ISSN 2616-5783 Vol.7, Issue 5: 79-87, DOI: 10.25236/AJHSS.2024.070514

The Impact of Public Education Expenditure on the Urban-rural Income Distribution Gap: Based on the Moderating Effect of Local Government Debt

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Abstract: *Narrowing the urban-rural income distribution gap is of great significance to promoting coordinated regional development and realizing common prosperity in China. Based on the provincial panel data from 2012 to 2021, this paper empirically examines the impact of public education expenditure on the urban-rural income distribution gap under the moderating effect of local government debt. The research shows that public education expenditure can significantly narrow the urban-rural income distribution gap; local government debt has a negative moderating effect on the impact of public education expenditure on the urban-rural income distribution gap. Further analysis shows that when the local government debt scale is in the range of two threshold values of 8.53 and 8.75, the effect of public education expenditure on narrowing the urban-rural income distribution gap is more obvious; in less developed areas, the moderating effect of local government debt on the impact of public education expenditure on the urban-rural income distribution gap is stronger. This paper can provide decision-making reference for government departments to better allocate education resources and strengthen local government debt management.*

Keywords: *Public Education Expenditure; Urban-rural Income Distribution Gap; Local Government Debt; Moderating Effect*

1. Introduction

The 20th National Congress of the Communist Party of China pointed out that the realization of common prosperity for all people is the essential requirement of Chinese-style modernization. In recent years, the Party and the state have continuously promoted the reform of the income distribution system with poverty alleviation as the starting point, greatly improving the pattern of urban and rural income distribution and improving the living standards of urban and rural people. At present, the theory of human capital believes that education investment can improve productivity and play a moderating role in the income distribution pattern. According to statistics, from 2012 to 2021, China's public education expenditure increased from 1.93 trillion yuan to 3.73 trillion yuan, an increase of 93.26%. At the same time, the ratio of urban and rural residents' disposable income decreased from 2.88 to 2.50 in 2021, a decrease of 13.19%. However, the continuous increase of fiscal expenditure in key livelihood areas such as education, combined with the deterioration of the external economic situation in recent years and the vigorous promotion of tax and fee reduction policies, the fiscal sustainability of local governments has been greatly impacted. In order to maintain fiscal sustainability, local governments have to increase their debt. In this case, the balance of local government debt rose from 9.67 trillion yuan in 2012 to 29.44 trillion yuan in 2021, an increase of 204.45%. The huge debt repayment pressure will affect the in-depth implementation of the government's policies to improve the quality of economic development, promote supply-side structural reform, and promote balanced development, which will ultimately be detrimental to narrowing the gap between urban and rural income distribution and realizing common prosperity. Under the background of vigorously implementing the national rejuvenation through science and education, deepening the supply-side structural reform and promoting common prosperity, can public education expenditure effectively narrow the urban-rural income distribution gap? How does local government debt moderate the effect of public education expenditure on the urban-rural income distribution gap? This will be the main question of this paper.

ISSN 2616-5783 Vol.7, Issue 5: 79-87, DOI: 10.25236/AJHSS.2024.070514

2. Literature Review

Currently, domestic and foreign scholars mainly focus on the impact of public education expenditure on the income distribution gap. The mainstream view is that public education expenditure can effectively narrow the income distribution gap of residents. For example, Gregorio J.D. et al. (2002) studied the relationship between public education investment and resident income in more than 100 countries and found that the income distribution gap of residents narrowed with the increase of public education investment[1]. Abdul A. et al. (2015) believed that government education expenditure not only narrowed the gap of residents' income distribution, but also affected the change of social class[2]. Feng Yun et al. (2011) found that public education expenditure was significantly positively correlated with residents' income by using spatial econometric analysis[3]. Li Xiangyun et al. (2018) found that public education expenditure significantly narrowed the gap of residents' income distribution by constructing Tobit model[4]. However, some scholars believed that public education expenditure did not necessarily narrow the gap of residents' income distribution. Sylwester K. (2002) pointed out that low-income groups were likely to give up receiving education due to their inability to bear high education costs[5]. In this case, the government's increased investment in education would further widen the gap of residents' income distribution. Jerrim J. et al. (2015) believed that the greater the investment in public education, the more solidified the social class, which led to the further expansion of the income gap between residents[6]. Xu Yonghong et al. (2019) found that there was a positive U-shaped relationship between education and income gap[7]. Under the early educational policy, the education investment could alleviate the income gap between residents. With the change of educational policy and the continuous improvement of education level, the more the education investment, the greater the income gap between residents. Zhang Xiaofang et al. (2020) studied 105 countries by using the method of structural threshold regression and found that public education expenditure could alleviate the income gap between residents only when it was higher than the threshold level of government governance[8]. Through sorting out relevant literature, it is found that the research on public education expenditure and income distribution in the academic circle mainly focuses on the direct impact of public education on the income distribution gap of residents, and that there may be negative correlation, positive correlation and nonlinear relationship between public education expenditure and income distribution gap, however, there are few studies on the relationship between public education expenditure and urban-rural income distribution gap, and few articles discuss the impact of local government debt in this process. Based on the existing research, this paper discusses the impact of public education expenditure on the urban-rural income distribution gap, and studies public education expenditure, local government debt and urban-rural income distribution gap in the same framework, analyzing the moderating effect of local government debt on the impact of public education expenditure on the urban-rural income distribution gap. In view of this, based on the data of 31 provinces, municipalities and autonomous regions in China from 2012 to 2021, this paper introduces local government debt as a moderator variable to explore the moderating effect of local government debt on public education expenditure in influencing the urban-rural income distribution gap, in order to provide decision-making reference for government departments to better allocate education funds and strengthen local government debt management.

3. Theoretical Analysis and Research Hypothesis

3.1. Public education investment and the urban-rural income distribution gap

As one of the government's basic expenditures on people's livelihood, public education expenditure has an impact on the urban-rural income distribution gap through two channels. One channel is the effect of individual income increase. On the one hand, public education expenditure increases the wage income of rural residents. According to the theory of human capital, the continuous improvement of rural residents' education level makes rural human capital accumulate rapidly, and labor productivity and wage income further improve. On the other hand, public education expenditure improves the property income of rural residents. Zhou Anhua et al. (2020) point out that public education expenditure significantly promotes the improvement of residents' property income[9]. Public education expenditure improves the quality of rural population, enhances their financial management ability and investment ability, makes their idle assets maintain value and increase value, and then increases the property income of rural residents. Another pathway is the intergenerational income mobility effect. Intergenerational income mobility can alleviate the polarization of income distribution. The research of Mayer SE. et al. (2008) shows that the higher the public education expenditure is, the greater the intergenerational income mobility is. Public education expenditure changes the rigid intergenerational transmission of poverty and wealth, alleviates the solidification of social wealth and social class, creates good conditions for the fair income distribution of rural residents, and thus narrows the gap in the income distribution of urban and

ISSN 2616-5783 Vol.7, Issue 5: 79-87, DOI: 10.25236/AJHSS.2024.070514

rural residents[10]. Based on this, this paper puts forward the following hypotheses:

H1: public education expenditure can significantly narrow the gap in urban and rural income distribution.

3.2. The moderating effect of local government debt on the impact of public education investment on the income distribution gap between urban and rural residents

Public education investment can narrow the urban-rural income gap by increasing the wage income and property income of rural residents, while the expansion of local government debt will affect the wage income and property income of rural residents. The first is the debt raising link. Local government debt will crowd out the loanable funds in the financial market, increase the cost of social funds, and make the wage income relatively decline. Second, in the debt use link, it can be seen from the National Government Debt Audit Results published by the National Audit Office in 2013 that municipal construction is the main investment, accounting for 37.49% of the total investment of debt balance, and agriculture, forestry and water conservancy construction only accounts for 4.04% of the total investment of debt balance. The use of local government debt is mainly biased towards cities. The development of urban infrastructure has improved the level of urban economic development. The more developed the economy is, the higher the income of urban residents is, which further widens the income distribution gap between urban and rural residents. The last link is debt repayment. The current funding sources for government debt repayment are mainly tax revenue and project income. Since most government projects are public welfare, the yield is often difficult to cover the cost. With the deterioration of the economic situation and the unsustainability of land finance, under the huge debt repayment pressure, it may encroach on the general public budget, cut the expenditure on education and other livelihoods, affect the increase of rural residents' wage income and property income, and worsen the income distribution gap between urban and rural residents. Based on this, this paper proposes the following hypotheses:

H2: Local government debt has a negative moderating effect on the impact of public education investment on the urban-rural income distribution gap.

3.3. The moderating effect of local government debt on the impact of public education investment on the income distribution gap between urban and rural residents

While improving the level of urban development, local government debt will increase the attraction of rural labor population, cause rural residents to flow to the city, and improve rural household income. However, with the continuous increase of local government debt scale, it may form urban siphon effect, highly concentrate resources to the city, distort the allocation of urban and rural resources, and further deteriorate the income distribution of urban and rural residents[11]. Only when local government debt is at a certain level, can local government debt give full play to the role of promoting the economy, which can not only meet the needs of urban and rural residents for a better life, but also minimize the negative impact on the income distribution gap of urban and rural residents and solve the problem of unbalanced and inadequate economic development. Based on this, this paper puts forward the following hypotheses:

H3: The moderating effect of local government debt on the impact of public education investment on the urban-rural income distribution gap shows a nonlinear feature.

3.4. Heterogeneity of the moderating effect of economic development level on local government debt

At present, the uneven development of regional economy has become an important feature of China's economic development. Compared with the backward western region, the eastern region has advantageous geographical location, strong economic strength, perfect infrastructure and large mobility of human capital. In addition, the government governance level in the western and other less developed regions is relatively low, and the management of government debt needs to be strengthened, the impact of the raising, use and repayment of local government debt on urban and rural residents' income is greater than that of the eastern region, and the adjustment effect of local government debt is different. Accordingly, this paper proposes the following hypotheses:

H4: In less developed regions, local government debt has a stronger negative moderating effect on the impact of public education investment on the urban-rural income distribution gap.

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4. Theoretical Analysis and Research Hypothesis

4.1. Variable definitions and data descriptions

4.1.1. Section Titles

(1) Urban-rural income distribution gap (TUR). Following the practice of Chen Gong et al. (2016)[12], this paper chooses the urban-rural Theil Index as an indicator to measure the urban-rural income distribution gap, and its calculation method is as follows: $TUR=\left(\frac{I_u}{I}\right)\ln\left(\frac{I_u/I}{P_u/P}\right)+\left(\frac{I_r}{I}\right)\ln\left(\frac{I_r/I}{P_r/P}\right)$, among which I_u, I_r and I represents the per capita disposable income of urban residents, the per capita disposable income of rural residents and total income respectively. P_u, P_r and P respectively represent the number of urban residents, the number of rural residents and the total population. In addition, in the robustness test, the urban-rural income ratio (URIG, urban per capita disposable income/rural per capita disposable income) is used as a substitute variable for the urban-rural income distribution gap (TUR).

(2) Public education investment (Edu). Existing studies mainly use national financial education funds, the proportion of general public budget education funds in local GDP, and the expenditure of different levels of education funds to measure public education investment. Referring to the practice of Sun Lin et al. (2018), this paper chooses public financial education funds including education fund, infrastructure funds and education surcharge to measure public education investment, and takes the natural logarithm[13].

(3) Local government debt(Debt). Drawing on the practice of Huang Chunyuan et al. (2020)[14], this paper selects the debt balance with repayment responsibility of local governments to measure local government debt, and takes the natural logarithm. After 2015, the data of local government debt balance can be directly obtained from the China Local Government Bond Information Disclosure Platform. The data before 2015 need to be estimated, and the specific estimation method refers to the method of Yang Canming et al. (2015), which is backward based on the average annual growth rate of the debt with repayment responsibility of local governments[15]. The average annual growth rate of the debt with repayment obligations of local governments can be obtained from the National Government Debt Audit Resultsreleased by the National Audit Office in 2013.

(4) Control variables. In order to prevent the omission of explanatory variables from causing errors in the model estimation results, this paper refers to existing research and introduces the degree of opening up, industrial structure, urbanization level, marketization level and economic development level as control variables into the econometric model. Table 1 lists the definitions of each variable.

Table 1: This caption has one line so it is centered.

variable type	variable name	variable symbol	variable definition
explained variable	Urban-rural income distribution gap	TUR	urban-rural Theil Index,$TUR=\left(\frac{I_u}{I}\right)\ln\left(\frac{I_u/I}{P_u/P}\right)+\left(\frac{I_r}{I}\right)\ln\left(\frac{I_r/I}{P_r/P}\right)$,among which I_u, I_r and I represents the per capita disposable income of urban residents, the per capita disposable income of rural residents and total income respectively. P_u, P_r and P respectively represent the number of urban residents, the number of rural residents and the total population.
Explanatory Variables	Public education investment	Edu	public financial education funds, takes the natural logarithm
Moderating Variables	Local government debt	Debt	debt balance with repayment responsibility of local governments, takes the natural logarithm
variable type	degree of opening up	Open	Proportion of Total Imports and Exports of Goods to GDP by Region
	industrial structure	Ind	Industrial Structure Index, $Ind=\sum_{n=1}^{3} P_n * n$,among which P_n is the proportion of the output value of the nth industry in the total output value
	urbanization level	Urb	Proportion of Urban Population by Region at Year-end
	marketization level	Mar	Total Marketization Index by Region
	economic development level	Dev	Ratio of GDP to the population at the end of the year, takes the natural logarithm

4.1.2. Data Description

Based on the accessibility of data, this paper conducts empirical analysis using panel data of 31 provinces in China from 2012 to 2021. The data on urban-rural income gap are from China Statistical Yearbook and China Population and Employment Statistical Yearbook, the data on public education investment are from China Statistical Yearbook on Education Expenditure, the data on local government debt are from the National Audit Office and China Local Government Bond Information Disclosure Platform, and the data on the degree of opening up, industrial structure, urbanization level, marketization

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level and economic development level are from China Marketization Index Database by Province and China Statistical Yearbook.

4.2. Model Construction

In order to verify the impact of public education investment on the urban-rural income distribution gap under the constraint of local government debt, the cross product of public education investment and local government debt is included and the following benchmark regression model is constructed by referring to the research method of Fang Jie et al. (2022)[16]:

$$TUR_{i,t} = \beta_0 + \beta_1 Edu_{i,t} + \beta_2 Debt_{i,t} + \beta_3 Edu_{i,t} * Debt_{i,t} + \sum \emptyset_i Controls_{i,t} + \mu_i + \mu_t + \varepsilon_{i,t} \quad (1)$$

among which $TUR_{i,t}$ represents the urban-rural Theil index of region i in period t, $Edu_{i,t}$ represents the public education investment of region i in period t, $Debt_{i,t}$ represents the local government debt balance of region i in period t, $Edu_{i,t} * Debt_{i,t}$ is the multiplication of investment in public education with local government debt, $Controls_{i,t}$ represents the control variables, μ_i and μ_t represent the fixed effects of region and time respectively, $\varepsilon_{i,t}$ is the random error term.

5. Empirical Analysis

5.1. Descriptive statistics

Table 2 shows the descriptive statistical results of each variable. It can be seen that the average value of local government debt is 8.252, with a standard deviation of 1.159, and the average value of urban-rural Theil index is 0.087, with a standard deviation of 0.043, indicating that there are significant differences in the debt scale and urban-rural income distribution gap among different provinces.

Table 2: Descriptive statistics.

Variables	Sample size	average value	standard deviation	minimum value	maximum value
Edu	310	18.146	0.889	16.071	19.794
Debt	310	8.252	1.159	3.964	9.852
TUR	310	0.087	0.043	0.018	0.197
Open	310	0.241	0.252	0.007	1.357
Ind	310	2.39	0.124	2.182	2.836
Urb	310	59.28	12.767	22.87	89.6
Mar	310	7.886	2.165	-0.16	12.922
Dev	310	1.686	0.428	0.647	2.912

5.2. Benchmark regression

Table 3: Benchmark regression results(1).

	(1)	(2)
VARIABLES	TUR	TUR
Edu	-0.036***	-0.036***
	(-19.62)	(-19.50)
Open		-0.003
		(-0.48)
Ind		-0.007
		(-0.58)
Urb		0.000
		(1.03)
Mar		0.002**
		(2.36)
Dev		0.003
		(0.98)
Constant	0.738***	0.732***
	(22.23)	(16.47)
Observations	310	310
R-squared	0.581	0.593
Number of id	31	31

Note: *,**,*** respectively indicate that they are significant at the significance level of 10%, 5%, and 1%. The same is shown in the table below.

Table 3 shows the results of direct regression and regression after adding control variables on the basis of controlling the fixed effects of region and time. It can be seen that the coefficients of public education investment (Edu) are significantly negative, which indicates that public education expenditure

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can significantly narrow the urban-rural income distribution gap, verifying H1.

Drawing on the practice of Wen Zhonglin et al. (2021), before analyzing the moderating effect[17], in order to alleviate the high collinearity between the interaction term and the independent variable and the moderating variable, we first centralize the public education investment (Edu) and local government debt (Debt). Table 4 shows the regression results, which show that the coefficient of interaction term is significantly positive, indicating that local government debt has a negative moderating effect on the impact of public education investment on urban-rural income distribution gap, and verifies H2.

Table 4: Benchmark regression results(2)

	(1)	(2)
VARIABLES	TUR	TUR
c_Edu	-0.038***	-0.038***
	(-21.73)	(-22.10)
c_Debt	0.012***	0.012***
	(4.94)	(5.48)
c_edu_debt	0.016***	0.016***
	(7.95)	(8.20)
Open		-0.005
		(-0.95)
Ind		-0.005
		(-0.50)
Urb		0.000
		(1.08)
Mar		0.001**
		(2.14)
Dev		0.003
		(0.89)
Constant	0.078***	0.071***
	(47.96)	(2.81)
Observations	310	310
R-squared	0.659	0.669
Number of id	31	31

5.3. Robustness test

Table 5: Robust regression results

	(1)	(2)
VARIABLES	URIG	URIG
c_Edu	-0.337***	-0.338***
	(-22.27)	(-22.29)
c_Debt	0.128***	0.130***
	(6.06)	(6.15)
c_edu_debt	0.153***	0.152***
	(8.76)	(8.69)
Open		-0.036
		(-0.83)
Ind		-0.015
		(-0.16)
Urb		0.001
		(1.64)
Mar		0.010**
		(2.01)
Dev		0.026
		(1.01)
Constant	2.481***	2.319***
	(175.47)	(10.65)
Observations	310	310
R-squared	0.669	0.680
Number of id	31	31

In order to improve the reliability of the research conclusion, the explanatory variable urban-rural Theil index (TUR) is replaced by urban-rural residents per capita disposable income ratio (URIG) for regression. Table 5 lists the regression results, which show that the coefficient of public education investment is significantly negative at the 1% level, and the coefficients of the interaction term public education investment and local government debt are significantly positive at the 1% level, consistent with the above results, indicating that the conclusion is robust.

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5.4. Further analysis

The above has verified the overall relationship between public education investment, local government debt and urban-rural income distribution gap. The next step will continue to test the impact of public education investment on the urban-rural income distribution gap under different local government debt levels and whether the moderating effect of local government debt is different in regions with different economic development levels.

5.4.1. Threshold regression

This paper takes local government debt as a threshold variable to test the differences in the influence coefficients of public education investment on the urban-rural income distribution gap under different levels of local government debt, and constructs the following threshold regression model:

$$TUR_{i,t} = \gamma_0 + \gamma_1 Edu_{i,t} * I(Debt_{i,t} \le \theta) + \gamma_2 Edu_{i,t} * I(Debt_{i,t} > \theta) + \sum \emptyset_i Controls_{i,t} + \varepsilon_{i,t} \quad (2)$$

among which $Debt_{i,t}$ represents the variable of local government debt threshold, $I(\cdot)$ is an indicator function whose value is 0 or 1. When the conditions in the brackets are satisfied, the function takes the value of 1, otherwise it is 0. Formula (2) is a single threshold model, and the multiple threshold model is similar. Referring to the practice of Hansen (1999)[18], the existence test of threshold effect is firstly conducted, and the F values and P values corresponding to the test statistics are obtained through repeated sampling, as shown in Table 6. It can be seen that Debt threshold variable passed the single-threshold and double-threshold tests but not the three-threshold test, so the double-threshold regression model is selected.

Table 6: Threshold effect test results

Explanatory Variables	Threshold variable	Threshold numbers	F value	P value	1.00%	5.00%	10.00%
Edu	Debt	Single threshold	42.02	0.00	24.79	18.96	16.00
		Double threshold	45.80	0.00	14.88	11.68	10.13
		Three thresholds	61.19	0.09	91.82	68.98	58.68

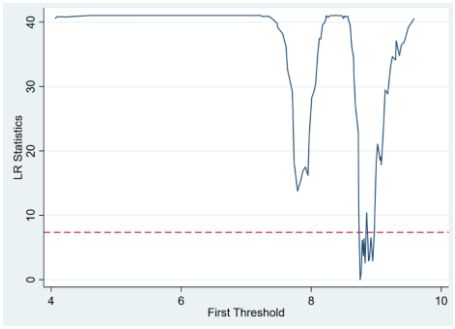

Figure 1: This caption has one line so it is centered.

Table 7: Threshold regression results

Double-threshold effect regression results	Coefficient	Significance	Upper limit of confidence interval	Lower bound of confidence interval
EDU*I(Th<=8.53)	-0.034	0.00	-0.04	-0.03
EDU*I(8.53<Th<=8.75)	-0.035	0.00	-0.04	-0.03
EDU*I(Th>8.75)	-0.033	0.00	-0.04	-0.03
Control variables	YES			
N	310			
R2	0.64			

Figure 1 is the LR statistical graph of the threshold estimates under the 95% confidence interval, the dotted line represents the critical value, and the lowest point of the statistic is the true threshold value. It can be seen that the first threshold value of 8.53 is infinitely close to 0 in the 95% confidence interval (-0.04, -0.03). The second threshold value of 8.75 is infinitely close to 0 in the 95% confidence interval (-0.04, -0.03). And the critical value is above the threshold value, so the threshold estimation can be considered true and effective. Table 7 shows the threshold regression results. It can be seen that in different value intervals of local government debt, there are differences in the influence coefficients of public education investment on the urban-rural income distribution gap. When the local debt level is less than or equal to the threshold value of 8.53, the influence coefficient is -0.034. When the first threshold value is greater than 8.53 and the second threshold value is less than or equal to 8.75, the influence coefficient is -0.035, and when the second threshold value is greater than 8.75, the influence coefficient

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is -0.033. The threshold regression results generally show that when the local debt level is between the two threshold values, public education investment can narrow the urban-rural income distribution gap more effectively, which further confirms that the moderating effect of local government debt on public education investment on the urban-rural income distribution gap presents a nonlinear feature, and verifies Hypothesis H3.

5.4.2. Heterogeneity analysis

Table 8: Heterogeneous regression results

	(1)	(2)	(3)	(4)
	Western regions	Northeastern regions	Central regions	Eastern regions
VARIABLES	y	y	y	y
c_Edu	-0.040***	-0.041***	-0.034***	-0.040***
	(-12.18)	(-8.02)	(-8.36)	(-14.59)
c_Debt	0.016***	0.010*	0.009	0.008**
	(3.42)	(1.85)	(1.30)	(2.17)
c_edu_debt	0.023***	0.013**	0.030***	0.010***
	(5.01)	(2.39)	(4.99)	(3.65)
Open	-0.002	-0.004	-0.012	-0.003
	(-0.23)	(-0.26)	(-1.43)	(-0.35)
Ind	0.013	0.007	-0.023	0.006
	(0.62)	(0.33)	(-1.00)	(0.37)
Urb	0.000	0.000	0.000	0.000
	(0.99)	(0.66)	(0.38)	(0.16)
Mar	0.000	-0.001	0.003**	0.002*
	(0.40)	(-0.65)	(2.50)	(1.75)
Dev	0.004	0.011	-0.012	0.005
	(0.69)	(1.42)	(-1.63)	(1.24)
Constant	0.034	0.042	0.115*	0.038
	(0.67)	(0.76)	(1.99)	(1.00)
Observations	120	30	60	100
R-squared	0.648	0.828	0.689	0.761
Number of id	12	3	6	10

In order to test the heterogeneity of the moderating effect of local government debt in regions with different economic development levels, according to the economic regional division method of the National Bureau of Statistics in 2011, the country is divided into eastern, central, western and northeastern regions according to different economic development levels. The regression results are shown in Table 8, which shows that the interaction terms of the four regions are all significantly positive at the 1% level, but the coefficient of the eastern region is the smallest, indicating that the moderating effect of local government debt in developed regions is weak, and the negative moderating effect of local government debt in less developed regions is stronger, which verifies Hypothesis H4.

6. Conclusions

Based on the data of 31 provinces, municipalities and autonomous regions, this paper studies the relationship between public education expenditure, local government debt and urban-rural income distribution gap. The results show that: first, in general, public education expenditure can significantly narrow the urban-rural income distribution gap. Second, local government debt has a negative moderating effect on the impact of public education investment on urban-rural income distribution gap. Third, through further analysis, it is found that when the scale of local government debt is in the interval of 8.53 and 8.75, the effect of public education expenditure on narrowing the urban-rural income distribution gap is more obvious. Fourth, in less developed areas, the negative moderating effect of local government debt on the impact of public education expenditure on urban-rural income distribution gap is stronger. Based on the above analysis results, this paper proposes the following policy recommendations:

First, we will continue to increase public education investment. On the basis of maintaining the 4% benchmark for public education investment, government departments will increase investment in a sustainable manner. At the same time, we will optimize the structure of public education investment, improve the performance of education funds, and give more priority to education in rural areas, so that education spending can better provide a solid guarantee for improving the quality of education in rural areas and the quality of workers, thus helping to solve the problem of uneven education development between regions and further easing the problem of excessive urban-rural income distribution.

ISSN 2616-5783 Vol.7, Issue 5: 79-87, DOI: 10.25236/AJHSS.2024.070514

Second, we need to strengthen local government debt management. On the one hand, government departments should borrow on the basis of a thorough investigation of their needs and full evidence to keep local government debt at a reasonable level. On the other hand, we need to optimize the structure of debt investment and make the use of debt more equitable, giving priority to rural infrastructure, agriculture, forestry, water conservancy, rural education, and the production of rural characteristics, so as to promote rural development, effectively increase the income of rural residents, and alleviate the contradiction between urban and rural residents' incomes that is further expanded due to the urban-rural dualization.

Third, we need to make a balanced overall plan for urban and rural development. To promote rural development, government departments must have sufficient financial resources. Given the current economic downturn and the increasing expenditures on education and other areas that improve people's lives, the lack of financial resources for local governments has become a prominent issue. To promote coordinated urban and rural development and equal access to public services in both urban and rural areas, government departments need to find new sources of revenue and increase revenue to strengthen their financial base. At the same time, they need to tighten their belts and continue to live a frugal life. At the same time, we need to increase investment in rural social security, medical care and other social spending to effectively improve the living standards and incomes of rural residents.

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