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Dynamic study of Xi 'an's high-quality development status

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ABSTRACT

According to the connotation of high-quality development, this paper takes Shaanxi Province as the research object, establishes a high-quality development level model, selects 24 indicators to establish an indicator system, assigns them by entropy weight method, and evaluates the high-quality development status of Xi 'an from 2012 to 2021 by combining TOPSIS method. The results show that the high-quality development of Xi 'an city has developed from a low level to a high level from 2012 to 2021, and the development trend is good. During the study period, the innovation, coordination, green, opening and sharing indexes of Xi 'an City show a gradually rising trend. The research shows that the high-quality development of Xi 'an city has made some progress, but some indicators can be further optimized, which has reference significance for the economic development of Xi 'an city.

KEYWORDS

High quality development; Economic development; Entropy weight Method -TOPSIS.

1. INTRODUCTION

Since the Third Plenary Session of the 15th CPC Central Committee, the reform and opening up have promoted the full liberation of productive forces and the rapid development of the national economy, from the "serious imbalance between agriculture and weight" in the early days of the founding of the People's Republic of China to the "second largest economy" and "the world's largest industrial country", creating a miracle of rapid growth of material wealth, which has become a demonstration that the socialist road with Chinese characteristics is more suitable for China's economic development. Its correctness and superiority continue to be highlighted. Along with the economic take-off, the simple pursuit of economic development in the early stage produced many social problems, such as air quality problems in some cities [1], irrational exploitation of mineral resources [2], and widening income gap [3], which have attracted increasing social attention since the beginning of this century, but some problems cannot be fully reflected in GDP indicators. The simple GDP index has long been unable to fully describe and measure economic and social development and reflect the problems exposed in social and economic development.

As pointed out in the report to the 19th National Congress, the principal contradiction in Chinese society has been transformed into the contradiction between unbalanced and inadequate development and the contradiction between the people's ever-growing needs for a better life. The economy has shifted from the stage of high-speed growth at the beginning of this century to the current stage of high-quality development, and it is in the critical period of transforming the development mode, optimizing the economic structure, and transforming the growth engine [4]. According to the changes in the actual situation, the government is facing the new situation, new contradictions and new problems in China in the 21st century - high-quality development. Development is the basis for solving problems and the key to resolving contradictions. The Central Economic Work Conference

held in December 2020 proposed that future economic development should be based on the new development stage, implement the new development concept, build a new development pattern, and promote high-quality development as the theme [4]. Moreover, the 14th Five-Year Development Outline and the 2035 Vision adopted at the Fifth Plenary Session of the 19th Central Committee once again emphasized that China's economic development work should take the road of high-quality development, put forward the theme of promoting high-quality development, detailed development issues in all aspects, and meet the people's growing needs for a better life as the fundamental purpose of the guiding ideology. We will deepen supply-side structural reform as the main line and take reform and innovation as the fundamental driving force to achieve overall high-quality development of the national economy.

High-quality development has rich connotations. It is a development concept proposed based on China's specific development conditions, and has been continuously expanded empirically in national development practice. At present, all sectors of society have not put forward a unified expression recognized by all parties [5][19], which can be roughly divided into three categories from the existing research: (1) From the perspective of the "Five development concepts" and the major social contradictions: For example, He Lifeng [6] believes that high-quality development is the development that reflects the "five development concepts" and can well meet the growing needs of the people for a better life. Xu Chuanjun [7] and Wang Wei [8] believe that high-quality development is the development that can well meet the people's growing needs for a better life and reflect the new development concept. (2) From the perspective of high-quality economic development, he believes that the standard of high-quality economic development should include five aspects: effectiveness, coordination, innovation, sustainability and sharing. For example, Jin Pei [9] believes that high-quality development is the mode, structure and dynamic state of economic development that can better meet the real needs of people's growing. Fan Jie believes that digital technology innovation is the core driving force for the development of digital economy, and in-depth discussion on the regional distribution pattern and formation mechanism of digital technology innovation is conducive to promoting the layout of regional digital economy and its high-quality development [10]. (3) Some scholars believe that high-quality development at the micro level is to ensure that products and services meet the quality needs of consumers; High-quality development at the macro level requires, first, implementing the "five development concepts", second, improving the input-output benefits of the overall economy, third, further strengthening the prediction and identification of various economic risks, and fourth, further strengthening the ability to respond to major emergencies [11].

Domestic scholars have done more studies on the evaluation system of regional high-quality development, but most of them are large-scale regional studies, such as the Yangtze River Economic Belt [12], Yellow River basin [13], major urban agglomerations [14] [20] or a certain province [15], and few micro-analysis studies on a specific city. Since the development concept of high-quality Development was put forward at the 18th National Congress, Each layer of government is gradually implemented in the actual development, which has different requirements for administrative units at all levels, thus enriching research on various scales and having guiding significance for practice. Xi 'an, as the central city of Guanzhong Plain urban agglomeration, is an important engine to promote the construction and development of Northwest China. [21] Therefore, this paper takes the panel data of Xi 'an as an example. This paper analyzes the high quality development level of Xi 'an city and provides reference for its own and other individual cities' social and economic development.

2. OVERVIEW OF THE STUDY AREA AND DATA SOURCES

2.1. Study area profile

Xi 'an, known as Chang 'an and Gaojing in ancient times, is the capital and vice-provincial city of Shaanxi Province and the national central city. It is the only megacity in western China, the core city

of Xi 'an metropolitan area and Guanzhong Plain urban agglomeration, an important national scientific research, education and industrial base, and an important transportation hub in western China. By the end of 2022, the city consists of 11 districts and 2 counties, with an area of 10,108 square kilometers and a permanent population of 12,995,900, ranking first in the western region. Xi 'an is a warm temperate semi-humid continental monsoon climate, cold and warm dry and wet, four distinct seasons, located in northwest China, the middle of the Guanzhong Plain, between 107°40 '~109°49' east longitude, 33°42 '~34°45' north latitude, near the Weihe River in the north, south of the Qinling Mountains, has been known as "eight waters around Chang 'an" since ancient times. The main landform of Xi 'an is Qinling Mountain and Weihe plain. In 1981, UNESCO identified Xi 'an as the "World Historical City". It is one of the important birthplace of Chinese civilization and the Chinese nation, and the starting point of the Silk Road. In history, 13 dynasties built their capitals here, and it is a world-famous historical city, equal to Rome in Italy, Athens in Greece, Cairo in Egypt and other ancient cities in the world. Since 2013, Xi 'an has made remarkable achievements in economic development, with its economic aggregate constantly rising. In 2020, the city's gross regional product (GDP) exceeded one trillion yuan, becoming the first city in Northwest China with a GDP of more than one trillion yuan. With developed tourism economy, Xi 'an is the best tourist destination in China and one of the cities with the best international image in China. There are two six heritage sites included in the "World Heritage List", namely the Mausoleum of the First Emperor of Qin and the Terracotta Warriors, the Big Wild Goose Pagoda, the small Wild Goose Pagoda, etc., and the scientific and technological force is relatively strong, the number of key universities is large, and it is the core city of education in western China.

2.2. Study area profile

The content of high-quality development in the new era is comprehensive, and its evaluation should not only include statistical economic growth, but also include social security, ecological environment and other contents. Based on this, this paper takes Xi 'an Statistical Yearbook, Xi 'an Ecological Environment Bulletin and Xi 'an Statistical Bulletin of National Economic and Social Development from 2013 to 2022 as data sources. Most of the research data can be obtained directly, and a small amount of data can be obtained by calculating the existing data.

3. XI 'AN HIGH QUALITY DEVELOPMENT INDEX SYSTEM CONSTRUCTION

3.1. Study area profile

Based on the principles of science, practicality and accessibility, [22] and starting from the five development concepts, green development is placed in a prominent position, and the people-oriented idea is emphasized. Three layers of indicators are constructed under the high-quality development goal layer of Xi 'an city. The indicators at the same layer are independent of each other, and the indicators at each layer are interrelated, so as to comprehensively reflect the high-quality development of Xi 'an City. Taking Xi 'an Statistical Yearbook, Xi 'an Ecological Environment Bulletin and Xi 'an National Economic and Social Development Statistical Bulletin from 2013 to 2022 as data sources, this paper establishes five first-level indicators of innovative development, green development, coordinated development, open development and shared development from the perspective of five development concepts. Design three secondary indicators of resource consumption, environmental pollution and ecological governance under green development; construct three secondary indicators of common prosperity, public service and social stability under shared development; construct two secondary indicators of innovation potential growth efficiency under innovative development; construct two secondary indicators of regional coordination and industrial coordination under coordinated development. Two secondary indicators, tourism service and foreign trade scale, are

constructed under the open development, and there are 12 secondary indicators in total. According to the requirements of secondary indicators, this paper selects 24 variables as specific tertiary indicators, through which the status quo of high-quality development of Xi 'an can be scientifically and systematically reflected

3.2. Calculation method

3.2.1. Weight calculation method.

The selected 24 indicators include five aspects: innovation, coordination, green, openness and sharing. Among the indicators, they have different impacts on high-quality development. According to their characteristics, they are divided into positive indicators and negative indicators. Considering that the dimensions of each index are not uniform, the range method is adopted to standardize the original data before calculation, and the method is as follows:

(1)Positive indicators:

$$R_{ij} = \frac{x_{ij} - \min x_{ij}}{\max\ x_j - \min x_j} \tag{1}$$

(2)Negative indicators:

$$R_{ij} = \frac{\max x_j - x_{ij}}{\max\ x_j - \min\ x_j} \tag{2}$$

Where: Xij is the original value, Rij is the value after standardization; maxij and minij represent the maximum and minimum values of year i and term j, respectively.

3.2.2. Determination of index weights.

In order to avoid the influence of subjective factors as far as possible, the entropy weight method is adopted to assign weights to the selected indicators, as shown in Table 2.

(1) Calculate the proportion fij of item J in Year i:

$$f_{ij} = \frac{R_{ij}}{\sum_{i=1}^{m} R_{ij}} \tag{3}$$

(2) Calculate index entropy ej:

$$e_j = -\frac{1}{\ln m} \sum_{i=1}^{m} (f_{ij} \ln f_{ij}) \tag{4}$$

(3) Calculate index weight Wj:

$$W_j = \frac{(1 - e_j)}{\sum_{j=1}^{n} (1 - e_j)} \tag{5}$$

The index weight Wj is obtained (see Table 1):

Table 1. Weight table of Xi 'an's high-quality development

Primary index	Secondary index	Three-level index	Serial number	Nature	Weight
Green development	Resource consumption	Total energy consumption/GDP (kw·h ／ 10000yuan)	C1	Negative	0.030728058
		Total water use/GDP(10000m3/10000yuan)	C2	Negative	0.023248668
	Environmental pollution	Exhaust emission/GDP(108m3/10000yuan)	C3	Negative	0.024024937
		Discharge of wastewater/GDP(104t/10000yuan)	C4	Negative	0.022919746
		Solid waste discharge/GDP(104t/10000yuan)	C5	Negative	0.030316382
	Ecological governance	Green coverage rate of built-up area(%)	C6	Positive	0.057839868
		The number of days with air quality above or below Grade II(Day)	C7	Positive	0.035594804
		Investment in industrial pollution control/Industrial added value(10000yuan/106yuan)	C8	Positive	0.016182392
Shared development	Common prosperity	Per capita disposable income(yuan)	C9	Positive	0.038708012
		Rural resident income/Income of urban residents	C10	Positive	0.041682834
	Public service	The proportion of 10,000 students in school(%)	C11	Positive	0.047798431
		Medical and health input/Total financial expenditure	C12	Positive	0.058694021
	Social stability	Number of marriages	C13	Positive	0.034528365
		Consumer price index	C14	Negative	0.060334578
Innovative development	Innovation efficiency	Growth rate of social fixed asset investment(%)	C15	Positive	0.03802063
		GDP/Number of social workers(108yuan/104people)	C16	Positive	0.035914095
	Innovation potential	Number of full-time teachers in colleges and universities(people)	C17	Positive	0.033328075
		Number of students in ordinary colleges and universities(people)	C18	Positive	0.059871843
Coordinated development	Industrial coordination	Output value of primary industry/Output value of secondary industry	C19	Negative	0.032199284
		Output value of primary industry/Output value of tertiary industry	C20	Negative	0.029725917
Open development	Tourism service	Number of tourists(104)	C21	Positive	0.043250526
		Tourism income(108yuan)	C22	Positive	0.057121888
	Scale of foreign trade	Actual utilization of foreign capital(10000yuan)	C23	Positive	0.056296719
		Amount of imports(10000yuan)	C24	Positive	0.091669928

3.2.3. TOPSIS evaluation model.

Entropy weight - TOPSIS model is a multi-objective comprehensive evaluation method which combines entropy weight method and TOPSIS model. [23] The principle is to find out the best and worst targets among the multi-targets through the normalization matrix, and through the evaluation index system built based on the high-quality development model in this study, TOPSIS method is used to measure the distance between the measurement indicators of Xi 'an's high-quality development level and the best and worst targets, obtain the proximity degree between each indicator and the ideal solution, and finally reveal each plan Results. [16-17] Based on the high-quality development model, TOPSIS model was used to evaluate the high-quality development level of Xi 'an City.

(1) Establish a weighted normalization matrix:

$$V = |V_{ij}| = W_j \times R_{ij} \quad (6)$$

(2) Determine the positive and negative ideal solutions S+ and S-:

Positive ideal solution:

$$S+ = \{\max V_{ij} \,|\, i = 1,2,3,\cdots,m\} \quad (7)$$

Negative ideal solution:

$$S- = \{\min V_{ij} \,|\, i = 1,2,3,\cdots,m\} \quad (8)$$

Where :max vij and min vij are the maximum and minimum values of the weighted normalized matrix.

(3) Calculate the distance between index and positive and negative ideal solution Si+ and Si-:

$$S_i+ = \sqrt{\sum_{j=1}^{n}(V_{ij} - V_j +)^2} \; (i = 1,2,3,\cdots,m) \quad (9)$$

$$S_i- = \sqrt{\sum_{j=1}^{n}(V_{ij} - V_j +)^2} \; (i = 1,2,3,\cdots,m) \quad (10)$$

Calculate index closeness Ci:

$$C_i = \frac{S_i -}{S_i^+ + S_i^-} \quad (11)$$

Where: The larger the Ci value, the better the high-quality development status in year i. According to the research results of Liu Xiaoheng et al. [18] and the specific situation of Xi 'an city, the high quality development level is divided into 5 levels by using the non-equal distance method (Table 2).

Table 2. Classification of high quality development in Xi 'an

High quality level of development	Low	Lower	Normal	Higher	High
Index closeness	(0,0.25)	[0.25,0.45)	[0.45,0.65)	[0.65,0.8)	[0.8,1)

4. ANALYSIS OF XI 'AN'S HIGH QUALITY DEVELOPMENT LEVEL

4.1. Overall development status

Based on the theoretical model of high-quality development, 24 indicators were determined from five aspects: innovation, coordination, green, openness and sharing. Xi 'an Statistical Yearbook (2013-2022) was used as the data source to quantify Xi 'an's high-quality development level. The development trend of Xi 'an's high-quality development proximity index (FIG. 1) and the change trend of S+ and S- (FIG. 2) are obtained.

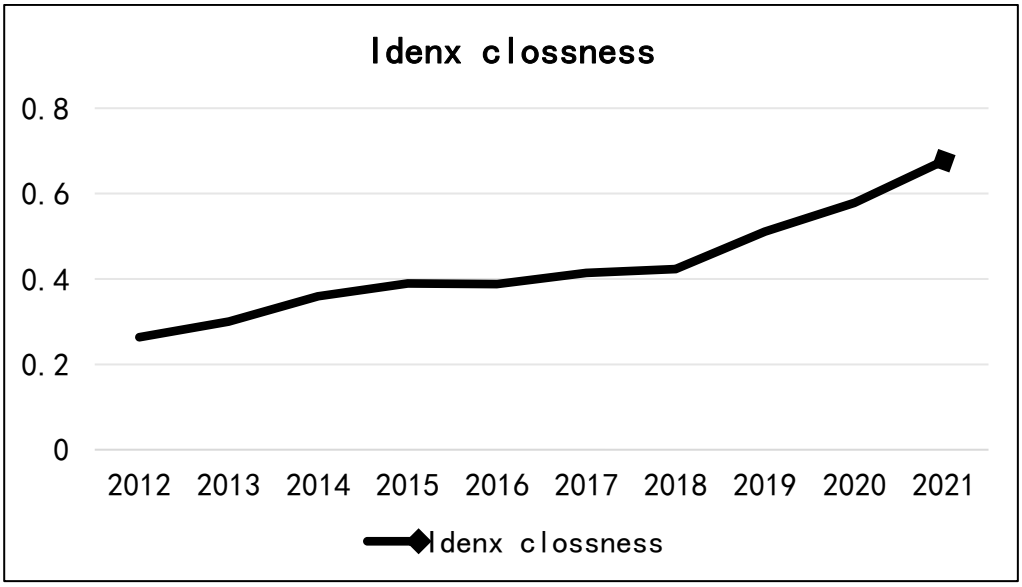

Fig .1 The change of the closeness degree of Xi 'an's high-quality development level from December to 2021

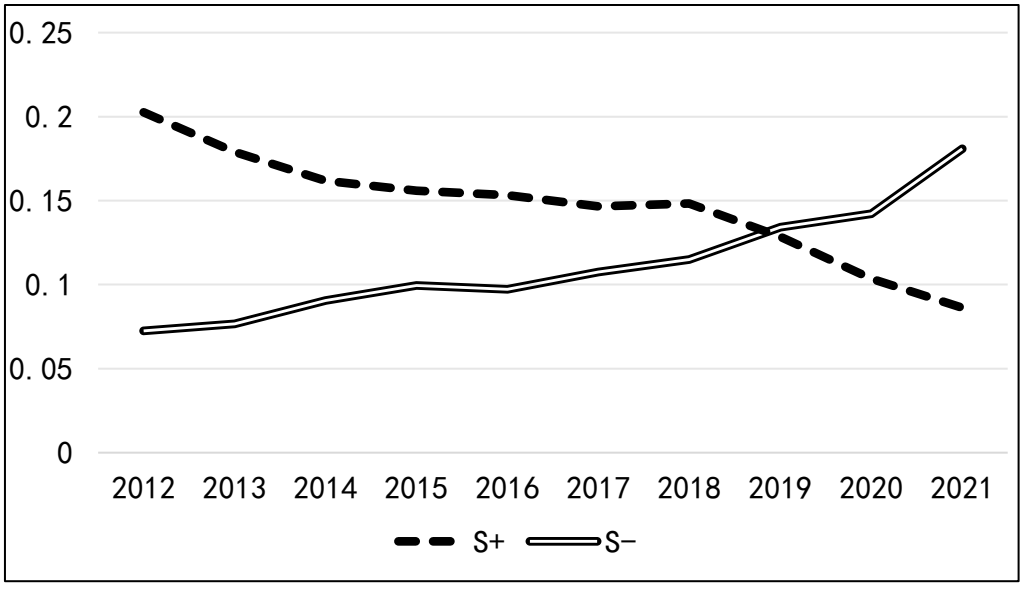

Fig .2 Changes in S+ and S- of Xi 'an's high-quality development level from 2012 to 2021

Based on FIG.1 and FIG.2, it can be seen that: (1) From 2012 to 2021, the level of high-quality development of Xi 'an shows an upward trend, rising from 0.2635 in 2012 to 0.6771 in 2021, more than doubling. Compared with previous years, the level of high-quality development has been greatly improved, and the level of high-quality development has moved from a low level to a high level. (2) From the overall point of view, during the ten years from 2012 to 2021, the high-quality development level of Xi 'an City is mostly in two stages: low level and general level, and only in 2021 will it reach

a higher level. (3) From the perspective of development speed, Xi 'an's high-quality development process can be roughly divided into two stages: The first stage is 2012-2018, during which the development speed is relatively gentle and the rise rate is small. The main reason is that during this period, most of the time was before the 18th CPC National Congress, and the concept of high-quality development had not been put forward. Although the society, people's livelihood and economy all developed along with economic development, some parts were inconsistent with the concept of high-quality development. The second stage is 2019-2021, which is a stage of rapid development with a rapid rise. At this stage, due to the convening of the 19th National Congress, the concept of high-quality development is further elaborated, and the concept of high-quality development continues to gain popularity among people, and various governments continue to increase their practical efforts to improve the level of high-quality development to a greater extent. (4) S+ value showed a downward trend as a whole, from 0.2026 to 0.0863; As a whole, S-showed an upward trend, rising from 0.0725 to 0.1808, and the two developed from mutual convergence to gradual separation.

4.2. Xi 'an high-quality development subsystem development status

Based on TOPSIS model, indicators at five levels in the high-quality development model are calculated respectively to obtain the development trend of indicator closeness of the subsystem (see Figure 4-3), which intuitively illustrates the development differences of each subsystem of high-quality development in Xi 'an

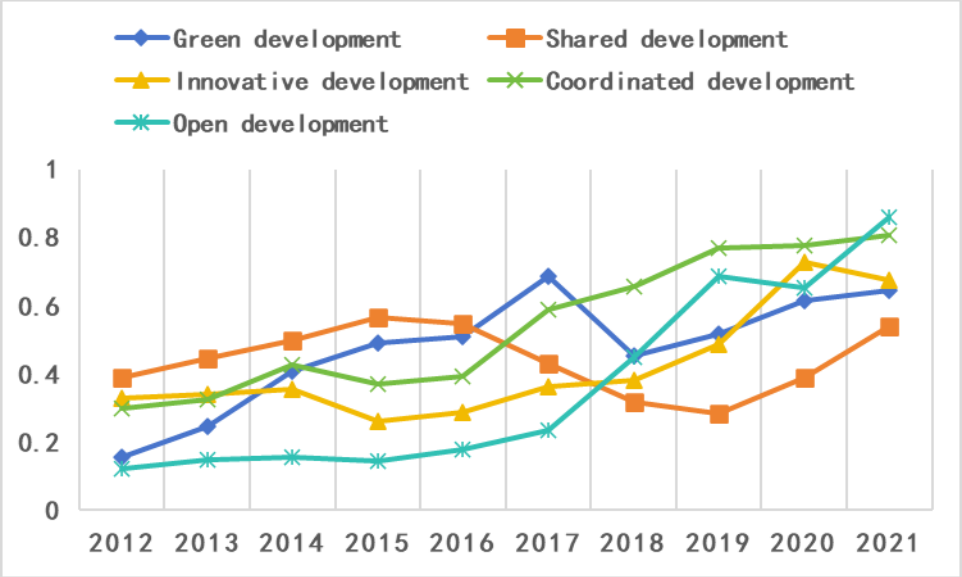

Fig 3. Development trend of index closeness of each subsystem of high-quality development in Xi 'an from December to 2021

The green development subsystem consists of six indicators: unit electricity consumption, unit water consumption, unit output of waste gas, unit output of waste water, unit output of solid waste, green coverage rate, air quality index and pollution control investment. According to Figure 3, the fit degree of the green development system is generally at a low level among the five sub-systems, but it reaches the highest level of the fit degree of the five sub-systems in 2017. Taking 2017 as the limit, it can be roughly divided into two stages: (1) From 2012 to 2017, due to the rapid economic development in this period, people's income increased greatly. However, under the influence of the family planning policy and the decline of the population's fertility intention, the natural population growth rate decreased, the pressure on the natural environment decreased, and the influence of development policies such as the scientific outlook on development and sustainable development. It reduces the production of industrial wastewater, waste gas and solid waste, highlights the importance of urban green space construction in urban planning, and promotes green development accordingly. (2) The period from 2018 to 2021 is the second stage. Compared with 2017, the green development proximity

index decreased more in 2018, but in the later stage, driven by the high-quality concept of development, the green development index increased, and with the development of science and technology, the environmental governance ability was enhanced.

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Shared development is based on three indicators: common prosperity, social stability and public services. Generally speaking, the closeness of shared development indicators shows a wave-like change and an upward trend. The degree of available social shared development is improving, and the development results are gradually benefiting all people. The close degree of the innovation and development subsystem shows an upward trend, and according to the data of 2012 and 2021, it has more than doubled, which is the embodiment of the strategy of rejuvenating the country through science and education. Xi 'an is a gathering area of universities in western China, with numerous key universities, strong scientific and technological force, and numerous scientific research achievements. The coordinated development subsystem is mainly from the perspective of industrial development, with the coordination degree of primary and secondary industries and the coordination degree of primary and tertiary industries as the index. During the ten years from 2012 to 2021, its index proximity degree has fluctuated and increased, and it has been at a high level among the five sub-systems since 2012. Generally speaking, Xi 'an has a high level of high-quality development coordination. Coordinated development has been achieved to a certain extent. The subsystem of open development is divided into two stages: from 2012 to 2017, the development speed is slower and the level of open is lower; From 2018 to 2021, the development speed is fast and the development has reached a higher level. Since the 18th National Congress was held at the end of 2017, the concept of high-quality development was proposed to jointly build domestic and international economic cycles and develop export-oriented economy. Moreover, due to the establishment of the Silk Road Economic Belt, Xi 'an will be taken as the starting point to strengthen the exchanges between Xi 'an and Central and West Asia. It has greatly improved the level of open development of Xi 'an City.

5. SUMMARY

5.1. Summary

Based on the high-quality development level model, this paper evaluates Xi 'an's high-quality development level and finds that Xi 'an has a good trend of high-quality development during 2012-2021, and has realized the transformation from a low level of development to a high level. The following conclusions are obtained through analysis:

(1)The high quality development level of Xi 'an has a relatively slow period from 2012 to 2018, which occupies a long time in the whole evaluation stage, mainly because: According to the 24 selected detailed indicators, although most of the indicators have changed at this stage, the range of change is not large. Moreover, the fluctuation and interaction among various indicators lead to little impact on the overall indicator fit degree. In this stage, Xi 'an's economy developed rapidly, achieving rapid economic growth from 439.447 billion yuan to 849.941 billion yuan, with rapid urban development and expansion and continuous improvement of urban construction, which made innovation, coordination, green, openness and other indicators show an upward trend. However, in 2018, the shared development index declined. Therefore, it has a certain impact on the overall high-quality development and development level, and has a corresponding impact on the economic development of Xi 'an.

(2)The period from 2019 to 2021 is the period of rapid improvement of Xi 'an's high-quality development water assessment. Since the 18th CPC National Congress, the concept of high-quality development has been put forward and continuously implemented in the process of practice and development under the guidance of governments at all levels. Governments at all levels have a clear understanding of the concept of high-quality development and a thorough grasp of its connotation. Innovation, coordination, green, openness, sharing and other aspects have been improved and developed accordingly. With the development of Internet technology, Xi 'an's economy has developed rapidly, especially its tourism economy has flourished, its GDP has exceeded the trillion mark, and its influence in China has been increasing.

5.2. Economic development proposals

(1)Relying on relevant national policies to actively carry out ecological civilization construction and build a beautiful China, the relevant government departments should strengthen the supervision of the land use of enterprises, factories and other departments, improve relevant laws and regulations, and further promote the protection of the ecological environment, and at the same time, it is necessary to clarify the relevant responsibility subjects. Strengthen the publicity and education of relevant law enforcement personnel and urban and rural residents, strengthen the sense of responsibility of every citizen through modern media such as television, radio and newspapers, deepen the concept of green development with the help of the Internet platform, strengthen the protection of grassland, forest and other resources while developing the economy in Dali, and promote the green and sustainable development of the economy.

(2)The development achievements are shared by the whole people. Xi 'an has achieved rapid economic development in the past decade and successfully entered the trillion-city club. However, compared with other indexes, the development level of the subsystem of sharing level is lower than that of other subsystems, and the gap between urban and rural development needs to be further narrowed. It is necessary to further promote universal medical care and provide certain guarantee for citizens' medical care. We also need to further increase investment in basic education and higher education to raise the level of education in society and enhance the quality of mutual encouragement.

(3)Innovation is the primary productive force, and scientific and technological innovation is conducive to further improving social productivity, improving labor efficiency, enhancing the overall social benefits, creating more social benefits, and taking a dominant position in economic competition.

(4) From the coordination level, the development of the primary, secondary and tertiary industries in Xi 'an is unbalanced, and the tertiary industry occupies a large proportion. Xi 'an is a famous tourist city in China, with rich tourism resources and perfect tourism related industries. It needs to further improve service quality and service level, and can fully rely on the advantages of local scientific research resources, combine them with the development of local service industry, enhance its competitiveness, vigorously develop digitalization, and add new attraction for its tourism development.

(5) Level of opening and development Xi 'an has developed well in recent years, so it should further increase the level of opening up, rely on the land Silk Road, strengthen economic and trade exchanges with West Asia and Central Asia, and further expand the level of opening to the outside world; At the same time, we should further expand the territory of opening up, broaden our horizons to the whole world, actively establish friendly economic and trade relations with countries around the world, actively integrate into the world trade network, and develop the economy.

CONFLICTS OF INTEREST

The authors declare that they have no conflict of interest.

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REFERENCES

[1] Chen Shiyi, Chen Dengke. Haze pollution, government control and high-quality economic development [J]. Economic Research,2018,53(02):20-34. (in Chinese)

[2] Yuan Xiaoling, Li Chaopeng, Fang Kai. Review and prospect of air pollution research in the process of urbanization in China [J]. Economic Trends,2019(05):88-103. (in Chinese)

[3] Qian Xiaojing, Lian Yuanmei. Labor income share and the quality of China's economic growth [J]. Economic Dynamics,2019(09):66-81.

[4] Publicity Department of the CPC Central Committee. Learning Press, People's Publishing House, 2019:111.

[5] An Shuxin. Research on the path of promoting high-quality economic development: a literature review [J]. Contemporary economic management, 2018, 40 (9) : 11-17. DOI: 10.13253 / j.carol carroll nki DDJJGL. 2018.09.002.

[6] He Lifeng. Comprehensively Implementing the New development Concept and Promoting China's economy towards high-quality development [J]. Macroeconomic management, 2018 (04) : 4-5 + 14. DOI: 10.19709 / j.carol carroll nki. 11-3199 / f 2018.04.003.

[7] Ou Jinfeng, Xu Caijun, Liu Yuqi. Measurement of high-quality economic development level based on "Five development Concepts" : An empirical analysis of 21 prefecture-level cities in Guangdong Province [J]. Economic Geography,2020,40(06)

[8] Wang Wei. Measurement and Evaluation of China's high-quality economic development [J]. East China Economic Management, 2019,34(06):1-9. (in Chinese)

[9] Jin Bei. Economic research on "high-quality development". China Industrial Economics,2018(04):5-18.]

[10] Sun Yong, Fan Jie, Liu Hanchu, ZHAO Tengyu. Digital technology innovation pattern of space and time in Yangtze river delta and its influencing factors [J]. Journal of economic geography, and 2022 (02) : 124-133. The DOI: 10.15957 / j.carol carroll nki JJDL. 2022.02.014.

[11] Wang Tongsan. In-depth understanding of China's economic transition to high-quality development [N]. People's Daily, 2018-06-07 (007).

[12] Fu Yifeng, Zhang Chenyi, Wang Xinfang et al. Study on spatial correlation structure and its effect of high-quality development of manufacturing industry in the Yangtze River Economic Belt [J]. Resources Development and Market,2023,39(11):1479-1488.

[13] Liu Jianhua, Pu Lingyu. The Yellow River basin development of economy and the high quality coupling interaction between digital research [J/OL]. The people of the Yellow River, 1-8 [2024-01-05] HTTP: / / http://kns.cnki.net/kcms/detail/41.1128.TV.20231207.0859.002.html.

[14] Fan Yufeng, Ma Yubo, Yu Ruiqing. Innovation efficiency and high quality development level measurement and coupling coordination analysis of Beijing-Tianjin-Hebei urban agglomeration [J]. Statistics and decision, 2023, 33 (22) 6:128-133. The DOI: 10.13546 / j.carol carroll nki tjyjc. 2023.22.023

[15] WANG Yining, ZHANG Xiaolei, ZHAO Yongjiang et al. Research on dynamic evaluation of high quality development level in Henan Province [J]. Areal Research and Development,2023,42(06):33-39. (in Chinese)

[16] Xu Mei, Zhu Xiang, Li Jingzhi. Evaluation of land ecological security in Hunan Province based on DPSIR-TOPSIS model [J]. Journal of Glaciology and Geocryology,2012,34(05):1265-1272.

[17] Zhou Yingxue, Li Yixue, Sun Yiyang et al. Evaluation of land ecological security based on PSR-TOPSIS model in Shandong Province [J]. Journal of agricultural resources and environment, 2016 (4) : 320-326. The DOI: 10.13254 / j.j motorcycle. 2015.0270.

[18] Liu Xiaoheng, Yang Liu. Evaluation and prediction of land ecological security in Guizhou Province based on DPSIR-TOPSIS and GM(1,1) models [J]. Jiangsu agricultural science, 2018, 46-48 (15) : 292-297. The DOI: 10.15889 / j.i SSN. 1002-1302.2018.15.072.

[19] WANG Yining, Zhang Xiaolei, ZHAO Yongjiang et al. Research on dynamic evaluation of high quality development level in Henan Province [J]. Areal Research and Development,2023,42(06):33-39. (in Chinese)

[20] WANG Jiawei, Zeng Gang, Zhu Nina et al. Market integration, opening to the outside world and development of Yangtze river delta regional high quality [J]. Journal of economic geography, the lancet, 2023 (11) : 8-16. DOI: 10.15957 / j.carol carroll nki JJDL. 2023.11.002

[21] Li Ni, Xiang Wenqian. Study on spatial linkage strength of central cities in Guanzhong Plain urban agglomerations [J]. Arid Land Geography,2020,43(06):1593-1602.

[22] Zhang Weili, Wang Yibin, Wei Ruibo. Spatio-temporal evolution and mechanism of convergence club for high-quality urban development in urban agglomerations [J]. Acta Geographica Sinica,2023,78(12):3109-3128.

[23] Li Xiaojuan, Wan Dajuan, Wang Changmei. Huaihua city economic development and ecological environment protection coupled coordination study [J]. Journal of economic geography, the lancet, 2023 (11) : 190-197. The DOI: 10.15957 / j.carol carroll nki JJDL. 2023.11.020.