

Comprehensive Measurement of the Degree of Achievement of Common Wealth, Spatial and Temporal Evolution and High Quality Development in Anhui Province

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ABSTRACT

The report of the Twentieth National Congress mentions that "Chinese-style modernization is the modernization of common wealth for all people". As a practice of building a modern economic system, common wealth is one of the main paths to achieve Chinese modernization. Therefore, the realization of common wealth in Anhui province is not only conducive to narrowing the income gap between urban and rural areas, regions and residents, and alleviating the polarization situation, but also promotes the equalization of basic public services, and better meets the material and spiritual cultural needs of the people of Anhui. Therefore, in order to understand the effect of Chinese-style modernization in Anhui Province, this paper takes Anhui Province as the research object, establishes the evaluation index system from the degree of affluence, commonness, sharing and sustainability of each city, and constructs the comprehensive evaluation index system of common wealth in Anhui Province by using entropy-weighted TOPSIS method, so as to measure the degree of the realization of the common wealth in Anhui Province in a comprehensive manner. On the basis of the comprehensive evaluation system of the common wealth in Anhui Province, the conceptual model of the common wealth development level is constructed by taking into account various factors, the comprehensive score of the common wealth development level is calculated, and the common wealth level is divided into three gradients of A, B, and C by quartile classification method using STATA software for the northern, central, and southern parts of Anhui Province, with A being the higher level, B being the average level, and C being the lower level. The spatial dynamics of Anhui Province is analyzed. Secondly, the Dagum Gini coefficient is used to analyse the urban-rural development differences in the level of common wealth in Anhui Province, in order to narrow the income gap and consumption gap between urban and rural residents, and to help the common wealth in Anhui Province. On the basis of analyzing the urban-rural income gap in the previous section, we study the reverse effect of the consumption gap between urban and rural residents on the income gap, and establish an empirical measurement model. The mediation effect model is established by incorporating the cross line between the difference between the proportion of urban and rural residents' consumption expenditures on enjoyment and development and the income gap between urban and rural residents into the above model to further explore the impact of common prosperity on Anhui Province. Finally, based on the comprehensive evaluation system of the common wealth in Anhui Province, the level measurement and spatial evolution characteristics, the degree of realization measurement and the analysis of urban-rural development differences, and the results of the impact on the development of Anhui Province, relevant policy recommendations are put forward. At the same time, based on the documents of the Anhui Provincial Government on the common wealth and the speeches of the leaders on the common wealth, it provides policy optimization for the further development of the degree of realization of the common wealth in Anhui Province.

KEYWORDS

Common Wealth; Degree of Realization; Entropy Weight Method; Dagum Gini Coefficient; Mediation Effect.

1. INTRODUCTION

Chinese-style modernization is a model of modernization aimed at achieving common prosperity for all people. This model is not only the core objective of socialist modernization with Chinese characteristics, but also the social ideal that the CPC relentlessly pursues. By continuously promoting comprehensive economic and social progress, we are committed to gradually narrowing the gap between the rich and the poor, and realizing the sharing of the fruits of development by all the people, so as to move towards the ambitious goal of common prosperity. Common prosperity is a standard of living in which all the people of China, through hard work and mutual assistance, work together to achieve an adequate standard of living; it is a moderately affluent society in which polarization is eliminated and in which we are all free from poverty; it is also an important element of Deng Xiaoping's theory of building socialism with Chinese characteristics; and it is the fundamental principle of socialism with Chinese characteristics.

In this era of developed Internet, the material level has gradually improved. People are paying more and more attention to the quality of life, and China has always advocated that the first to get rich should lead the rich to get rich, which is also one aspect of the common wealth. The pursuit of common prosperity and the realization of a better life has always been the goal pursued by our Party, and I believe that in the near future, the realization of common prosperity will be the inevitable trend for our Party to lead the people to build a moderately prosperous society in all aspects.

Since the reform and opening up, Anhui Province has been following the pace of China's economic development, making steady progress step by step. The modern development of Anhui Province is also a partial reflection of China's modern development. During these decades, Anhui Province's regional innovation capacity has risen to the eighth place in China, and has been ranked in the first square in China for ten consecutive years.

Over the years, Anhui Province for the development of scientific and technological innovation support efforts continue to increase, in 2021 the province's financial expenditure on science and technology reached 41.505 billion yuan, more than four times that of 2012, with an average annual growth rate of 17.7 per cent, and financial expenditure on science and technology accounted for several percentage points. The influx of talents has also added to the economic development of Anhui Province. Hefei, as the capital of Anhui Province, has been continuously providing its own strength on the road to common prosperity, not only rapid economic development, scientific and technological achievements, but also with other cities to help each other, reduce the gap between the rich and the poor in the region, and strive to common prosperity.

In grasping the rapid development of science and technology at the same time, Anhui Province, the green environmental industry is also a large-scale strengthening, always adhere to the principle of "green mountains are golden mountains", high-quality to promote the common wealth, to ensure that the fruits of economic development more and more equitably benefited all the people.

2. CONSTRUCTING A COMPREHENSIVE EVALUATION INDEX SYSTEM FOR COMMON PROSPERITY IN ANHUI PROVINCE

Common wealth, as a practice of building a modernized economic system, is one of the important paths to achieve Chinese-style modernization^[1]. In this paper, we have selected four first-level indicators of affluence, commonality, sharing and sustainability, and 40 third-level indicators from

17 second-level indicators of economic development, livelihood and welfare development, innovation-driven development, green development, urban-rural coordinated development, group commonality, regional commonality, education, medical and health care, housing, digital application, spiritual affluence, social security, high-quality development, taxation, ecology, governance, and so on. These 17 secondary indicators are selected from 40 tertiary indicators, and the overall evaluation index system of common prosperity is constructed from various aspects and perspectives.

Table1. Evaluation Indicator System of the Degree of Common Wealth Practice

Level 1 indicators	Secondary indicators	Tertiary indicators	causality	Weights(%)
affluence	economic development	Province's Gross Domestic Product	+	2.86
		GDP per capita	+	2.82
		Total labour productivity	+	3.32
	Development of people's well-being	Per capita disposable income	+	2.70
		Engel's coefficient for households	-	1.83
		Average years of schooling of the population	+	2.04
	Innovation-driven development	R&D expenditure as a share of GDP	+	1.70
	Green development	Parkland per capita (municipal districts)	+	2.50
		Electricity consumption of society as a whole	+	2.64
	Coordinated development of urban and rural areas	Per capita disposable income of urban residents	+	2.86
		Per capita disposable income of rural residents	+	2.32
		Engel's coefficient for urban residents	-	3.52
		Engel's coefficient for rural inhabitants	-	3.02
		Consumption expenditure per urban resident	+	2.04
		Consumption expenditure per rural inhabitant	+	1.01
commonality	group commonality	Amount of minimum subsistence guarantee for urban and rural residents	+	2.39
	Regional commonality	Urbanization rate of resident population	+	3.74
shareability	teach	Population with educational attainment per 100,000 population	+	2.94
		Burden factor for teachers in higher education	+	1.78
	healthcare	Number of practising (assistant) physicians per 10,000 persons	+	3.24
		Hospital beds per 10,000 population	+	2.82
	houses	Per capita housing floor space for	+	2.67

		permanent urban residents		
		Housing floor space per permanent resident in the countryside	+	2.44
		Number of urban public toilets	+	3.37
		Municipal wastewater treatment plant treatment rate	+	0.84
	digital application	Mobile phone penetration rate	+	3.85
	spiritual abundance	Public libraries per million people	+	5.44
		Number of cultural centres	+	4.29
	social security	Old-age dependency ratio	+	2.57
		unemployment insurance premium	+	1.68
		Number of employees' basic medical insurance participants	+	0.96
sustainability	High-quality development	Urban registered unemployment rate	-	3.41
		Authorized Patents	+	1.91
	tax revenue	Share of tax revenues	-	1.95
	ecologically	Water resources per capita	+	1.89
		air quality index (AQI)	+	1.97
		forest cover	+	2.21
	gestion	Number of traffic accidents	-	2.44
		Direct economic losses from natural disasters	-	2.03
		Criminal cases filed by public security organs	-	2.86

Through the observation of the data in Table 1, it can be seen that the weights of "affluence" and "sharing" among the four level 1 indicators of the data of Anhui Province are in the first place, and the weight of "sustainability" is in the last place, and the weights of "economic development" and "coordinated urban-rural development" under "affluence" are good. The weights of "economic development" and "coordinated urban-rural development" under "affluence" are good, which can be concluded that the economic development of Anhui Province is relatively optimistic and the coordinated urban-rural development has been improved, but the weights of "social security" and "social security" in the third-level indicators are good. However, the "social security" indicator is a bit pale, which means that there is still a lot of room for the development of infrastructure services in Anhui Province.

3. CHARACTERIZATION OF THE LEVEL MEASUREMENT AND SPATIAL EVOLUTION OF COMMON WEALTH IN ANHUI PROVINCE

3.1. Measurement of the Level of Shared Prosperity

3.1.1. Data Sources and Processing

Data for 17 years from 2005 to 2022 were collected through the National Bureau of Statistics, Anhui Provincial Bureau of Statistics, Baidu search, and CEIBS data network to ensure the scientificity and reasonableness of the data. The overall collected database is huge, wide-coverage and descriptive. However, due to the difference in each indicator's outline, economic significance and the direction of its impact on the whole, it is not objectively comparable, i.e., it is necessary to carry out a

dimensionless processing for each indicator to eliminate the influence of the indicator's outline. Where the missing data is very small, using linear interpolation, the last valid value before the missing value and the first valid value after the most interpolation. In this case, the raw data are treated as follows in terms of units of magnitude:

Positive indicator (the larger the value of the indicator, the better):

$$Z_{ij}^* = \frac{Z_{ij} - \min(Z_{ij})}{\max(Z_{ij}) - \min(Z_{ij})} \quad (1)$$

Reverse indicator (the smaller the value of the indicator, the better):

$$Z_{ij}^* = \frac{\max(Z_{ij}) - Z_{ij}}{\max(Z_{ij}) - \min(Z_{ij})} \quad i = 1, 2, 3, \dots, n; j = 1, 2, 3, \dots, m (n = 17, m = 40) \quad (2)$$

Where Z_{ij} in Eq.(1) and Eq.(2) refers to the original data, ij denotes the j indicator of the i sample, and Z_{ij}^* is the new value after the unit-of-measure treatment. $\max(Z_{ij})$ and $\min(Z_{ij})$ are the maximum and minimum values in the original data, respectively.

3.1.2. Entropy Weight TOPSIS Method

Entropy weight TOPSIS method is a combination of entropy weight method and TOPSIS method, which is used in this paper to quantitatively rank the comprehensive indexes for evaluating the practice of common wealth in Anhui Province[2] .

① Entropy weight method: this method is based on the discrete degree of indicator data to determine the amount of information or information entropy carried by the indicator, and then select the weights. Among them, the greater the degree of discrete, the greater the amount of information, the greater the weight of the indicator, and this method can effectively solve the problem of information overlap between multiple indicator variables.

Construct a matrix of dimensionless (data has been unit-sized) indicators R_{ij} :

$$R_{ij} = \frac{Z_{ij}^*}{\sum_{i=1}^n Z_{ij}^*} \quad (3)$$

Where the larger the value of the indicator the better, Z_{ij}^* uses a positive indicator and vice versa.

Calculate the entropy E_j , the discriminant F_j and the weight w_j of Z_j :

$$E_j = -\frac{\sum_{i=1}^n (R_{ij} \times \ln R_{ij})}{\ln n} \quad (4)$$

$$F_j = 1 - E_j \quad (5)$$

$$w_j = \frac{F_j}{\sum_{j=1}^m F_j} \quad (6)$$

②TOPSIS method: It is to measure and rank the relative distances of the best and worst objects by observing each indicator, and to derive a relative evaluation of the strengths and weaknesses of each observed object.

Construct the weighting matrix V :

$$V = (v_{ij})_{mn} = [w_j \times Z_{ij}^*]_{m \times n} \quad (7)$$

Positive ideal solutions (v^+):

$$v^+ = (\max_{i=1}^n v_{i1}, \max_{i=1}^n v_{i2}, \dots, \max_{i=1}^n v_{im}) \quad (8)$$

Negative ideal solutions (v^-):

$$v^- = (\min_{i=1}^n v_{i1}, \min_{i=1}^n v_{i2}, \dots, \min_{i=1}^n v_{im}) \quad (9)$$

Calculate the Euclidean distance for each measure S_i :

$$S_i^+ = \sqrt{\sum_{j=1}^m (v_{ij} - v_j^+)^2} \quad (10)$$

$$S_i^- = \sqrt{\sum_{j=1}^m (v_{ij} - v_j^-)^2} \quad (11)$$

Relative proximity C_i :

$$C_i = \frac{S_i^-}{S_i^+ + S_i^-} \quad (12)$$

Since the overall data after 2015 is more complete, this section mainly selects the data of each indicator from 2015 to 2022, adopts the extreme value method to eliminate the scale, and calculates the index score of each dimension and the total score of the common wealth index through weighted summation. Assuming that the data of the j the indicator in the i the year is x_{ij} , the maximum value of all indicators in the i the year is M_i , and the minimum value is m_i , the data of each indicator for each year are processed as follows:

$$P_{ij} = (x_{ij} - m_i) / (M_i - m_i) \quad (\text{on } P_{ij} \text{ interval } [0, 1]) \quad (13)$$

For each dimension the index scores were calculated by applying the weighted summation method:

$$D_j = \sum (W_j * P_{ij}) \quad (W_j \text{ is the weight of the first } j \text{ indicator}) \quad (14)$$

Using the above common wealth index system, the data related to the development level of common wealth in Anhui Province from 2015 to 2022 are calculated and statistically obtained in Table 2. Since 2015, the development level of common wealth in Anhui Province has been on a gradual upward trend, from 0.0596 in 2015 to 0.1190 in 2021, and the development index of 2022 has slightly decreased due to the impact of the epidemic, but the overall trend has remained relatively stable. However, the overall trend remains relatively stable. Among them, the shareability index score and the affluence index score account for about 90% of the total index score, with the affluence index growing steadily from 2015 to 2022, and the shareability index growing by leaps and bounds after 2019, with an average growth rate of 15.8%, which is an extremely impressive figure. The Sharedness Index shows no significant change between 2015 and 2019, and has been in an upward situation after 2019, and shows an upward trend in the future as well. The Sustainability Index drifted from 2015 to 2018, grew gradually from 2019 to 2021, and was more significantly affected in 2022.

Table2. Degree of common wealth development and sub-dimension index scores

vintages	Common Wealth Index (CWI)	affluence index	Commonality index	Shareability index	Sustainability index
2015	0.0596	0.0100	0.0302	0.0011	0.0055
2016	0.0647	0.0107	0.0317	0.0011	0.0066
2017	0.0667	0.0118	0.0339	0.0011	0.0068
2018	0.0690	0.0130	0.0376	0.0011	0.0066
2019	0.0850	0.0142	0.0510	0.0011	0.0088
2020	0.1005	0.0165	0.0636	0.0017	0.0097
2021	0.1190	0.0171	0.0771	0.0018	0.0136
2022	0.1125	0.0219	0.0752	0.0019	0.0089

3.2. Characteristics of the Spatial Evolution of Common Wealth

As shown in Table 3, the level scores and rankings of common wealth in 2015, 2018 and 2021 of representative cities in northern, central and southern Anhui province[3] . The North Anhui, Central Anhui and South Anhui regions are divided into three gradients of A, B and C in terms of the level of common wealth, in which A is a higher level, representing a better degree of common wealth development compared to other regions; B is an average level, representing an average level of common wealth development within the province; and C is a lower level, representing a poorer degree of common wealth development compared to other regions. Taking the spatial region of Anhui Province as the division standard, this paper selects Bengbu, Huainan, Suzhou, Hefei, Lu'an, Chuzhou, and Wuhu, Tongling, Xuancheng, the representative cities of northern, central and southern Anhui Province, respectively, as the object of study, and takes per capita disposable income, consumer spending, Engel's coefficient of urban residents, and urbanisation rate of the resident population as the basic indexes to assess the development of common wealth index of different cities at different times. score situation to analyse and describe the spatial evolution of common wealth in Anhui Province. The scores of the nine cities in 2015, 2018 and 2021 are calculated by the extreme value method above, and then weighted and summed to obtain the overall score of common wealth, and the specific scores of the cities in each year are compared and ranked.

Table3. Common Wealth Score and Ranking by Region, 2015, 2018, 2021

district	Representative cities	2015 Common Wealth Score	2018 Common Wealth Score	2021 Common Wealth Score	three-year Ranking changes	Subordi- nate
northern Anhui province, covering both sides of the border with China	Bengbu, Huainan, Suzhou	0.5887	0.5994	0.5901	3-3-3	C
Anhui faction of Northern Warlords	Hefei, Lu'an, Chuzhou	0.6437	0.6498	0.6257	1-1-1	A
New Fourth Army, communist party of the Northern Dynasties, including Beijing, Tianjin, Hebei, Henan and Hubei	Wuhu, Tongling, Xuancheng	0.6393	0.6417	0.6119	2-2-2	B

Using the already calculated indicator scores and the entropy weight TOPSIS method mentioned by Ms Tan Yanzhi in the literature on the measurement of the level of common wealth of Chinese farmers and the evolution of spatial and temporal differentiation[4] the entropy weights of the same indicator in different cities in different years are calculated, and the coefficient of variation is calculated.

Table4. Coefficients of variation for the same indicator by region, 2015, 2018 and 2021

vintages	Per capita disposable income	Consumer spending	urban dwellers Engel's coefficient	resident population urbanisation rate
2015	0.0086	0.0156	0.0008	0.0070
2018	0.0063	0.0090	0.0012	0.0062
2021	0.0076	0.0177	0.0029	0.0120

In summary, we can roughly understand that the overall common wealth score of Anhui Province in the three years of 2015, 2018 and 2021 is on an upward trend. Per capita disposable income, consumer spending and urbanization rate of the resident population are all growing gradually, and the Engel's coefficient of urban residents is gradually decreasing, showing a better and better trend overall.

Among them, central Anhui has been in the leading position, driving the development of other cities, and northern Anhui and southern Anhui, though not ranked high, are also in good development. As can be seen from Table 4, although the overall score of the common wealth of different cities has increased in each year, the coefficient of variation of the regions is still not considerable, and the coefficient of variation between the indicators declined in 2018, and then rebounded in 2021 due to the impact of the epidemic, so it can be seen that, although the economic level of the region is developing steadily, the gap of the economic development between the regions is increasing, and the coefficient of variation with the passage of time does not change significantly.

4. MEASUREMENT OF THE DEGREE OF REALIZATION OF COMMON WEALTH AND ANALYSIS OF URBAN-RURAL DEVELOPMENT DIFFERENCES IN ANHUI PROVINCE

The idea of Dagum's Gini coefficient decomposition method is to decompose the overall Gini coefficient by subgroups into three parts: intra-region, inter-region and hypervariable density contribution, which can effectively overcome the limitations of the traditional Gini coefficient and Terre's index, and is able to effectively analyse the problem of rural regional disparities[5].

$$G = G_n + G_j + G_{cb} \quad (15)$$

$$G = \sum_{b=1}^k |y_{ab}| / \lambda \quad (16)$$

Where equation (15) and (16) calculate the Gini coefficient. G , y_{ab} represents the common wealth level of the region b in Anhui Province. a represents Anhui Province, b represents towns and villages, k represents the number of regions, and λ represents the mean value of the common wealth level in Anhui Province. G consists of the contribution of inter-region variation G_j , the contribution of intra-region variation G_n , and the contribution of hypervariance density G_{cb} .

4.1. Intra-regional Differences

Table5. Gini coefficient and its decomposition results

vintages	Anhui	Intra-regional variations		Interregional differences
		cities and towns	villagers	city and countryside
2015	0.175	0.141	0.121	0.223
2016	0.168	0.127	0.114	0.219
2017	0.169	0.123	0.105	0.212
2018	0.156	0.136	0.108	0.205
2019	0.153	0.121	0.102	0.197
2020	0.151	0.113	0.094	0.189
2021	0.147	0.112	0.091	0.182
2022	0.143	0.108	0.079	0.179

From 2015 to 2022, the Gini coefficient of Anhui province continued to decline, and rebounded in 2017, but the difference was not obvious. At the end of the "13th Five-Year Plan" stage, the Gini coefficient of Anhui province dropped from 0.175 to 0.151, and entered the "14th Five-Year Plan" stage, which means that the problem of unbalanced and insufficient development in urban and rural areas is being alleviated. The Gini coefficient is also decreasing, which means that the overall gap between the overall level of common wealth in Anhui Province continues to decline, and the problem of unbalanced and insufficient development in urban and rural areas is being reduced. The differences and trends of the Gini coefficient in Anhui Province and urban and rural areas from 2015-2022 are shown in Table 5 and Figure 1.

During the sample observation period, the differences between Anhui Province, urban and rural areas as a whole show a slow downward trend, and the fluctuation amplitude is relatively small, indicating that the common wealth balance in Anhui Province has improved.

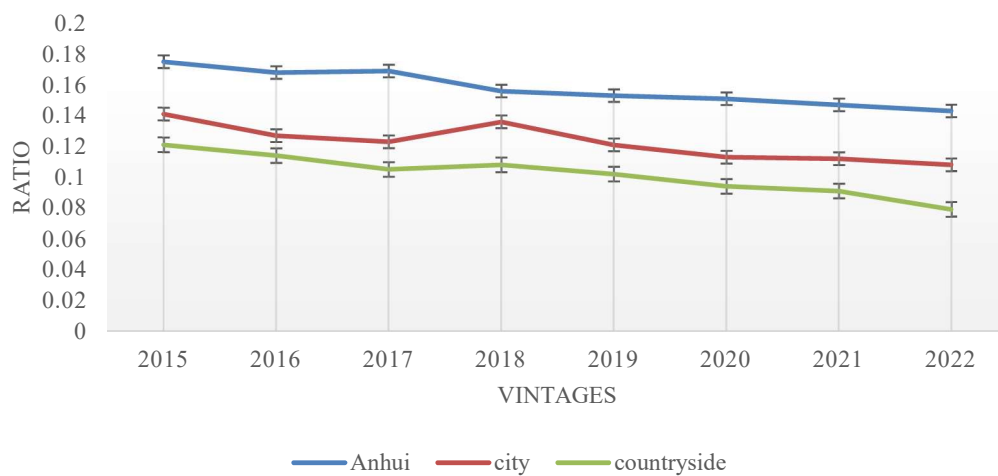


Figure1. Gini coefficient within urban and rural areas in Anhui Province

4.2. Interregional Differences

As can be seen from Table 5 as well as Figure 2, the Gini coefficient between urban and rural areas in Anhui Province has been decreasing from 2015 to 2022, from 0.223 in 2015 to 0.179 in 2022, which means that the difference between urban and rural areas in Anhui Province as a whole has shown a slow decreasing trend during the sample observation period and the fluctuation amplitude is relatively small, which indicates that the problem of imbalance and insufficiency of the development of common wealth in Anhui Province has been improved.

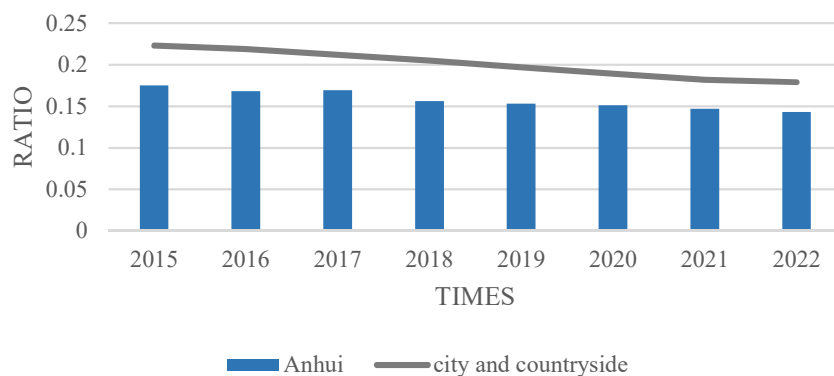


Figure2. Gini coefficient between urban and rural areas in Anhui Province

5. IMPACT OF CHINESE-STYLE MODERNISATION AND COMMON WEALTH ON THE DEVELOPMENT OF ANHUI PROVINCE

Common wealth is an essential feature of socialism, and most of the relevant studies in the past basically chose to examine the target of multiple provinces, with fewer studies targeting a specific province, and in the new development phase of the 14th Five-Year Plan, the data variables of the year before the start of the 13th Five-Year Plan were used. In the new development phase of the "14th Five-Year Plan", data variables from 2015 were used for analysis.

As a newly promoted member province of the Yangtze River Delta, Anhui Province is experiencing rapid economic development, and there is an urgent need for academic research to explore the extent to which common wealth is being achieved in the province, construct new theoretical explanations, and analyse the income and consumption gaps between urban and rural development.

According to data from the Anhui Provincial Bureau of Statistics, both urban and rural residents in Anhui Province have seen a significant increase in disposable income per capita, from 26,900 yuan and 0.7 million yuan in 2015 to 45,100 yuan and 12,800 yuan in 2022, respectively. However, at the same time, the income gap between urban and rural residents in Anhui Province is also widening, from 19,900 yuan in 2015 to 32,300 yuan in 2022. In terms of consumption expenditure, the per capita consumption expenditure of urban and rural residents in Anhui Province grows from 17,200 yuan and 0.9 million yuan in 2015 to 26,800 yuan and 18,000 yuan in 2022, respectively, and the consumption gap likewise shows a certain widening trend, expanding from 0.82 million yuan in 2015 to 0.88 million yuan in 2022. There is some widening, but not as significant as the widening of the income gap.

Table6. Income gap and consumption gap between urban and rural residents (unit: yuan)

norm	2015	2016	2017	2018	2019	2020	2021	2022
Disposable income per capita (income gap)	1.84	2	2.19	2.4	2.64	2.81	3.09	3.27
Per capita disposable income of urban residents (10,000 yuan)	2.69	2.92	3.16	3.44	3.75	3.94	4.3	4.51
Urban disposable income per capita increased year-on-year	/	8.6	8.2	8.9	9.0	5.1	9.1	4.9
Per capita disposable income of rural residents (10,000 yuan)	0.7	0.76	0.83	0.91	1.0	1.07	1.16	1.28
Rural disposable income per capita increased year-on-year	/	8.6	9.2	9.6	9.9	7.0	8.4	10.3
Consumption expenditure per capita (consumption gap)	1.28	1.47	1.58	1.7	1.91	1.89	2.19	2.25
Per capita consumption expenditure of urban residents (RMB 10,000)	1.72	1.96	2.07	2.15	2.38	2.27	2.65	2.68
Per capita consumption expenditure of urban residents increased year-on-year	/	14.0	5.6	3.9	10.7	4.6	16.7	1.1
Per capita consumption expenditure of rural residents (ten thousand yuan)	0.9	1.03	1.11	1.27	1.45	1.5	1.72	1.8
Per capita consumption expenditure of rural residents increased year-on-year	/	14.4	7.8	14.4	14.2	3.4	14.7	4.7

The narrowing of the income gap is an important indicator of the economic dimension of common prosperity, while consumption is an important guarantee for the promotion of high-quality economic development in our province[6] . Current research has basically formed a consensus that "income is the main factor determining consumption". Income and consumption, which are closely related to

people's lives, are not simply a one-way relationship, and the widening of the consumption gap may have a solidifying effect on the income gap. Therefore, it is urgent to examine from the perspective of the reverse effect of the consumption gap on the income gap. Based on the current literature on the impact of the income gap on the consumption gap, this paper explores the perspective of the reverse effect of the consumption gap on the income gap, and further examines whether the difference between the share of enjoyment-type and development-type consumption expenditures of urban and rural residents plays an intermediary effect between the consumption gap and the income gap[7].

5.1. Empirical Model Design and Variable Data Description

5.1.1. Empirical Model Design

Through the above analysis, the empirical econometric model of the reverse effect of consumption gap on income gap is established as shown in equation (17):

$$\Delta Income_{it} = \gamma + \alpha \Delta Consume_{it} + \beta Control_{it} + \mu_{it} \quad (17)$$

Where $\Delta Income_{it}$ denotes the urban-rural residents' income gap variable, $\Delta Consume_{it}$ denotes the urban-rural residents' consumption gap variable, $Control_{it}$ denotes other control variables affecting the residents' income gap, and μ_{it} is the error correction term.

On this basis, in order to test the mediating effect of the difference between the shares of urban and rural residents in the enjoyment and development-type consumption expenditures, the difference between the shares of urban and rural residents in the enjoyment and development-type consumption expenditures is included in the model (17), and the mediating effect test model is set up as shown in equation (18):

$$\Delta Income_{it} = \gamma + \alpha \Delta Consume_{it} + \theta \Delta Consume_{it} \times Consume_{it} - ratio_{it} + \beta Control_{it} + \mu_{it} \quad (18)$$

Where $\Delta Consume_{it} \times Consume_{it}$ is the mediating effect variable, when the estimated coefficient of θ is non-zero and significant, it indicates the existence of the mediating effect of the difference between the shares of enjoyment and developmental consumption expenditures of urban and rural residents.

5.1.2. Description of Variable Data

Urban-rural residents' income gap variable: the per capita disposable income variable is used for measurement, and currently the most intuitive measurement method is to use the difference between the per capita disposable income of urban and rural residents in Anhui Province for measurement.

Consumption gap between urban and rural residents: Measured by per capita consumption expenditure, using the difference between the per capita consumption expenditure of urban and rural residents in Anhui Province.

Control variables: other control variables affecting the income gap between residents, choose the difference between the share of urban residents and rural residents in the enjoyment and development type of consumption expenditures to measure.

5.2. Empirical Studies

This paper uses data from our province for empirical evidence to test the reverse effect of the consumption gap between urban and rural residents on the income gap, with a sample period of 2015-2022, totalling eight years.

Table7. Estimated results of the mediating effect of the consumption gap on the income gap between urban and rural residents

variant	Models (5-1)	Models (5-2)
Consumption gap between urban and rural residents	0.0242*** (4.37)	0.0197*** (5.16)
variable mediation effect		0.0138*** (4.29)
Level of economic development	0.0813*** (-4.74)	0.1219*** (-2.25)
Educational attainment of the population	0.0312*** (-5.44)	0.0298*** (-4.11)
healthcare	0.0467*** (-4.56)	0.0381*** (-3.84)
times	fixation	fixation
individually	fixation	fixation
constant term (math.)	1.4679*** (4.41)	1.9734*** (2.79)

Note: *** indicates that the statistic for the coefficient estimate is significant at least at the 5 per cent significance level, as below.

From the estimation results, it can be seen that the mediating effect of the consumption gap between urban and rural residents on the income gap is positive and significant. This indicates that the consumption gap does have a reverse effect on the income gap, which is mainly manifested in the phenomenon that the higher the consumption capacity, the higher the income[8] .

As in Table 7, the mediation effect of the control variables results in not 0 and $p < 0.05$, then it is significant. It shows that income and consumption, which are closely related to people's lives, are not just a simple one-way influence relationship, and the widening of the consumption gap will have a solidifying effect on the income gap, which will naturally lead to differences in urban and rural residents' consumption of different categories of consumer goods. Among them, urban residents, whose differences are more pronounced, are more inclined to enjoyment-type or development-type consumption in education, medical care, cultural and recreational activities, and so on. At the same time, the level of economic development will further widen the income gap between urban and rural residents, probably because urban residents have greater accessibility and acceptance of economic resources, and are better able to fulfil the role of economic development in promoting consumption. In addition, urban residents are surrounded by more resources for education and health care than rural residents, leading to differences between urban and rural residents.

6. POLICY RECOMMENDATIONS FOR CONTINUOUSLY PROMOTING THE DEVELOPMENT OF COMMON WEALTH IN ANHUI PROVINCE IN THE CONTEXT OF MODERNIZATION

6.1. Conclusions of the Study

Based on the existing research, this paper first adopts the entropy weight method to determine the weights of each index by the information entropy in the data of common wealth indexes in Anhui Province from 2005-2021, combines with the TOPSIS analysis to carry out a comprehensive evaluation of the degree of common wealth practice in Anhui Province, and constructs the evaluation system of the common wealth indexes to score the four first-level indexes indexes in Anhui Province

from 2014-2021. Subsequently, the urban and rural per capita consumption level expenditure in Anhui Province for the study of urban and rural economic differences between northern Anhui, central Anhui, southern Anhui, and found that the province's urban and rural regional development differences in the overall mitigation, as a reflection of the common wealth balance in Anhui has been improved, but also from the urban and rural consumption gap in Anhui Province on the reversal of the effect of income disparity to observe the mediating effect that it plays in urban and rural residents, and concluded that the level of economic development in Anhui Province, though further widens the income gap between urban and rural residents, but also promotes urban and rural per capita consumption expenditure at the same time.

This result, can be concluded that the level of practice of common wealth in Anhui Province to a certain extent compared to the former has obvious growth and development, in the overall reduction of the development of urban and rural areas in Anhui Province, Anhui Province's economic development can be improved, but in the combination of the actual common wealth in Anhui Province, the practice of common wealth in Anhui Province and the results of this paper under the analysis of the practice of the road is still there are a lot of problems:

First, In the context of Anhui Province, which has now become a member of the Yangtze River Delta but is still a developing province, the problem of unbalanced and insufficient development in Anhui Province is still very prominent; secondly, the primary challenge facing the common wealth is the income gap that currently exists in China[9], so the problem of the large gap between urban and rural regional development and income distribution in Anhui Province poses a major obstacle to the realization of the common wealth in Anhui Province; thirdly, the Anhui Province Third, the basic public services in Anhui Province cannot be equalized. In today's society, the quantity and quality of public services and facilities have a serious impact on the living standard of the residents, therefore, the realization of the equalization of basic public services in Anhui Province is the basic content of the practice of common wealth.

6.2. Recommendations for Countermeasures

Common wealth is an important feature of Chinese modernization, which plays a role in the process of Chinese modernization in resolving the risks of social members, improving social welfare and safeguarding social rights and interests^[10]. Therefore, the realization of common wealth in Anhui Province is a top priority, and corresponding suggestions can be made on the existing problems of realizing common wealth in Anhui Province:

First, efforts to improve the promotion mechanism. First of all, from the research in this paper can be seen as the centre of Anhui Province, Hefei development in any aspect is higher than the other 15 cities, its affluence score shows an upward trend, so the provincial government needs to co-ordinate the development of 16 cities in Anhui Province layout and planning guidelines, encourage and actively promote the city to adapt to local conditions, play the city's cultural heritage, to explore the effective way of development, in order to "map war" task force to promote the mode; Secondly, actively carry out the "early and pilot" task force to form an integrated working atmosphere and mechanism. "Secondly, it actively carries out the strategic idea of "early and pilot implementation". According to "within one year to capture the key areas, two years to do to expand the regional area, three years to strive for a hundred flowers in the province, the full spread" of the development of the idea, the first to explore and support the development of good, strong support, the facilities of the region, while striving to create a common wealth in Anhui province prototype in the advancement of the region at the same time to sum up and improve the experience of the method and as soon as possible to be implemented in the province to promote methodology and as soon as possible in the implementation of the province to promote.

The second is to improve the quality and quality of the middle- and low-income groups. First of all, studies have shown that under the slower pace of development or even non-development, if we simply

use the existing redistribution methods to narrow the income gap of the groups, it will only aggravate the problem and further frustrate the economic development of the province.^[11] Therefore, the provincial government should stimulate the endogenous motivation of the middle- and low-income people and lagging areas, grow the size and affluence of the middle-income group, and promote the low income group to become the middle-income group by fully releasing the vitality of the private economy and expanding the development of the private enterprises. By fully releasing the vitality of the private economy and expanding the development of private enterprises, the provincial government should promote the low-income group to become the middle-income group. Secondly, it should pay attention to the weak links in the integrated development of urban and rural areas, so as to achieve the integrated development of urban and rural areas, and narrow the gap between urban and rural areas. Finally, strengthening the top-level construction of central cities, expanding the radiation drive of Hefei and other central cities in Anhui Province to nearby counties and townships, actively guiding the peripheral backward counties to undertake industrial transfer, giving full play to the role of the market in the allocation of resources, and actively paying attention to the regional development policies issued by the provincial government, so as to provide basic conditions for the development of new industries and innovation platforms and the promotion of the construction of new infrastructures.

Thirdly, it is to improve the multi-level social security system. First of all, the improvement of its system is to alleviate the urgency of realizing basic public services in Anhui Province, where the problem of poverty and poverty return due to disease, disaster and aging still exists, so the provincial government should improve the urban and rural minimum living and medical care protection, and these two indexes account for the weight of the upper tier of the Common Wealth Evaluation Indicator System in Anhui Province, so the government should lower the threshold of the poverty premiums, and increase the poverty alleviation policy. Finally, it should co-ordinate the urban and rural employment policy system, promote high-quality employment for urban and rural residents, and further improve the public finance system.

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