and the development of a country's city reflects the overall economic strength of the country, the degree of social civilization and the living standards of the people. As a modern socialist country, China's urban development has begun to evolve from quantity to quality and from big to good. The report of the 20th National Congress of the Communist Party of China put forward: "Adhere to the people's city for the people and the people's city for the people, improve the level of urban planning, construction and governance, accelerate the transformation of the development mode of megacities, implement urban renewal actions, strengthen urban infrastructure construction, and build livable, resilient and smart cities." This important requirement conforms to the new trend of urban development, the new requirements of reform and development, and the new expectations of the people, and points out the direction for doing a good job in urban work on the new journey and promoting people-centered new-type urbanization. As an important provincial capital city in Heilongjiang Province and even Northeast China, Harbin's urban planning has important research significance.

Keywords: urban planning; public economy; urbanization

1   Introduction

The provision of public services and the supply of public goods are the core of the public economic problem research, Public services and public goods are the top priorities in the urban planning process, In the whole process of urban planning, the government takes the overall role, Coordinate the role of all parties, In the public economic research, the government functions to promote the optimal allocation of resources[1], Stabilizing macroeconomic development and income redistribution, The two research direction and theoretical content are generally the same, Analyze the problems of public services and public goods arising in the process of urban planning, Helping the government to better safeguard the interests of the state and its citizens in the process of urban planning, Promote the optimal allocation of various resources in a city, To coordinate

the material and spiritual gains of a city resident. Scientific, reasonable, efficient local to complete the task of socialist new period of modern urban planning.

2   Public economic problems arising in the urban planning of Harbin city

2.1   The contradiction between city public interest and economic growth

Urban public resources refer to the name of public goods that is naturally formed and exists in a city, with the government as the main supplier and the enjoyment of all urban citizens. It is a necessary item for a city's economic development and the survival and life of citizens[2]. The development and utilization of public resources in a city is often affected by many factors, including the urban economic level (see table 2), the urbanization process, the citizen quality, the civic interests and the management system of the government. The rights and interests of city citizens in urban public resources are also called urban public interests. After the reform and opening up, with the rapid development of our country economy, market economy plays an irreplaceable decisive role, Harbin city planning has entered the stage of rapid development, in the development period of Harbin infrastructure, and the integration of the surrounding rural town get overall planning, the main urban area division further clear, with south post and road two city as the east, west, south, north four direction of radiation of modern urban development. However, due to the too much attention to the speed of urban economic development and urban economic growth, and the neglect of many important public interests, an obvious urban disease has appeared. For example, traffic congestion in Harbin, uneven distribution of educational resources and urban environment. Have become a restriction factor affecting the economic development of Harbin city.

2.2   The contradiction between the supply of urban public goods and services and the growth of demand

Government-led public services and public goods can not meet the people as the urban economic growth and income level needs, make the urban planning in the process of health care, education, entertainment, culture, and other public services and public products appear lag phenomenon[3], Harbin city still exist "difficult", "expensive" problem, some middle and below income citizens of common disease, frequently-occurring disease treatment spending is stretched. Especially in the special period when the second boot has not yet hit the ground. Harbin has 8 area 7 county 3 city, urban and rural area of surrounding counties and townships in the cultural cognition and cultural understanding level than urban has obvious deficiency, and most of Harbin public cultural service funds into the city, to the surrounding remote counties and townships both economic investment and infrastructure construction is less, lead to the public cultural services supply deviation. Due to the influence of climate, geographical location, cultural differences, and many other factors, Harbin on the relevant talent construction, part of the cultural construction unit talent team appeared the cliff phenomenon, related public

cultural service provider unit talent reserves, engaged in personnel quality is not high, seriously affected the construction and development of public cultural services in Harbin.

3   Gray association advantage analysis

3.1   The algorithm principle

Correlation coefficients were calculated

Let the reference sequence be $X0 = \{x0\ (1),\ x0\ (2),\ ...,\ x0\ (m)\}$

The comparison sequences are $Xi = \{xi\ (1),\ xi\ (2),\ ...,\ xi\ (m)\}$, $i\ = 1, …, n$

The association coefficient at k of the comparison sequence Xi for the reference sequence X0 is defined as:

$$\eta_i\ (k)\ =\ \frac{\displaystyle\min_s \min_t |x_0\ (t)\ -x_s\ (t)\ |+\rho \max_s \max_t |x_0\ (t)\ -x_s\ (t)\ |}{|x_0\ (k)\ -x_i\ (k)\ |+\rho \max_s \max_t |x_0\ (t)\ -x_s\ (t)\ |}$$

Among them, the min min x0(t)−xs(t) and max max 0(t)−xs(T) is called two-stage minimum difference and two-stage maximum difference respectively; p is called resolution coefficient, the greater the resolution, generally $p = 0.05$.

The association coefficient only represents the degree of association between the reference sequence and the comparison sequence at each position, and in order to understand the degree of association between the sequences overall, they must find the mean value, namely the gray correlation degree.

$$r_i = \frac{1}{n} \sum_{k=1}^{n} \eta_i\ (k)$$

Note: If each index has different weights, it can be weighted average to get the gray weighted correlation degree.

$r \in$ [0, 0.35), known as a weak association;

$r \in$ (0.35, 0.65), known as moderate association;

$r \in$ [0.65, 1], referred to as a strong association.

Table 1. Urbanization rate of registered population in Harbin (2018-2021)[4]

Year	Urbanization rate
2018	49.10%
2019	49.80%
2020	55.70%
2021	55.80%

Table 2. Economic GDP of Harbin (2018-2021)[4]

Year	Gross Economic Product
2018	501.01 billion
2019	512.94 billion
2020	513.52 billion
2021	529.25 billion

Table 3. Table of Some Financial Final Accounts of Harbin City (2018-2021 Unit billion)[4]

	2018	2019	2020	2021
General public services expenditure	558031	627751	693552	634496
education spending	1180131	1194121	1174796	1143298
social security expenditure	2184358	2603758	2604188	2571181
Medical and health expenditure	703817	752476	948227	1001630
Urban and rural community expenditure	1535166	1885052	1627597	919687
Transportation expenditure	314429	355899	362683	394425
Housing security expenditure	550496	483454	754750	686490

3.2   Operation results and interpretation

Consider 7 subfactors X_1General public service expenditure, X_2education spending X_3Expenditure on social security and employment, X_4Medical and health care and family planning expenditure X_5Urbanand rural community expenditureX_6Transportation expenditure, X_7Housing security expenditure 2 parent factors Y_1Urban economic GDP Y_2Urbanization rate, and the data is taken down (see table 3):

Table 4. Operation results

	Y_1	Y_2
X_1	0.7361512	0.8546487
X_2	0.8897771	0.8165112
X_3	0.7020481	0.8233789
X_4	0.6600249	0.7205586
X_5	0.6820364	0.6684893
X_6	0.7137711	0.8310567
X_7	0.6385178	0.7260097

It can be seen from the correlation matrix that the financial input has a great impact on the economic development level and urbanization rate of a city. (see table 1)

Public economy research promotes urban modernization. (see table 4)

4   Public economy research promotes urban modernization

4.1   Increase the effective supply of public goods

In the process of urban planning in Harbin, the Harbin municipal government should not only give full play to the regulatory role of the market in the resource allocation, but also do a good job as the regulator and planner of urban public services and public goods provision. Harbin has not met the expectations of Harbin residents in providing public goods and services such as transportation, medical care and education. Many public services that should be provided free or cheap by the government have made urban residents pay a large price. A large number of the population has been excluded. In the government in the process of urban planning should according to the different regional economic level of resource allocation, based on regional economic development goals of reasonable allocation of resources, for the higher level of economic development area to increase the investment in the urban infrastructure to make its play to the role of the city window and resources clusters[5]. For the urban areas with relatively backward economic development level or low economic output value, the investment in education and medical care should be increased to avoid the problems such as "school district housing" and "difficult to see a doctor"[6]. The government should do a good job in making public decisions on resource allocation, improve the relevant decision-making mechanism, and establish a certain feedback system to regularly observe and collect the satisfaction degree of citizens with the relevant decisions. Fully safeguard the extensive interests of Harbin citizens[7].

4.2   Actively give full play to the government's public finance function

Urban public finance expenditure plays an important role in guaranteeing the process of urbanization[8]. In the study of public economy, the government has the functions of stabilizing the macro economy, optimizing the resource accessories, and adjusting the income distribution. In urban development, the primary responsibility of the government is to provide public services and public goods. As the government is not only the regulator of public finance, but also the planner and provider of public goods and public services, it plays the responsibility for the collection and application of public finance in the process of urban planning[9]. Therefore, the government should play a role of overall development, people first and coordination in the process of urban planning. In the process of urbanization, we should try to avoid the phenomenon of government failure, promote the economic development of cities, accelerate the development speed of modern cities, and guarantee the quality of modern city development on the basis of safeguarding the interests of urban citizens.

Acknowledgment

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