

Retraction

Retracted: Evaluation of Social and Economic Benefit of Urban Rail Transit Project Based on Spatial Econometric Model

Wireless Communications and Mobile Computing

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

- (1) Discrepancies in scope
- (2) Discrepancies in the description of the research reported
- (3) Discrepancies between the availability of data and the research described
- (4) Inappropriate citations
- (5) Incoherent, meaningless and/or irrelevant content included in the article
- (6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

- [1] S. Zhang, "Evaluation of Social and Economic Benefit of Urban Rail Transit Project Based on Spatial Econometric Model," *Wireless Communications and Mobile Computing*, vol. 2022, Article ID 7890342, 10 pages, 2022.

Research Article

Evaluation of Social and Economic Benefit of Urban Rail Transit Project Based on Spatial Econometric Model

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The social and economic benefits of urban rail transit projects based on spatial econometric model are evaluated. A spatial econometric model is established to evaluate the social and economic benefits of rail transit projects in different cities in China. From 2007 to 2019, the growth rate of GDP in the eastern, central, and western regions as well as the whole country showed a downward trend. The growth rate was at a relatively high level in 2007 and 2008. It dropped sharply to below 10% in 2009 and again to 10-15% in 2012. The growth rate of eastern and central China and the whole country was basically maintained between 5% and 12%. The development of urban rail transit projects was positively correlated with social and economic benefits. Therefore, it is necessary to take into account all the influencing factors and strengthen the development of urban rail transit projects to promote the growth of social and economic benefits.

1. Introduction

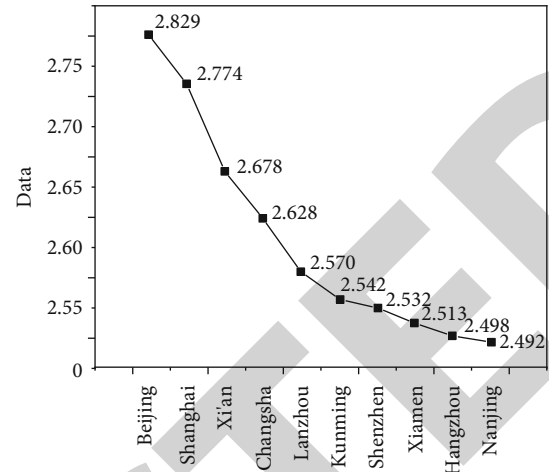
Concerns about the relationship between transport and economic development have long been raised, especially in today's interconnected world. But our country is humongous, and different provinces have different cultural backgrounds. The economic development around the focus and speed also has very big difference. In terms of transportation construction, railway and highway are two kinds of common mode of transportation. There are also some areas, such as coastal cities or cities near the river, occupying a certain advantage in shipping. Though in recent years there has been a certain degree of development in the shipping way, there is still a certain gap between the proportion and the previous ones [1]. With the rapid development and the expanding of the economy in recent decades, China has now become the world's second-largest economy entity. In order to keep our strengths, keep the sound and rapid economic development and avoid a major shift in the economy, the pattern of economic development must be changed and the economic structure must be adjusted and optimized. We must not focus on the rapid pace of development, but focus on the positive aspects of development, and achieve sustain-

able and collaborative growth. An urgent problem to be solved at present is the imbalance of regional development. The process of the reform and opening-up in China is deepening, the development among different regions is unbalanced, and the gap is increasing. Because the eastern coastal areas are in the forefront of reform and opening up, the development of private economy and enterprises is rapid, which accumulates a large amount of capital. The implementation of the many preferential policies of reform and opening up also attracts a large number of international capital and capacity, so foreign exchange reserves grow rapidly. It provides a solid foundation for the economic development of the eastern region. And due to the geographical position and policy implications, the central and western regions open late. And the difficulty of inside and outside to build roads and other infrastructure makes the trade with other countries and regions of the world restricted. The gap between east and west is gradually increasing [2, 3]. Transportation infrastructure is an important content of government investment and one of the main regulation way of economic growth, as a result of human society productivity. It also has become an indispensable important condition. Through the transportation infrastructure, the limit of the

space can be broken. It can promote the flow of capital, labor, and technology between different regions and promote the coordinated development of the overall process of social production in different regions. Green traffic in 2021 is shown in Figure 1.

In terms of theory, the traditional economic growth theory (Figure 2) holds that capital, technology, and labor are important factors that affect the economic growth. It assumes that flow of elements and products do not need time cost and ignore the transportation cost, which causes the influence of the traffic infrastructure on the economic growth is ignored. Therefore, transportation has not been included in the research model as a separate variable. But in real economic activities, the transportation cost is not negligible. The two most important characteristics of spatial economics are transportation cost and increasing returns in production and consumption. These two characteristics are abstracted from the general equilibrium model, which is the reason why spatial economics has not become an important method of economic research for a long time. Adding the spatial spillover effect of transportation infrastructure into the study of economic growth can make up for the neglect of transportation cost in previous studies and improve relevant theories [4, 5].

From the practical point of view, the transportation infrastructure construction plays a key role in promoting regional coordinated development and realizing integration [6]. At present, the urban traffic planning and construction are generally considered according to the economic characteristics and traffic routes of the city. However, in practice, the traffic construction of a region not only considers its contribution to the economic growth of the region but also considers the influence on its neighboring regions. In real life, the relatively perfect transportation system of high-level economic development of region becomes an advantage [7, 8]. It can absorb more resources and elements, which becomes the core economic growth. And the spillover effects of low level of development of the region may cause the loss of more resources, leading to the regional gap increases gradually. Therefore, in order to realize the regional integration, the construction of transportation infrastructure must be carried out on the premise of coordinated regional development, so as to break the barriers of connectivity and realize mutual communication and common development between regions. In addition, due to the uneven distribution of resources and large regional gaps in China's previous development, the transportation system also presents problems such as regional imbalance and large density differences. Therefore, the study of the spatial effect of transportation infrastructure on regional economy is not only to strengthen the interconnection of some regions and realize regional integration but also to apply relevant experience to the future study of China's overall economic coordination development. Therefore, the impact of transportation infrastructure on regional economic growth is studies in the research, which is conducive to improving China's transportation system, reducing regional economic development gap, and promoting coordinated economic development [9]. Traffic density data are shown in Figure 3.



2021 urban green travel willingness index top10

FIGURE 1: Green transportation in 2021.

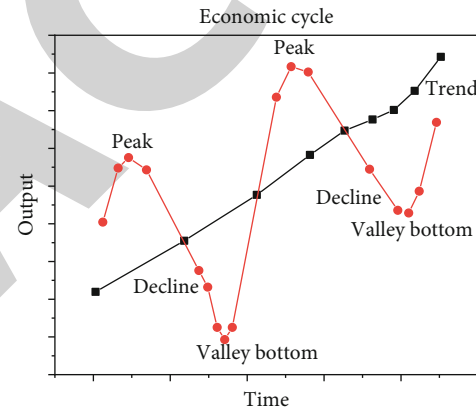


FIGURE 2: Economic growth theory.

2. Literature Review

Infrastructure is an important prerequisite for business growth. As an important part of infrastructure, transportation has always played an important role in the development of the industry. As a result, there is endless discussion about transportation infrastructure and the development of domestic and foreign markets. After the 1980s, Liu proposed the theory of new economic geography, and more scholars began to study economic issues from the perspective of space [10]. After a period of in-depth research, spatial econometrics began to be more widely used in various economic problems [11]. Up to now, more and more economists began to add transportation infrastructure into the corresponding research system from the perspective of space, which was determined by the network and external characteristics of transportation facilities.

2.1. Spatial Dependence of Regional Economic Growth. Spatial dependence occurs when the value of a local area depends on the value of the stem and its adjacent location, the significance of the situation. By this influence, the value

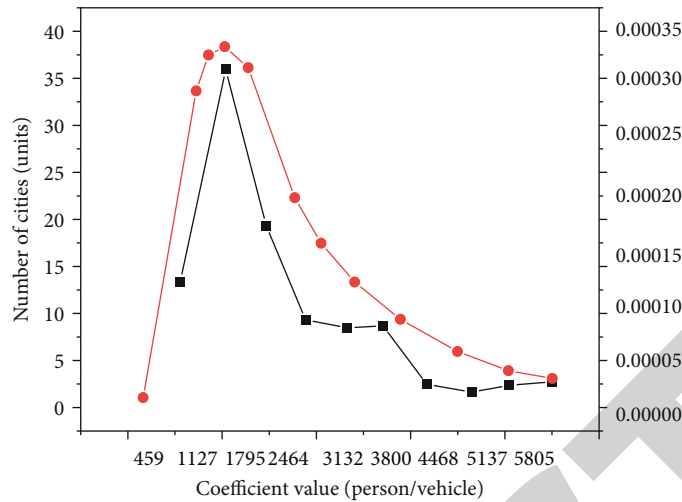


FIGURE 3: Traffic density data.

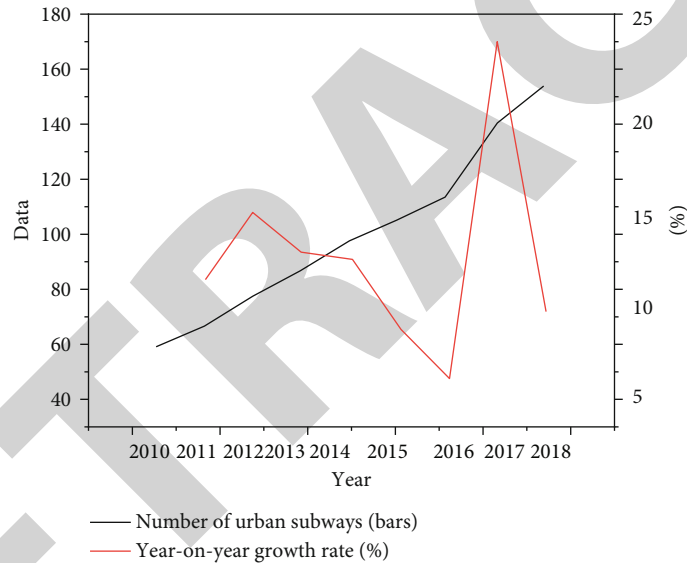


FIGURE 4: Spatial spillover effect.

of each location in the area will be affected by the value of the other points surrounding it. The real spatial dependence reflects the spatial interaction effect existing in reality, such as the intercommunication of production factors between different regions. The spatial clustering of these things is due to spillover effects, as well as other socioeconomic factors. This effect is reflected in the interaction between different regions in real life. The key reason why transportation infrastructure can produce spatial spillover effect is that regional economy is spatially dependent [12].

Spatial spillover effect (Figure 4) refers to the change of a certain feature in a region that will affect other regions, resulting in the change of neighboring regions in this feature. This influence is due to the interaction space and the indirect impact, and its impact strength will increase with distance and waning. The spillover effect makes an organization in an activity produce the desired effect, which will

affect people or society outside the organization. It is the main part of the activities and the external benefit of the activity. When an area of the capital investment and policy direction in geographic space plays the exemplary role and incentive effects, it will promote economic growth in the region, radiate to the surrounding areas, accelerate the economic development of surrounding areas, and bring a series of effects on foreign capital or talent flow. In addition to these positive effects, there may also be negative effects such as the loss of local talent and capital production factors and the inhibition of economic development [13, 14].

2.2. Network of Transportation Infrastructure. A network is made up of many lines connecting points everywhere. Transportation network is to connect various regions through different transportation lines to complete the flow of goods or services between different regions. Transportation infrastructure

is a major channel for economic connection in daily life and shoulders the heavy task of product and factor circulation in various regions. A traffic line can affect the area directly connected to the line but also affect other lines, which in turn have an impact on other areas. Therefore, the spatial “context” of regional economic growth is the network system formed by it. To be specific, each city and village in the network of transportation facilities are connected by different means of transportation, and then, different provinces are connected by trunk lines, which can correspond with the three basic units of point, line, and plane in the network. Through the organic combination of all basic units, the whole network system is formed. The face represents a region, which can be a province or an economic circle. The network performance of transportation infrastructure is enough to build an economic system in each region and, at the same time, ensures the effective circulation of various production factors among regions, which is conducive to the allocation of resources and ensures the realization of the integration goal [15].

Due to the characteristics of regional heterogeneity, each region has a certain gap in natural conditions, human resources, capital concentration, innovation ability, and other aspects. So the level of economic development will be affected. Those areas with obvious innate advantages will be developed preferentially, attracting resources from neighboring areas to flow and gather, and forming an obvious gap with the development of other surrounding areas. When this center reaches a certain level of development, certain resources reach saturation and begin to spread to the surrounding areas, forming a larger range of development centers. Connected by transportation lines, the different development centers form a large-scale network. The networked nature of transportation infrastructure provides carriers for the movement of factors of production and goods between different regions, reducing transport costs and strengthening links between economies. At the same time, it also makes it possible to connect more different modes of transportation, such as road, railway, and water transportation [16].

The network characteristics of transportation infrastructure can be understood from the following three aspects. First, transportation infrastructure is an important channel for the exchange of factors of production, goods, and culture between different regions and economies. With the continuous improvement and expansion of transportation network and the improvement of regional accessibility, the country is increasingly moving towards an economic and cultural integration direction, and the connection between various regions is gradually deepened. Second, the network characteristics of transportation infrastructure are conducive to the improvement of transportation construction. The geographical conditions of different regions in China are not the same, so various modes are selected according to local conditions to achieve the optimal connection mode. The improvement of each mode of transportation can not only improve the same type of transportation lines but also provide new connection modes for other types of lines, forming organic connections of all kinds of transportation lines. Third, the network of transportation infrastructure can form

certain competition between regions in the process of economic (Figure 5) and cultural communication. The improvement of accessibility enables residents and enterprises to have more choices and achieve higher quality goals with lower transportation costs, thus forming certain competition among different regions [17, 18].

2.3. The Action Path of Transportation Infrastructure on Spatial Spillover Effect of Regional Economic Growth. First, the path of microscopic plays. The microoperation of transport by the intersection of the industrial area in the region can be explained by two people and involved visually.

- (1) The impact of transportation infrastructure on individuals

The developed transportation infrastructure can make residents have more convenient travel conditions and reduce travel costs. In addition, transportation infrastructure also has an effect on residents’ economic activities, and on this basis, the spatial spillover effect is mainly achieved through the following paths. First, the improvement of transportation infrastructure can improve the location accessibility and attract more workers from other regions to move to the areas with improved transportation, which directly promotes the economic development of the areas with improved transportation and produces typical spatial spillover effects. Second, the reduction of transportation costs can affect residents’ choice of travel goals. One of the most important factors residents consider when traveling is the convenience of transportation. When the transportation infrastructure network between different regions can be effectively connected, people will have a longer distance to go out. With the improvement of residents’ income level and the boom of tourism (Figure 6), more families or individuals will choose to travel during holidays. And when choosing a destination, they usually prefer to choose a place with high accessibility. Therefore, the improvement of transportation infrastructure can promote the development of tourist cities, increase a certain amount of tourism income, and also produce a typical spatial spillover effect [19].

- (1) The impact of transportation infrastructure on enterprises or industries

Whether transportation is perfect or not has a significant impact on the location of businesses. In addition, by improving transportation infrastructure, it can reduce the production costs of businesses and expand product launches. The production and transportation costs in the future should be taken into consideration as to how to choose the right place to establish a new organization when the enterprise expands its scale and how to make the optimal choice when the enterprise merges other organizations. Transportation determines this, which in turn affects the input and output of products. Therefore, in the case of similar other conditions, enterprises will inevitably choose cities with better transportation infrastructure to survive and sell. In addition, regions with convenient transportation are more likely to

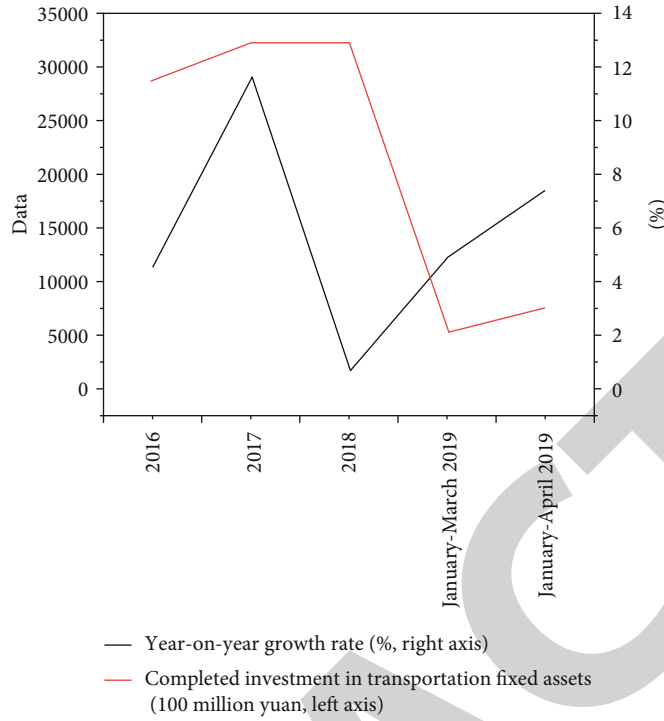


FIGURE 5: The relationship between traffic and economy.

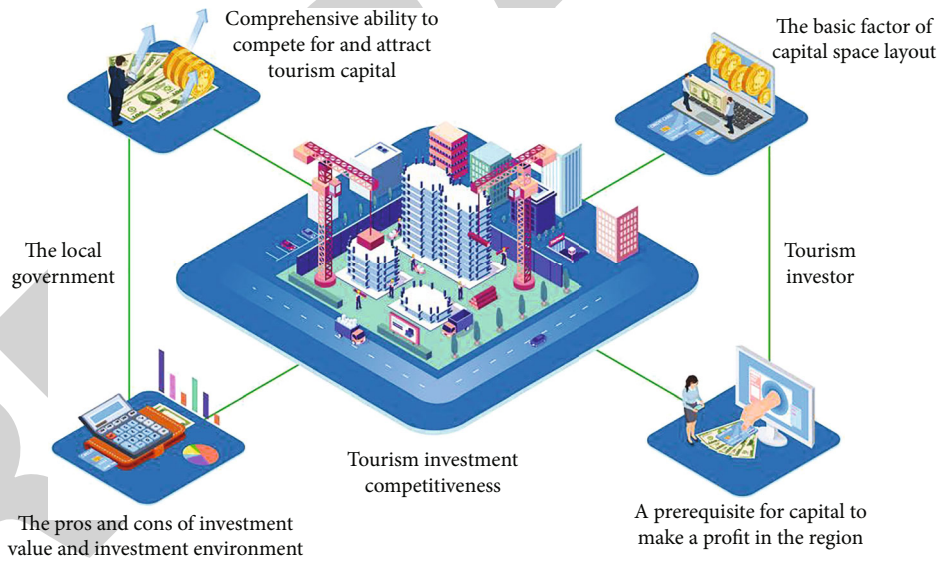


FIGURE 6: High-end transportation and tourism.

attract the inflow of foreign capital, technology, and other factors. Residents also tend to choose areas with convenient transportation when they find jobs. Therefore, enterprises located in areas with developed transportation infrastructure are more likely to obtain high-quality resources. With these high-quality resources, enterprises can have more space for technological innovation and more scientific production management, so as to further improve economic returns [20, 21].

When an enterprise or industry has more resources and more space for development, it will have a certain impact on

the level of regional economic development and employment. But whether the effect is positive or negative is not entirely certain. For areas with a higher level of economic development, a perfect transportation system is conducive to attracting high-quality resources and labor from other areas and forming resource aggregation. Abundant labor force and advanced technology as well as low transportation cost make the sales of products in this region more advantageous than other regions. However, for those regions with low level of economic development, they may face the loss

of talents and the preemptive occupation of the market. They cannot reduce costs and have no advantages in market competition [22].

Second, the macroscopic action path.

According to the theory of regional economics, economic development is not balanced. Due to the unbalanced allocation of resources, there is always a gap between the preconditions of economic development in different regions. Regions with development advantages can give full play to their advantages first and draw a gap with the economic development level of other regions. In this way, regions with fast development will be more attractive to investors. It can also obtain the inflow of capital, technology, talents, and other factors of production from the surrounding slow-developing areas and then further promote economic growth. After that, the fast-developing areas will develop faster, while the slow-developing areas will develop more slowly due to the loss of resources, forming a center-periphery structure. However, this trend does not last forever. When economic development reaches a certain level, economic growth will be accompanied by a series of problems, such as environmental pollution, traffic congestion, increased competitive pressure, insufficient per capita resource allocation, urban planning, and blind investment. The emergence of these problems will weaken the economic growth trend of the central economic region to a certain extent. At this time, the production scale of the rapidly developing region will no longer expand, and the remaining production resources will flow to other surrounding areas, driving the economic development level of the surrounding areas. When the surrounding area gradually increases the level of growth, it will become a new attractive area, absorbing the elements of the central area to diffuse and transfer in its own direction. In this way, it can drive the economic development of surrounding areas and narrow the development gap between different regions [23].

3. Methods

3.1. Selection of Spatial Weight Matrix. In order to measure the position relation and spatial distance between variables, it is necessary to introduce the important tool of spatial weight matrix, which is a basic condition and basic tool of spatial econometrics in empirical aspect. There are different types of spatial weight matrix. But at present, there is no standard for the selection of spatial weight matrix, which is usually determined according to the actual research problems and research objectives. It has certain subjectivity in the actual selection. The spatial weight matrix W represents the distance relation of n positions in a certain space, which can not only represent the distance of geographical space but also the distance of upper cooperative relationship and the closeness of interpersonal relationship [24]. Its form is as follows.

$$W = \begin{vmatrix} w_{11} & \cdots & w_{1n} \\ \vdots & & \vdots \\ w_{n1} & \cdots & w_{nn} \end{vmatrix}. \quad (1)$$

w represents the distance between region i and region j , and element $W_1 = \cdots = W_{nn} = 0$ on the main diagonal, indicating that the distance between each region and itself is 0, so the space weight matrix is a symmetric matrix with all the main diagonal elements being 0. The most commonly used distance function is "adjacent," that is, $W_{ij} = 1$ when region i is adjacent to region j . On the contrary, $W_{ij} = 0$ when region i is not adjacent to region j . Adjacent relationships can be divided into the following types (Figure 7).

Car adjacent: two adjacent areas have a common edge [25].

Like adjacent: two adjacent regions have common vertices but no common edges.

Back adjacent: two adjacent areas having common edges or vertices.

In spatial econometric analysis, "row standardization" is usually carried out on the spatial weight matrix, that is, each element in the matrix is divided by the sum of all elements in its row, so that the sum of all elements in the matrix is 1.

$$W_{ij} = \frac{\bar{W}_{ij}}{\sum_j \bar{W}_{ij}}. \quad (2)$$

3.2. Spatial Autocorrelation Test. Spatial autocorrelation describes the relationship in adjacent area identification data. Spatial autocorrelation is preferably the high-benefit area and the low-income area. Conversely, if the high value is adjacent to the low value, this is the negative spatial autocorrelation. If the distribution of height and depth does not have special rules and is completely different, this means that there is no spatial relationship. The analysis of spatial correlation is generally considered from global and local perspectives. Global spatial autocorrelation can reveal the average aggregation degree of data in spatial distribution. In the research, global Moran index is used to measure global spatial autocorrelation, which is defined as follows.

$$I = \frac{\sum_{i=1}^n \sum_{j=1}^n W_{ij} (X_i - \bar{X})(X_j - \bar{X})}{S^2 \sum_{i=1}^n \sum_{j=1}^n W_{ij}}. \quad (3)$$

In the above formula, S^2 represents sample variance, W_{ij} represents spatial weight matrix (i, j) elements, and the part in the denominator except S^2 represents the sum of spatial weights. The value range of global Moran index is $[-1, 1]$. If >0 , the space is positively autocorrelated, and <0 , the space is responsible for correlation. $=0$ means random distribution in space. Moran index formula is as follows.

$$I_i = \frac{(X_i - \bar{X})}{S_i} \sum_{j=1}^n W_{ij} (X_j - \bar{X}). \quad (4)$$

The dependence of each local area can be calculated as a model. The positive I am used to indicate the high (low) value of the area I am surrounded by the high (low) ambient value, and the negative I am used to indicate the high (low)

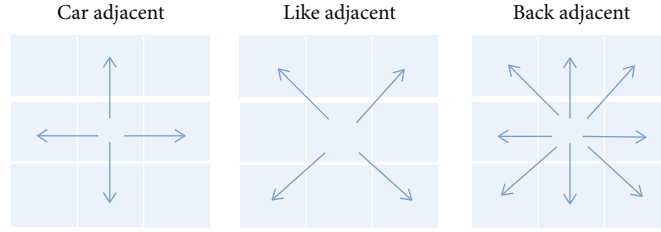


FIGURE 7: Common adjacency relationships.

value. A scatter plot based on the calculated Moran index shows the concentration of each region, with the location of each quadrant having its own meaning.

The first quadrant: high-high aggregation area represents the spatial connection formed by connecting the spatial area with a higher level.

The second quadrant: low-low aggregation area represents the spatial connection formed by the connection between the spatial area with lower level and the spatial area with higher level.

The third quadrant: low-low aggregation area represents the spatial connection formed by the connection between the lower level spatial area and the lower level spatial area.

The fourth quadrant: high-low gathering area represents the spatial connection formed by the connection between the spatial area with a higher level and the area with a lower level.

Spatial autoregressive model (SAR model), also known as spatial lag model (SLM model), is complicated because the spatial lag can come from different directions. It needs to assume that the spatial dependence obeys some common mode to simplify parameters, and the model form is

$$y = \lambda W y + e. \quad (5)$$

W is a known spatial weight matrix, and the spatial dependence is described only by a single parameter λ . λ measures the effect of space lag W on y and is a spatial autoregressive coefficient. Since spatial dependence may produce endogeneity, independent variables are generally added.

$$y = \lambda W y + X \beta + e. \quad (6)$$

In formula (6), X represents $n \times k$ data matrix, including k column timely variables, and β represents corresponding coefficients.

4. Results

4.1. Current Situation and Spatial Pattern of Regional Economic Development. In order to measure the economic growth rate and compare the differences of economic development in different years and different regions, the regional GDP is firstly compared and analyzed. It can be seen that the economic development degree of eastern China is higher, the development speed of central China is in the middle, and the development level of western China is lower than that of eastern China and central China. Although GDP has been on the increase trend, it can be seen from

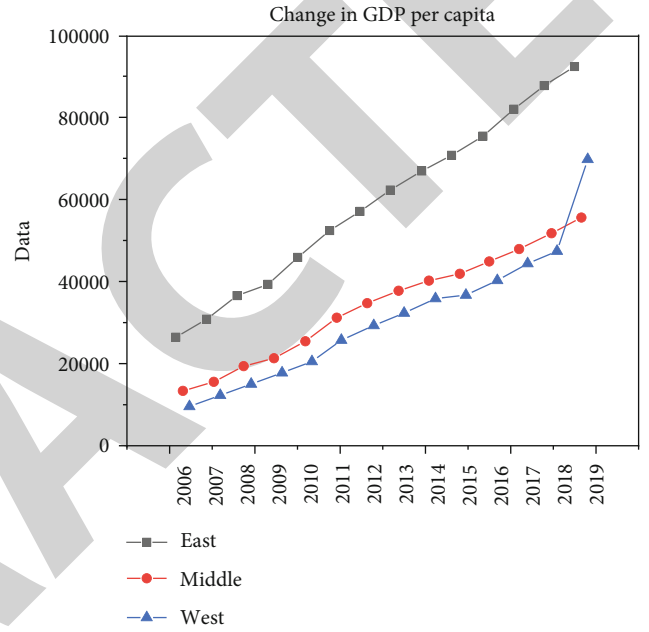


FIGURE 8: Change in per capita GDP.

TABLE 1: Moran index.

Year	I	p value
2017	0.356	0.002
2018	0.348	0.003
2019	0.315	0.004

Figure 8 that the growth rate of GDP in the east, central, and western regions as well as the whole country showed a downward trend from 2007 to 2019. The growth rate in 2007 and 2008 was at a relatively high level, but it dropped sharply to less than 10% in 2009. This may be due to the financial crisis in 2008. In the following two years, the growth rate returned to the higher level of the previous two years and dropped to 10-15% in 2012. After 2013, the country proposed to reshape the economy and adjust investment, and the economic growth rate declined in a short period. The growth rate of the eastern and central regions and the whole country basically remained between 5% and 12%, while the western region showed an upward trend during this period, because in the development of the western region, more detailed planning was made for the

TABLE 2: Hausman test results.

Test results	(b)Fe	(B)Re	(b-B)difference	Sqrt(diag(V-B-V-5B))S.E.
ROAD	0.341587	-0.213625	0.564740	0.0633095
RAIL	0.123360	-0.236147	0.1496321	0.2213445
FAI	0.203154	0.395644	-0.0386509	0.0102325

TABLE 3: Fixed effect test results of SAR model.

In (GDP)	Fixed time		Fixed space	
	Coef	p	Coef	p
In (ROAD)	-0.5141	0.271	0.2254	0.010
In (RAIL)	-0.0010	0.0240	0.0240	0.684

TABLE 4: Fixed effect test results of SEM model.

In (GDP)	Fixed time		Fixed space	
	Coef	p	Coef	p
In (ROAD)	-0.0659	0.381	0.2207	0.008
In (RAIL)	-0.0047	0.623	0.0320	0.190

development of the western region, and the infrastructure construction in the western region began to play a significant role in economic growth.

4.2. Spatial Autocorrelation Analysis of China's Regional Economic Growth. In this study, the logarithm of GDP per capita of 31 states (autonomous regions and municipalities) in different years is used to calculate the global Moran index and the assessments of the year, similarly using the adjacent spatial weight matrix, as shown in Table 1. It can be seen from Table 1 that the global Moran index of GDP per capita in the year difference of 14 years is positive, and the value of p is significant. Thus, there is a significant relationship between the per capita GDP of China's 31 provinces (autonomous regions and municipalities), for example, between the states with the highest levels of economic growth and states with lower levels of economics.

In order to reflect the spatial aggregation of each region accurately, the local Moran index of per capita GDP should be calculated to judge. In the research, the per capita GDP of three years is selected to analyze the local spatial correlation among each province through LISA significance map drawn by GeoDa software. In LISA significance diagram, when the significance level is 0.05, the per capita GDP is significant. Stata software was then used to set up Moran distribution of GDP per capita to 31 provinces (autonomous regions and cities) in China. The results showed a significant correlation of GDP per capita in China's 31 provinces (autonomous regions and cities).

4.3. Index Selection and Data Sources. In spatial econometric analysis of transportation and industry in the region, GDP per capita of 31 states (autonomous regions and municipalities) in China was selected as a measure to measure the level

of development in the region. When measuring the development level of transportation infrastructure, two types of indicators are generally selected, one is the monetary indicator of investment in transportation infrastructure, and the other is the physical indicator such as operating mileage or density. The amount of current investment does not truly reflect the current transportation infrastructure. In addition, different types of traffic facility construction time are also different, therefore, lag period also is different in the data processing. Processing has a certain degree of difficulty. In addition, there is a certain lack of detailed investment data of different types of transportation infrastructure in the statistical data of each year, resulting in a large error in estimation. Physical indicators can directly reflect the current transportation infrastructure situation, and there is no lag and data is easy to obtain. Therefore, the physical indicators are selected to measure the level of transportation infrastructure in 31 provinces (autonomous regions, municipalities) in China. China's traffic transport configuration refers to the railway, highway, water transport, aviation, pipeline, and other five kinds of modern transport routes. Rail, road, and water transport account for the largest proportion of both passenger and cargo traffic. However, due to the geographical differences of various provinces in China, some regions without sea or suitable river channels for water transport cannot develop water transport, so there is no relevant data. If the indicators related to water transportation are added into the analysis, it will be difficult to process the data. Therefore, urban rail transit is selected in the research to study the level of transportation infrastructure. In the research, density is selected as a relative index, namely, the ratio of rail transit operating mileage to the area of the region. The empirical research is carried out according to the data.

In addition to rail transit density, in order to accurately estimate the impact on economic growth, the following control variables should be added. In the theory of economic growth, it is generally believed that capital and labor can have a significant impact on the economy. Therefore, the actual total investment in fixed assets is selected as the measurement index of capital input, and the number of employment in each region is selected as the measurement index of labor input. Urbanization is also an important indicator of China's economic development, so the urbanization rate is selected to represent the urbanization level. In terms of human capital stock, the average number of years of education widely accepted by the academic community is used to represent the level of human capital stock in a certain region. The results of Hausman test obtained are shown in Tables 2–4.

5. Conclusions

First, the distribution of rail transit in different cities in China is not balanced, and the unbalanced situation has not been significantly improved, but more concentrated in the eastern coastal areas.

Second, the analysis of global and local spatial correlation of regional economic development shows that there is a significant positive spatial correlation of regional development in China by widespread the world. From a local point of view, some regions form clusters with high economic growth, while others form clusters with low growth. The GDP per capita of China's 31 provinces (autonomous regions and municipalities) has a good spatial correlation.

Third, the increasing investment in transportation infrastructure will promote economic growth. The output elasticity of rail transit is 0.2207. At present, rail transit contributes a lot to regional economic growth, and its role in economic growth needs to be paid attention to in the future.

Fourth, production factors such as capital and labor still play a significant role in promoting economic growth, but human capital, urbanization, education level, and other new economic growth factors are also increasingly important to the economy. It shows that with the continuous improvement of the economic level and the continuous improvement of the rail transit network, more new elements begin to circulate through the transportation system and have a certain impact on the economy. In the research of economic problems, attention should be paid to these new economic growth factors.

Data Availability

The labeled dataset used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The author declares that there are no conflicts of interest.

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