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Original Paper

Eliminate Absolute Poverty to Narrow the Gap between the Rich and the Poor?—Based An Chinese Provincial Panel Data From 2012 to 2021 of The Empirical Research

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Abstract

Began to implement precise poverty alleviation in China, from 2012 to 2020, eliminating absolute poverty across the country, this study based on 2012-2021, the Chinese government poverty monitoring tracking 22 provincial economic data, with the aid of stata17.0 software tools, correlation analysis, the heteroscedasticity test and multiple regression analysis of the 10 years rural residents per capita disposable income, respectively, and residents' income gap between urban and rural areas, rural residents income gap between the number of dependent relationship, and the Per capita GDP, the total amount of foreign investment, the urbanization rate, value of tertiary industry and total retail sales of social consumer goods listed as influencing factors, so as to reveal that the influence of the gap between rich and poor eliminating absolute poverty. The empirical results show that rural residents per capita disposable income increased, can be narrowed between urban and rural residents and rural residents and rural residents between the gap between the rich and the poor.

Keywords

Per capita income, Absolute poverty, Relative poverty, Poverty gap

1. Introduction

Eradicating poverty has been an insurmountable challenge for China, where the poor make up 97.5 percent of the population. However, the Chinese government's efforts have led to the successful elimination of absolute poverty in 2020 (The National Bureau of Statistics, 2022), prompting experts and scholars to delve into China's measures and achievements in eliminating absolute poverty from multiple perspectives. This paper presents an exhaustive review of recent research on China's poverty governance and its relative poverty governance plan.

Huang (2020) examined the main views on poverty governance in China and highlighted the historical significance of poverty eradication in China, along with its contribution to global poverty reduction. Cheng and Zou (2019) reviewed China's anti-poverty history over the past 70 years and highlighted three major characteristics, six significant meanings, and four implications for alleviating relative poverty. Zhang and Cheng (2020) proposed that China's poverty reduction plan had four essential features and five elements, serving as a public good for anti-poverty in developing countries. Xiao and Wu (2021) argued that the elimination of absolute poverty in China had bolstered the confidence of all countries worldwide to fight against poverty and had become a model for the world to address poverty issues.

Pang and Wang (2021) contended that the eradication of absolute poverty did not signify the complete end of poverty but rather a shift to relative poverty governance, presenting more strenuous tasks and far-reaching impacts. Zuo and Su (2020) summarized China's experience in eliminating absolute poverty and argued that relative poverty had distinctive characteristics from absolute poverty, rendering it more challenging to solve. Luo (2020) posited that absolute poverty chiefly addressed the survival problem of the poor population, concentrating on their living conditions, while relative poverty aimed at narrow the income and quality of life gaps of the poor, focusing on their economic and social status.

Qu (2021) believed that relative poverty demanded not only increasing the economic income of the poor but also enhancing their development ability and rights. Zhang and Zhou (2019) argued that China's governance of absolute poverty had boosted the economic level of the poor population and narrowed the economic gap between poverty and non-poverty. Guan et al. (2020) utilized PSM and OLS models to analyze the survey data of poor areas in 2017 and discovered that the income growth rate of rural poor residents surpassed that of non-poor residents by 4.2%. However, Fan and Zou (2021) found contrasting results, indicating that the change trend of relative poverty and absolute poverty was inverse, and the reduction of absolute poverty would result in an increase in relative poverty. Li et al. (2020) employed data from the China Household Income Survey (CHIP) from 2010 to 2018 and discovered that the per capita disposable income growth rate of poor rural individuals was 0.26% lower than that of non-poor individuals.

Overall, the study provides a comprehensive overview of China's poverty and relative poverty governance programs, highlighting the challenges and achievements China has encountered. These findings provide insights into the actions needed to address and alleviate poverty in developing countries worldwide.

The bulk of research carried out by scholars revolves around the methods, mechanisms, results and achievements of China's absolute poverty eradication. In addition, scholars have explored the disparity between absolute and relative poverty and the mechanisms governing relative poverty. However, limited research has been done on whether governance of absolute poverty reduces the wealth gap.

This paper aims to analyze the relationship between the elimination of absolute poverty and the wealth gap using publicly available economic data from the Chinese government from 2012 to 2021. With the aid of Stata 17.0 software, the study employed descriptive, correlation and multivariate regression methods to examine the relationship between the two factors. The study aims to understand the impact of eradicating absolute poverty on the wealth gap.

2. Method

2.1 Data Source and Variable Set

2.1.1 Data Source

Since 2012, China has implemented precision poverty governance and successfully lifted all its citizens out of absolute poverty by 2020. According to Yuan and Yu (2021) and Lei et al. (2022), the targeted poverty alleviation program that was implemented since 2012 played a crucial role in the comprehensive eradication of absolute poverty by 2020. To investigate this claim, this study examined the economic data from 22 provinces in China between 2012 and 2021, which were obtained from publicly available sources such as the China Statistical Yearbook, China Rural Poverty Monitoring Report, and China Household Survey Yearbook issued by the Chinese government.

2.1.2 Explained Variable

The explained variable in this study was the rich-poor gap. Scholars at home and abroad had many discussions on the gap between rich and poor, its widely used indicators include the Gini coefficient, Theil index, Per capita disposable income ratio, Engel's Coefficient, etc. (Zhou, 2012), of which the most commonly used Gini Coefficient, but it was relatively slow responding to changes in the income of the poor, can easily lead to the results of the study appear to error (Xiong & Li, 2022), and per capita disposable income was a good way to reflect the extent to which a group of rich and poor (Chao et al., 2020). Therefore, in this paper, the per capita disposable income ratio of rural residents to urban residents (edv1%) and the ratio of poor rural residents to the per capita disposable income of rural residents (edv2%) were used as the measure of the gap between the rich and the poor.

2.1.3 Explanatory Variables

The core explanatory variable factor in this paper was the elimination of absolute poverty. The term absolute poverty first came from Booth's research, under the World Bank's proposed absolute poverty standard of the United States $1.90 per person per day, China had eliminated absolute poverty by 2020. In other words, the per capita income of the poor people in China had reached or exceeded this standard by 2020. This paper uses the per capita disposable income of rural poor residents in China from 2012 to 2021 as the core explanatory variable, to analyze the dependency between the per capita disposable income (eyv1) of rural poor residents and the gap between the rich and the poor in the ten years from 2012 to 2021.

2.1.4 Control Variables

The study in question employs research methods previously used by Hua and Chen (2016) and Wang and Wang (2018). Control variables used in this study include GDP per capita (eyv2), total foreign investment (eyv3), the urbanization rate (eyv4), tertiary industry value (eyv5), and total retail sales of consumer goods (eyv6). To avoid bias caused by collinearity and heteroscedasticity, logarithmic treatment is applied to the explained variables (edv1) and (edv2), explanatory variable (eyv1), and control variables (eyv2, eyv3, eyv4, eyv5, eyv6), denoted as y1, y2, x1, x2, x3, x4, x5, and x6, where y1=log(edv1), y2=log(edv2), x1=log(eyv1), x2=log(eyv2), x3=log(eyv3), x4=log(eyv4), x5=log(eyv5), and x6=log(eyv6). The log transformation of variable data preserves its nature and correlation, making it a suitable technique for this study.

In summary, this study uses well-established research methods and control variables to investigate the impact of certain economic indicators on the income gap among rural and urban residents in China. The logarithmic treatment of variables is an appropriate technique for this study.

2.2 Econometric Analysis

The study employed Stata 17.0 software to perform descriptive statistics, correlation tests, multivariate regression analysis, and heteroscedasticity tests on the data to determine if there was a significant effect on the disposable income and wealth gap of poor rural residents and to calculate their respective impact coefficients. Variables were first collected and processed logarithmically, including explanatory and control variables, and then imported into Stata 17.0 software data tables for analysis using linear multivariate regression. The resulting least-squares regression model equations and empirical conclusions are derived from the analysis.

2.3 Descriptive Statistical Analysis

Enter the “summarize” command in the Command window of Stata 17.0 software to get the descriptive statistical results of all data (Table 1):

Table 1. Descriptive Statistics

Variables	Obs	Mean	SD	Min	Max	p1	p99	Skew.	Kurt.
area	220	11.5	6.359	1	22	1	22	0	1.795
year	220	2016.5	2.879	2012	2021	2012	2021	0	1.776
y1	220	1.579	0.060	1.438	1.726	1.449	1.694	-0.230	2.379
y2	220	1.908	0.058	1.754	2.000	1.775	2.000	-0.316	2.412
x1	220	3.947	0.140	3.618	4.229	3.652	4.220	-0.081	2.108
x2	220	4.647	0.125	4.295	4.939	4.346	4.932	-0.107	2.789
x3	220	2.301	0.695	-0.764	3.810	-0.046	3.628	-1.274	5.792
x4	220	1.722	0.078	1.359	1.847	1.419	1.834	-1.671	7.279
x5	220	3.787	0.403	2.577	4.461	2.692	4.428	-0.878	3.398
x6	220	3.704	0.447	2.406	4.387	2.562	4.371	-0.835	3.034

According to the results presented in Table 2, this study used a sample of 220 observations collected over a ten-year period (2012-2021) from 22 provinces in China. The results indicate that the average ratio of per capita disposable income for rural residents to urban residents (edv1) was 37.93% (10^1.579), with the highest value being 53.21% (10^1.726), the lowest value being 27.42% (10^1.438), and a standard deviation of 1.15 (10^0.06). The average ratio of per capita disposable income for rural poor residents to all rural residents (edv2) was 80.91% (10^1.908), with the highest value being 100% (10^2), the lowest value being 56.75% (10^1.754), and a standard deviation of 1.14 (10^0.058). The average per capita disposable income for rural poor residents (eyv1) was RMB 8851.16 (10^3.947), with the highest value being RMB 16943.38 (10^4.229), the lowest value being RMB 4149.54 (10^3.618), and a standard deviation of 1.38 (10^0.14). The average per capita GDP for all residents (eyv2) was RMB 44360.86 (10^4.647), with the highest value being RMB 86896.04 (10^4.939), the lowest value being RMB 19724.23 (10^4.295), and a standard deviation of 1.33 (10^0.125). The average total foreign investment (eyv3) was RMB 19.998 billion (10^2.301), with the highest value being RMB 645.654 billion (10^3.81), the lowest value being RMB 17 million (10^-0.764), and a standard deviation of RMB 495 million (10^0.695). The average urbanization rate (eyv4) was 52.72% (10^1.722), with the highest value being 70.31% (10^1.847), the lowest value being 22.86% (10^1.359), and a standard deviation of 1.20% (10^0.078). The average tertiary industry value (eyv5) was RMB 612.35 billion (10^3.787), with the highest value being RMB 2890.68 billion (10^4.461), the lowest value being RMB 37.757 billion (10^2.577), and a standard deviation of RMB 253 million (10^0.403). The average total retail sales of consumer goods (eyv6) were RMB 505.825 billion (10^3.704), with the highest value being RMB 2437.811 billion (10^4.387), the lowest value being RMB 25.468 billion (10^2.406), and a standard deviation of RMB 280 million (10^0.447). Descriptive statistical analysis reveals that the selected variable data has no outliers or extreme values, and the range of the data lies within an acceptable dimension.

2.4 Correlation Analysis

To obtain the correlation analysis results between the variable data presented in Table 2, execute the "pwcorr_a y1 y2 x1 x2 x3 x4 x5 x6" command within the Command window of the Stata 17.0 software.

Table 2. Results of the Correlation Analysis

	y1	**y2**	**x1**	**x2**	**x3**	**x4**	**x5**	**x6**
y1	1							
y2	-0.537***	1						
x1	0.404***	0.379***	1					
x2	0.470***	0.022	0.756***	1				
x3	0.434***	-0.327***	0.125*	0.280***	1			
x4	0.537***	-0.305***	0.451***	0.717***	0.488***	1		

x5	0.466***	-0.320***	0.354***	0.407***	0.757***	0.489***	1	
x6	0.456***	-0.361***	0.267***	0.341***	0.763***	0.426***	0.983***	1

*** p<.01, ** p<.05, * p<.1.

The results of the correlation analysis presented in the foregoing exposition indicate a robust positive correlation between the control variables x5 and x6. The calculated correlation coefficient between the two control variables was 0.983, which was found to be significant at the 0.01 level of inspection.

Further, the primary explanatory variable (x1) exhibits a positive correlation with both explained variables (y1 and y2). The test results for this correlation are significant at the 0.01 level. In contrast, the correlation coefficient between the control variable (x2) and explained variable (y2) is a mere 0.022, with a non-significant test result, thereby indicating a weak correlation between the two variables.

Additionally, other control variables exhibit a positive correlation with the explained variable (y1), with significant test results at the 0.01 level. However, these same control variables demonstrate a negative correlation with the explained variable (y2), with significant test results at the 0.01 level.

In sum, the analysis reveals a strong positive correlation between control variables x5 and x6 and a positive correlation between the primary explanatory variable (x1) and both explained variables (y1 and y2). The study also highlights a weak correlation between the control variable (x2) and explained variable (y2), as well as other control variables' differing correlation with explained variables y1 and y2.

3. Regression Analysis

3.1 Build Linear Model

$$y1_{it}=\alpha_0+\alpha_1\bullet x1_{it}+\alpha_2\bullet x2_{it}+\alpha_3\bullet x3_{it}+\alpha_4\bullet x4_{it}+\alpha_5\bullet x5_{it}+\alpha_6\bullet x6_{it}+\varepsilon_{it}$$

$$y2it=\beta_0+\beta_1\bullet x1_{it}+\beta_2\bullet x2_{it}+\beta_3\bullet x3_{it}+\beta_4\bullet x4_{it}+\beta_5\bullet x5_{it}+\beta_6\bullet x6_{it}+\mu_{it}$$

In this study, y1 represented the logarithm of the disposable income ratio between rural and urban residents, while y2 represented the logarithm of the disposable income ratio between rural poor residents and all rural residents. The subscript "i" denoted the individual effect (province), and "t" represented the time effect (year). The intercept terms for the interpreted variables y1 and y2 were denoted by α_0 and β_0, respectively. The unknown regression coefficients were represented by α_1 to α_6 and β_1 to β_6. The independent variables x1, x2, x3, x4, x5, and x6 were the logarithms of per capita GDP, total foreign investment, the urbanization rate, tertiary industry value, and total retail sales of consumer goods. The random error terms for the explained variables y1 and y2 were denoted by ε_{it} and μ_{it}, respectively.

3.2 Regression Analysis of the Explained Variables (y1) With the Core Explanatory Variables and Control Variables

3.2.1 Regression Results

In the present study, our aim was to elucidate the relationship between the dependent variable (y1) and

1 primary explanatory variable and 5 control variables. To refine the model, we employed a stepwise regression approach, which entailed eliminating control variables with insignificant P-values. Specifically, control variable (x2) with a P-value of 0.652 and control variable (x3) with a P-value of 0.122 were removed, and the refined model was subjected to final regression analysis. The results of this analysis revealed a significant relationship between the explanatory variable and the dependent variable (y1), as elucidated in Table 3.

Table 3. Results of the Linear regression

Source	**SS**	**df**	**MS**		Number of obs	=	220	
Model	0.3109	4	0.0777		F (4, 215)	=	35.63	
					Prob>F	=	0.0000	
Residual	0.4690	215	0.0022		R-squared	=	0.3986	
					Adj R-squared	=	0.3875	
Total	0.7800	219	0.0036		Root MSE	=	0.0467	
y1	**Coef.**	**St. Err.**	**t-value**	**p-value**	**[95% Conf**		**Interval]**	**Sig**
x1	0.1103	0.0281	3.93	0.000	0.0550		0.1656	***
x4	0.3041	0.0506	6.01	0.000	0.2044		0.4039	***
x5	-0.1464	0.0518	-2.82	0.005	-0.2485		-0.0442	***
x6	0.1585	0.0445	3.56	0.000	0.0708		0.2463	***
Constant	0.5863	0.1027	5.70	0.000	0.3838		0.7889	***

*** $p<.01$, ** $p<.05$, * $p<.1$.

The current investigation involved a substantial sample size of 220 participants, as depicted in Table 3. The deployed model showcased an impressive overall significance, as evidenced by an F value of 35.63 and a P value (Prob>F) of 0.000. Furthermore, the model's coefficient of determination (R-squared) was 0.3986, with an adjusted coefficient of determination (Adj R-squared) of 0.3875, thereby signifying an exceptional level of explanatory power.

Upon the development of the final regression model, it became apparent that the model consisted of one primary variable (x1) and three auxiliary variables (x4, x5, x6). Notably, the P values for these variables were found to be less than 0.01, thus highlighting their statistical significance. Consequently, a least-squares regression model equation can be derived to capture the underlying relationships between these variables with a greater degree of precision.

$$y1=0.5863+0.1103 \cdot x1+0.3041 \cdot x4-0.1464 \cdot x5+0.1585 \cdot x6$$

3.2.2 Heteroscedasticity Testing

To gauge the potential influence of error terms on the explanatory variables of the regression model and uphold the statistical integrity of the regression parameter estimates, the Breusch-Pagan test was executed. This evaluative assessment rested on the critical assumption that the stochastic disturbance term adhered to a normal distribution and was both independent and identically distributed. A comprehensive summary of the Breusch-Pagan test's outcomes is furnished in Table 4, elucidating the empirical findings in a rigorous and meticulous manner.

Table 4. Results of the Breusch – Pagan Test

hettest	**estat hettest, iid**
Variable: Fitted values of y1	Variable: Fitted values of y1
H0: Constant variance	H0: Constant variance
chi2(1) = 0.69	chi2(1) = 1.06
Prob > chi2 = 0.4075	Prob > chi2 = 0.3030

Upon careful scrutiny of the test results, it was discerned that the P value of the BP test surpassed the 0.1 threshold, thus lending substantial credence to the null hypothesis of equivalent variances. This notable discovery engenders the inference that the data was bereft of heteroscedasticity, thereby obviating the need for a robust standard deviation in the regression analysis. Consequently, this salient outcome serves to bolster the accuracy and reliability of the statistical inferences derived from the regression model.

3.3 Regression Analysis of the Explained Variables (y2) With the Core Explanatory Variables and Control Variables

3.3.1 Regression Results

Using a stepwise regression method that included one core explanatory variable and five control variables, excluding with control variable x5 for a P value of 0.793 and control variable x2 for a P value of 0.108, the explained variable y2 was analyzed. The final regression results can be found in Table 5.

Table 5. Results of the Linear Regression

Source	**SS**	**df**	**MS**		Number of obs	=	220	
Model	0.4051	4	0.1013		F (4, 215)	=	63.42	
					Prob>F	=	0.0000	
Residual	0.3433	215	0.0016		R-squared	=	0.5413	
					Adj R-squared	=	0.5327	
Total	0.7485	219	0.0034		Root MSE	=	0.0400	
y2	**Coef.**	**St. Err.**	**t-value**	**p-value**	**[95% Conf**	**Interval]**	**Sig**	
x1	0.3012	0.0225	13.38	0.000	0.2568	0.3456	***	
x3	0.0182	0.0065	2.80	0.006	0.0053	0.0309	***	

x4	-0.3937	0.0445	-8.85	0.000	-0.4815	-0.3060	***
x6	-0.0646	0.0097	-6.66	0.000	-0.0837	-0.0455	***
Constant	1.5945	0.0831	19.17	0.000	1.4306	1.7584	***
*** p<.01, ** p<.05, * p<.1							

*** p<.01, ** p<.05, * p<.1.

Based on the results, the study included a total of 220 samples, and the F value of the model (4215) was 63.42 with a P value (Prob > F) of 0.000, indicating a strong overall significance of the model. The determination coefficient (R-squared) of the model was 0.5413, and the adjusted determination coefficient (Adj R-squared) was 0.5327, indicating a good explanatory ability of the model.

Moreover, the core variable (x1) and three control variables (x3, x4, x6) had P values less than 0.01, and their coefficients were highly significant. From this, a least-squares regression model equation can be constructed as follows:

y2=1.5945+0.3012•x1+0.0182•x3-0.3937•x4-0.0646•x6

3.3.2 Heteroscedasticity Testing

Breusch-Pagan test of the regression model in the same way above, and the results are shown in Table 6:

Table 6. Results of the Breusch – Pagan Test

hettest	**estat hettest, iid**
Variable: Fitted values of y2	Variable: Fitted values of y2
H0: Constant variance	H0: Constant variance
chi2(1) = 0.08	chi2(1) = 0.16
Prob > chi2 = 0.7815	Prob > chi2 = 0.6928

The above test results show that, according to the stochastic disturbance to obey a normal distribution and become independent identically distributed two ways of regression model Breusch - Pagan inspection results, P values were greater than 0.1, very significantly accepted with the variance of the original assumption, that the data there were no heteroscedasticity, do not need to use the steady standard deviation by regression.

4. Research Conclusion

Through the correlation and multiple regression analysis of 8 variables and indicators of 22 provincial panel data of China's poverty monitoring from 2012 to 2021, this paper empirically studies the dependence of the per capita disposable income of rural poor residents on the income gap between urban and rural residents, as well as the income gap between rural poor residents and rural residents.

From the perspective of correlation analysis, the per capita disposable income of rural poor residents is positively correlated with the per capita disposable income ratio of urban and rural residents and the per capita disposable income ratio of rural poor residents to rural residents; the correlation between per capita GDP of residents and the ratio of per capita disposable income of rural poor residents to rural residents was not significant, but was positively correlated with the ratio of per capita disposable income of urban and rural residents; The total amount of foreign investment, the rate of urbanization, the value of tertiary industries and total retail sales of social consumer goods, as well as the per capita disposable income of urban and rural residents were positively correlated, while the per capita disposable income of rural poor was negatively correlated.

Through the utilization of gradual multiple regression analysis, an investigation was conducted to explore the impact of per capita Gross Domestic Product (GDP) of residents and total foreign investment on the ratio of per capita disposable income for both urban and rural residents. Remarkably, the obtained results indicate that these aforementioned variables do not exhibit a statistically significant effect on the said ratios, suggesting a potential absence of correlation between them. In addition, it was found that per capita GDP and the value of tertiary industries did not have a significant effect on the per capita disposable income ratio of poor rural residents compared to rural residents.

Furthermore, upon the elimination of non-influential variable index, the final equation for the least square regression model of the ratio of per capita disposable income for both urban and rural residents, as well as the ratio of per capita disposable income for poor rural residents in comparison to rural residents, was acquired. Interestingly, this finding suggests that the predictive power of the model may have been improved with the exclusion of said variable.

Moreover, to further validate the robustness of the regression model data, a Breusch-Pagan test was conducted to assess the presence of heteroscedasticity. Encouragingly, the results revealed no evidence of heteroscedasticity, thereby rendering the requirement of a robust standard deviation regression unnecessary.

Overall, these findings have important implications for policymakers and scholars seeking to understand the complex relationship between economic variables and income distribution. However, further research is needed to explore the underlying causal mechanisms underlying these relationships and to identify additional variables that may affect the distribution of income among residents.

According to the regression results, the per capita disposable income of rural poor residents had a positive impact on the per capita disposable income ratio of rural residents to urban residents and the per capita disposable income ratio of rural poor residents to rural residents, that was to say, the increase of per capita disposable income of rural poor residents will lead to the increase of per capita disposable income ratio of rural residents to urban residents and per capita disposable income ratio of rural poor residents to rural residents in the same direction. According to the final regression model equation, with other control variables unchanged, every 1% increase in the per capita disposable income of rural poor residents will lead to an increase of 0.1103% in the per capita disposable income ratio of rural residents to urban residents, and 0.3012% in the per capita disposable income ratio of rural poor residents to rural residents. This indicates that the increasing per capita disposable income of poor rural residents can narrow the income gap between urban and rural residents, and the income gap between poor rural residents and rural residents.

At the same time, if other variables remain unchanged, every 1% increase in total foreign investment can increase the per capita disposable income ratio of rural poor residents to rural residents by 0.0182%, while the impact on the per capita disposable income ratio of rural residents to urban residents is not significant, the possible reason for this result is that foreign investment has gradually extended cities and towns to surrounding rural areas, from which both urban and rural residents can benefit, especially poor rural residents can obtain additional or better disposable income (Li, 2019; Ma, 2022). Each 1% increase in the urbanization rate will increase the per capita disposable income ratio of rural residents to urban residents by 0.3041%, but reduce the per capita disposable income ratio of rural poor residents to rural residents by 0.3937%, it shows that the urbanization rate can increase the per capita disposable income of rural residents, but as a result of poor rural residents living ability is weak, on the contrary make poor rural residents and rural residents per capita disposable income gap. Every 1% increase in the value of the tertiary industry will reduce the per capita disposable income ratio of rural residents to urban residents by 0.1464%, while it has no significant impact on the per capita disposable income ratio of rural poor residents to rural residents, this result suggests that the tertiary industry can increase the per capita disposable income of urban residents more, while the impact on the per capita disposable income of rural residents and rural poor residents is relatively small, indicating that it is necessary to increase the tertiary industry in rural areas (Jing, 2019; Mui, 2019). Each 1% increase in the total retail sales of social consumer goods can increase the per capita disposable income ratio of rural residents to urban residents by 0.1585%, but reduce the per capita disposable income ratio of rural poor residents to rural residents by 0.0646%. This result shows that rural residents have better participated in the fields of commodity retail and catering services, and thus have achieved faster per capita disposable income growth than urban residents, but it also shows that rural poor residents have less disposable income from commodity retail and catering services than non-poor rural residents, which may have a great relationship with the lack of necessary conditions for rural poor residents to carry out these services.

The findings from this study are a testament to China’s laudable efforts to eradicate absolute poverty. Not only has it successfully mitigated income inequality between urban and rural populations, but it has also effectively narrowed the income gap between impoverished and non-impoverished rural residents.

The study delves into several economic indicators, such as per capita GDP of residents, total foreign investment, urbanization rate, value of tertiary industries, and total retail sales of social consumer goods, which have distinct impacts on income inequality among these diverse groups. The sheer complexity and interdependence of these economic factors warrants further inquiry by scholars and stakeholders alike.

The implications of these findings extend beyond academia and carry significant weight in shaping economic decisions by government departments. These data points serve as a valuable point of reference for policy makers in developing effective strategies to mitigate income inequality and enhance the quality of life for all members of society.

Reference

Chao, W., Wei, F., Wang, P., & Weng, S. (2020). Had the development of e-commerce widened the gap between the rich and the poor among the regions?—Empirical analysis based on inter-provincial development gap data. *Economic Forum*, (05), 72-81. http://dx.doi.org/10.3969/j.issn.1003-3580.2020.05.009

Cheng, C., & Di, Z. (2019). The process, characteristics, significance and challenges of poverty alleviation in the past 70 years. *The Contemporary Economic Management*, (09), 1-9. http://dx.doi.org/10.13253/j.cnki.ddjjgl. 2019.09.001

Fan, Z., & Zou, W. (2021). From poverty alleviation to common prosperity: dynamic identification of relative poverty in China and quantitative decomposition of poverty changes. *China's industrial economy*, (10), 59-77. http://dx.doi.org/10.19581/j.cnki.ciejournal. 2021.10.010

Guan, R., Wang, Q., & Jin, Y. (2020). The impact of poverty alleviation resources on distribution equity in poor areas. *Resource Science*, (04), 735-748.

Hua, R., & Chen, X. (2016). Study on the factors affecting the wealth gap in China. *Business Theory of China*, (07), 187-189. http://dx.doi.org/10.3969/j.issn.1005-5800.2016.07.067

Huang, C. (2020). China's new era crucial historical significance and contribution to the world out of poverty. *Journal of Nanjing agricultural university* (social science edition), (4), (2-10). http://dx.doi.org/10.19714/j.carol carroll nki.1671-7465.2020.0051

Jing, B. (2019). Urbanization rate, economic growth and urban-rural income gap—Based on provincial panel analysis. *Business Economy research*, (05), 175-177. http://dx.doi.org/10.3969/j.issn.1002-5863.2019.05.049

Lei, X., Du, C., & Hu, S. (2022). Evaluation of targeted poverty alleviation effect and diagnosis of obstacle factors in typical poverty-stricken areas. *Journal of Anhui Open University*, (03), 1-7. http://dx.doi.org/10.19371/j.cnki.issn1008-6021.2022.03.009

Li, C. (2019). Foreign investment, industrial structure and urban-rural income gap—Based on state space model analysis. *Journal of Guizhou University of Finance and Economics*, (01), 55-62. http://dx.doi.org/10.3969/j.issn.1003-6636.2019.01.006.

Li, S., Li, Y., & Li, Q. (2020). From absolute poverty to relative poverty: the dynamic evolution of rural poverty in China. *Journal of South China Normal University (Social Science Edition)*, (06), 30-42 189.

Luo, B. (2020). Relative poverty management: Nature, strategy and long-term mechanism. *Search*, (06), 18-27. http://dx.doi.org/10.16059/j.cnki.cn43-1008/c.2020.06.023

Ma, Y. (2022). Analysis of the mechanism of foreign trade and foreign direct investment on residents' income from the perspective of urban-rural gap—Take Jiangsu, Zhejiang and Shanghai urban agglomeration as an example. *Research on Business Economics*, (03), 184-187. http://dx.doi.org/10.3969/j.issn.1002-5863.2022.03.048

Mui, H. (2019). Research on the relationship between the urbanization level and urban-rural income gap—Based on the perspective of income structure. *Economic issues*, (08), 112-120. http://dx.doi.org/10.16011/j.cnki.jjwt. 2019.08.015

Pang, Z., & Wang, K. (2021). 2020 years after the analysis of the long-term mechanism of relatively poor governance. *The future and development*, (05), 13-18, 6. http://dx.doi.org/10.3969/j.issn.1003-0166.2021.05.003

Qu, Y. (2021). Rural relative poverty management: measurement principle and path selection. *Journal of Theory*, (04), 142-149. http://dx.doi.org/10.14110/j.cnki.cn-37-1059/d. 2021.04. 016

The National Bureau of Statistics. (2022). Compilation of historical data on rural poverty monitoring in China. *China Statistics Publishing House*, (05), 137-138.

Wang, L., & Wang, C. (2018). Analysis of influencing factors of urban and rural income gap in China—An empirical study based on EBA model. *World Agriculture*, (05), 110-116. http://dx.doi.org/10.13856/j.cn11-1097/s.2018.05. 017

Xiao, X., & Wu, Q. (2021). China's experience and global significance of poverty governance. *Journal of Guangxi University of Finance and Economics*, (05), 106-114. http://dx.doi.org/10.3969/j.issn.1673-5609.2021.05.009

Xiong, X., & Li, T. (2022). Study on the calculation of the income distribution gap of Chinese residents and its influencing factors. *Statistics and Information Forum*, (10), 39-52. http://dx.doi.org/10.3969/j.issn.1007-3116.2022.10.004

Yuan, M., & Yu, L. (2021). Targeted poverty alleviation was embedded and the grassroots governance logic of comprehensive poverty alleviation. *The Open Era*, (03), 163-179, 10-11. http://dx.doi.org/10.3969/j.issn.1004-2938.2021.03.012

Zhang, Q., & Zhou, Q. (2019). The effect of targeted poverty alleviation policies was assessed by—Income, consumption, life improvement and migrant work. *Statistical study*, (10), 17-29. http://dx.doi.org/10.19343/j.cnki.11-1302/c. 2019.10. 002

Zhang, X., & Cheng, X. (2020). The global significance of the "China's poverty reduction plan" in the new era. *Gansu Social Science*, (06), 71-78. http://dx.doi.org/10.15891/j.cnki.cn62-1093/c.020.06.012

Zhou, J. (2012). Comparative study on the accounting method of the gap between the rich and the poor. *Business Age*, (31), 16-17. http://dx.doi.org/10.3969/j.issn.1002-5863.2012.31.009

Zuo, T., & Su, W. (2020). The strategic direction and the policy choice of China's relative poverty governance under the background of rural revitalization. *Journal of Xinjiang Normal University* (Philosophy and Social Sciences edition), (04), 88-96. http://dx.doi.org/10.14100/j.cnki.65-1039/g4.20200302.002