



Policy Assessment of Targeted Poverty Alleviation by Universities: Education and Health Assistance

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Abstract. The implementation of targeted poverty alleviation policies by the Ministry of Education's directly affiliated universities has played an important role in poverty alleviation through education and health. In order to scientifically evaluate and examine the effectiveness of these policies, a DID model is used to evaluate the policy effects of education and health assistance in targeted poverty alleviation by universities. The study found that the health assistance of universities effectively helped assisted counties improve their medical resources and standards, while the education assistance significantly improved the fundamental education of primary and middle schools in the assisted counties, but had no significant impact on vocational education. The empirical research method of this article expands the research ideas in the field of targeted poverty alleviation policies by universities, adds empirical evidence to this field, helps improve the performance evaluation mechanism of targeted poverty alleviation, enhances the social service capabilities of the Ministry of Education's directly affiliated universities, and provides theoretical support for the implementation of rural revitalization strategies.

Keywords: Poverty Alleviation, DID, Policy Assessment

1 Introduction

In 2020, China successfully completed the poverty alleviation campaign, in which 75 directly affiliated universities under the leadership of the Ministry of Education played an important role. By providing targeted assistance such as education and health assistance, the universities helped 55 impoverished counties overcome poverty, leading to improved living standards and local economic growth. Ensuring the long-term effectiveness of poverty alleviation and promoting local economic development are important goals of the Chinese government. Therefore, it is crucial to conduct a scientific evaluation of the effectiveness of targeted poverty alleviation policies implemented by universities and ensure the stability of existing assistance policies for poverty alleviation in China in the long term.

Empirical research is the main research method used in this article. Previous studies mainly conducted qualitative research on the effectiveness of targeted poverty alleviation policies by universities through case analysis. This article collected information on the list of paired assistance by each directly affiliated university under the Ministry of Education, start time, and other relevant policy documents through various websites such as the news websites of the universities, the Ministry of Education, and local government websites. Furthermore, this study compiled a data table by gathering information from county-level statistical yearbooks spanning from 2010 to 2019, encompassing education, health, and economic domains. Drawing on this panel data, we employed a DID model for empirical analysis and obtained the following relevant measurement outcomes. Firstly, health assistance by universities helps impoverished counties to improve medical resources and medical standards from both human resources investment and in-kind investment. Secondly, education assistance by universities significantly improves the fundamental education of primary and middle schools in impoverished counties, with no impact on vocational education.

This article has certain research significance both in theory and in practice. At the theoretical level, the existing literature on targeted poverty alleviation policies by universities mostly adopts case studies, and lacks quantitative empirical research. This article used county-level data and applied the DID model to conduct mathematical and empirical research on the effectiveness of targeted poverty alleviation policies by universities, avoiding possible subjectivity and limitations in traditional research methods. This article not only expands the research ideas in the field of targeted

assistance policies by universities, but also adds empirical evidence to this field. At the practical level, improving the evaluation research methods of targeted poverty alleviation policies by universities is conducive to further improving the performance evaluation mechanism of targeted poverty alleviation, enhancing the social service capabilities of directly affiliated universities under the Ministry of Education, providing targeted poverty alleviation with university characteristics according to local conditions, and consolidating the achievements of poverty alleviation.

1.1 Literature Review

Existing literature has conducted extensive research on the poverty alleviation measures of universities. The main core of poverty alleviation work is the comprehensive development of people (Zhao, 2020)^[1]. Universities not only provide material assistance to poverty-stricken counties through conventional means such as education, medical care, and talent (Zhu et al., 2018)^[2] but also achieve the effect of "supporting aspirations before supporting poverty" through spiritual assistance such as top-level planning, party building poverty alleviation, and cultural poverty alleviation (Shi et al., 2020)^[3]. This is to achieve the long-term effectiveness of poverty alleviation. In terms of poverty alleviation subjects, academia believes that targeted poverty alleviation by universities should focus on multi-subject linkage. It is not only necessary to strengthen ties with local governments and mobilize the social forces of enterprises, but also to attach importance to the participation and interaction of farmers. Wan and Xiang (2016) pointed out the problem of the lack of farmer subjectivity in the poverty governance system through the study of the technical governance mechanism in the targeted poverty alleviation process of universities^[4]. Cheng and Liu (2017) proposed a solution to this poverty alleviation reality problem^[5]. They made innovations based on the theory of the "triple helix" of "university-industry-government" linkage, proposing a "quadruple helix" theory of "university-industry-government-farmers" linkage in targeted poverty alleviation by universities. Yuan and Li (2021) studied higher education poverty alleviation policies from a historical evolution perspective^[6]. They concluded that from a macro perspective, the changes in higher education poverty alleviation policies are influenced by factors such as economic system, political system, and cultural concepts. From a meso perspective, the rational choices of the government and universities are the fundamental reasons for the path dependence of higher education

poverty alleviation policies. From a micro actor perspective, government legislation, university professional settings, and social participation provide strong driving forces for the changes in higher education poverty alleviation policies.

Education assistance is one of the important poverty alleviation measures in targeted poverty alleviation, and academia has conducted research from multiple perspectives on this issue. Zhao et al. (2021) focused on the long-term accumulation of individual human capital affected by education assistance[7]. The study found that education assistance significantly increased the probability of rural poverty-stricken groups obtaining compulsory education resources. However, as the overall education level of society improves, the relative education level of basic compulsory education may decline, leading to a weakening of policy dividends. Song et al. (2022) explored the promotion role of policies on human capital accumulation from the perspective of accurate education assistance[8]. The study showed that the education assistance plan significantly improved the cognitive level and some non-cognitive abilities of children in poverty-stricken areas during the compulsory education stage. Zuo et al. (2023) focused on the impact of the Compulsory Education Law on relative poverty and its intergenerational transmission[9]. The study found that education assistance can effectively reduce the incidence of poverty and block intergenerational transmission of poverty, especially in rural and female groups. Regarding how to better carry out education assistance, academia has different views. Liu and Hannum (2017) found that early nutrition poverty and tuition fees are the main factors affecting adolescent educational achievement[10]. Based on this, they proposed education assistance strategies such as improving nutrition status, waiving tuition fees, paying attention to early education, focusing on gender equality, and comprehensive community support. However, some scholars believe that education assistance has limitations. Brown and James (2020) argue that education assistance cannot be used as a single poverty alleviation measure, and multiple poverty alleviation measures should be combined to create a fair and inclusive educational environment[11].

In addition to education assistance, health assistance is also a widely discussed topic in the current research field of poverty alleviation policies. Chen et al. (2023) analyzed 48 counties in Sichuan Province using the PSM-DID method and found that health assistance policies can reduce the economic burden of diseases on poor families, and the effect of reducing the economic burden of poor families in poor counties is better, but some families still experience catastrophic health

expenditures[12]. Li et al. (2022) conducted in-depth interviews and questionnaire surveys of relevant personnel in poor counties in Guizhou Province and conducted empirical analysis of the results[13]. They proposed that there are problems in the grassroots traditional Chinese medicine health assistance in Guizhou Province, such as weak quality of grassroots traditional Chinese medicine services and poverty alleviation projects, and the need to improve the degree of poverty alleviation funding assistance, and the grassroots traditional Chinese medicine health assistance urgently needs to be consolidated and strengthened.

Overall, existing literature has extensively studied the poverty alleviation measures of universities and revealed the positive role played by universities in targeted poverty alleviation. These studies indicate that universities provide material and spiritual assistance to poverty-stricken areas through various channels such as education, healthcare, talent cultivation, party building poverty alleviation, and cultural poverty alleviation, thereby achieving long-term and stable poverty alleviation effects. Poverty alleviation measures such as education assistance and health assistance have a positive role in promoting the accumulation of human capital in poverty-stricken areas, improving residents' quality of life, creating employment opportunities, and reducing poverty.

Although existing research provides us with rich theoretical and practical achievements, there are still some aspects that need further exploration. First, existing research is still mainly theoretical and case studies. This article will focus more on the actual effects of university poverty alleviation policies, fill the gaps in empirical research, and provide more comprehensive and effective theoretical support for policy optimization. Second, the effectiveness of university targeted poverty alleviation policies is currently unclear. This article will focus on this issue and analyze how to avoid resource waste and improve policy effectiveness in the policy implementation process to ensure the long-term stability of poverty alleviation results.

2 Data

2.1 Data Resources

The poverty data used in this article comes from various websites such as the news websites of universities, the Ministry of Education, and local government websites, as well as relevant policy documents. The education, health, and economic data comes

from the statistical yearbooks of counties throughout the country. This study focuses on 592 impoverished counties selected as research subjects based on the National Rural Revitalization Bureau's list of key counties for national poverty alleviation and development work, released in 2012. To investigate the impact of university-targeted poverty alleviation policies, we collected county-level data from 2010 to 2019, encompassing various domains such as students in primary schools, students in middle schools, students in vocational education schools, doctors per 10,000 people, health technicians per 10,000 people, hospital beds per 10,000 people, the regional GDP, the balance of savings deposits of urban and rural residents, the balance of loans of financial institutions at the end of the year, general public budget expenditures of the government, the total population at the end of the region, and the administrative area of land area, etc.

2.2 Variables Setting

Response Variables. The education assistance of universities aim not only to improve the education resources of primary and middle schools in impoverished counties and increase the opportunities for students to receive basic education, but also to improve the level of vocational education in impoverished counties, cultivate talents with certain knowledge and skills, and inject vitality into the labor market of impoverished counties. Therefore, 3 response variables are chosen, Students in Primary Schools, Students in Middle Schools, and Students in Vocational Education Schools, to examine the policy effects of university education assistance from both fundamental education and vocational education.

In the research of university health poverty alleviation policies, there are also 3 response variables in the article, Doctors per 10,000 People, Health Technicians per 10,000 People, and Hospital Beds per 10,000 People, which are chosen to measure the policy effects of university health assistance from both human resource investment and in-kind investment perspectives.

Explanatory Variables. The core explanatory variables of this article are whether the county is assisted by university (Treat), policy treatment variable (Post), and the interaction term of Treat and Post (Treat_Post). If a county is designated for university targeted poverty alleviation, Treat takes a value of 1, otherwise it takes a value of 0. The university targeted poverty alleviation policy was officially launched

in 2012, therefore, Post is set to be 1 if the year is 2012 or later, otherwise it takes a value of 0. The interaction term of Treat and Post (Treat_Post) is the product of Treat and Post.

In order to ensure a precise assessment of policy effects, this study utilized four control variables in the model, namely Savings, Finance, Public Budget, and Population Density. Savings, measured by the ratio of the balance of savings deposits of urban and rural residents to the regional GDP, effectively reflects the funds available to residents for education and medical expenses. Finance, measured by the ratio of the year-end loan balance of financial institutions to the regional GDP, may indicate regions with greater financial development and more credit resources invested in health and education assistance projects, thereby enhancing policy effects. Public Budget, measured by the natural logarithm of the general public budget expenditure, reflects the government's investment in the public service sector. Lastly, Population Density, measured by the ratio of the year-end total population to the administrative land area, may reflect the urgency of education and health resources in regions with higher population densities, potentially influencing the implementation of university education and health poverty alleviation policies.

2.3 Descriptive Statistics

Table 1 shows the descriptive statistics of each variable, including the sample observations, mean, standard deviation, minimum, and maximum values.

Table 1. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Students in Primary Schools	5864	31770.05	28510.13	960	259636
Students in Middle Schools	5866	21273.36	19338.76	452	154552
Students in Vocational Education	2698	2463.53	3002.59	1	44207

Schools					
Doctors per 10,000 People	1113	10.30863	5.809152	1.450549	52.23464
Health Technicians per 10,000 People	5827	33.36726	14.52032	0.6175755	321.6747
Hospital Beds per 10,000 People	1741	30.74758	12.81443	3.756372	108.4781
Treat	5920	0.0929054	0.2903244	0	1
Post	5920	0.8	0.4000338	0	1
Saving	5801	0.8387319	0.3809589	0.01	3.004045
Finance	5820	0.6774676	0.386182	0.0048	4.037261
Public Budget	5709	0.0183786	0.019413	0.0000338	0.1276596
Population Density	5900	12.22844	0.5859861	10.12575	14.20843

From the table, it can be seen that students in primary and middle schools in impoverished counties is widely distributed. Students in vocational education schools are relatively few and unevenly distributed, indicating that the level of vocational education development in some areas may be low, and the number of doctors and health technicians varies greatly, while the distribution of hospital beds is uneven, reflecting the problem of uneven distribution of education and health resources in different regions. The average value of Treat is 0.0929054, indicating that about 9.29% of impoverished counties have received assistance from university targeted poverty alleviation policies. The standard deviations of the variables Savings, Finance, and Public Budget are relatively large, indicating that there are significant differences in wealth accumulation, financial resource distribution, and government investment in the public service in different regions. The standard deviation of

Population Density is relatively small, indicating that the distribution of Population Density in different regions is relatively concentrated, and the population distribution characteristics are relatively stable.

3 Empirical Findings

3.1 Empirical Specification

In terms of model construction, the 55 impoverished counties designated for university targeted poverty alleviation are taken as the treatment group, and other impoverished counties are taken as the control group. The DID method is used to examine the effects of the Ministry of Education's university targeted poverty alleviation policy on education and health assistance in impoverished counties. The model is set as follows:

$$Y_{it} = \alpha_0 + \alpha_1 Treat_{it} \times Post_{it} + Controls_{it} + County_i + Year_t + \varepsilon_{it} \quad (1)$$

where Y represents response variables: Students in Primary Schools, Students in Middle Schools, Students in Vocational Education Schools, Doctors per 10,000 People, Health Technicians per 10,000 People and Hospital Beds per 10,000 People; Controls represent a collection of control variables, including Savings, Finance, Public Budget, and Population Density; County represents County Fixed Effects, which is used to eliminate individual differences between counties that may interfere with the empirical results; Year is included as Year Fixed Effects in the model to mitigate the impact of varying macroeconomic conditions in different years on the empirical findings, and ε represents the random disturbance term. The subscript i represents the county, and the subscript t represents the year. Since County Fixed Effects and Year Fixed Effects are included, Treat and Post are not separately added to the model to avoid multicollinearity problems.

The interaction term is constructed to identify the average treatment effect of policy impact on the affected individuals, with a focus on the coefficient of α_1 . A positive coefficient indicates a promoting effect of the university targeted poverty alleviation policy on the assisted counties, while a negative coefficient indicates an inhibitory effect.

3.2 Parallel Trend Test

Parallel trend tests were conducted using time trend graphs. The university targeted poverty alleviation policy was first proposed by the State Council Leading Group Office of Poverty Alleviation and Development in 2012, with the program's initiation primarily concentrated towards the end of the same year. Consequently, this study considers 2012 as the policy shock point and examines the disparities between the treatment and control groups before and after this time frame.

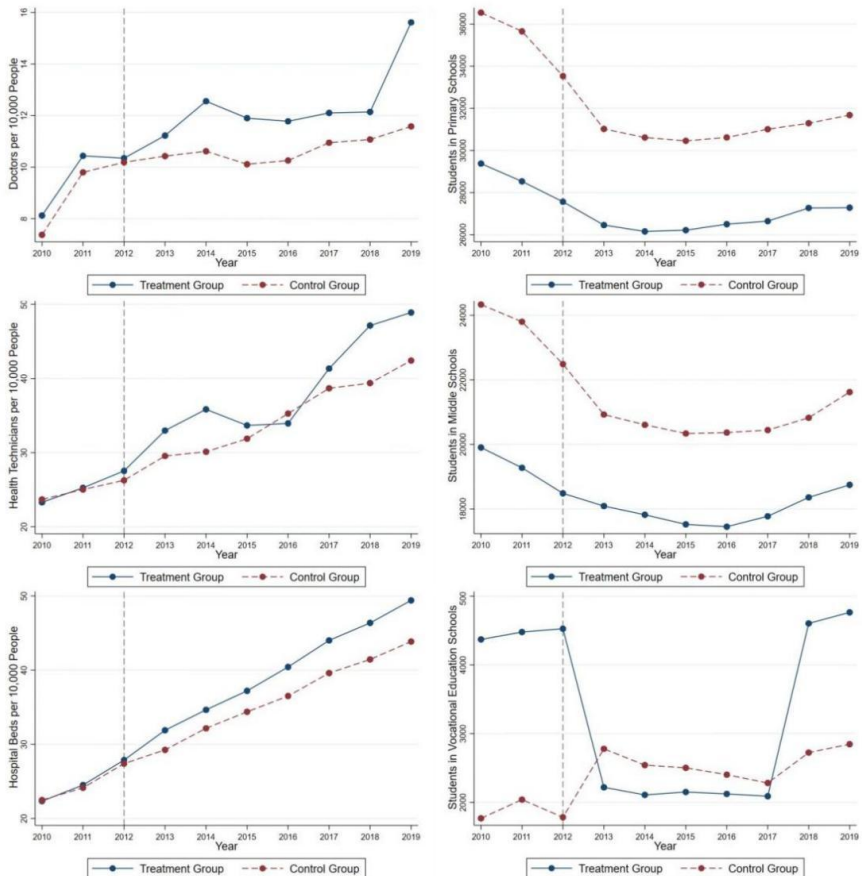


Fig. 1. Time Trend Graphs

There are 6 time trend graphs for response variables: Students in Primary Schools, Students in Middle Schools, Students in Vocational Education Schools, Doctors per 10,000 People, Health Technicians per 10,000 People, and Hospital Beds per 10,000 People. It can be seen that before the policy was implemented in 2012, the trend lines

of the treatment group and the control group were roughly parallel, while after the policy was implemented, there were significant differences in the trend lines between the two groups, and the slope of the trend line of the treatment group was significantly larger than that of the control group. This indicates that the DID model in this article is reliable and effective in evaluating the effect of policy shock.

3.3 Baseline Results

Table 2 presents the results of examining the university health assistance. Column (1) uses Hospital Beds per 10,000 People as the response variable to test the in-kind investment effect of the university health assistance, while columns (2) and (3) use Health Technicians per 10,000 People and Doctors per 10,000 People as response variables, respectively, to test the human resource investment effect of the university health assistance.

In column (1), the regression coefficient of Treat_Post is 3.570, which is significantly positive at the 1% level. This indicates that after the implementation of the university targeted poverty alleviation policy, the number of Hospital Beds per 10,000 People in the assisted counties has increased significantly by 3.570, reflecting the effectiveness of the university's medical in-kind investment. In columns (2) and (3), the regression coefficients of Treat_Post are 1.908 and 1.277, respectively, but they are not significant. This indicates that the implementation of the university health assistance has not had a significant impact on the medical human resources in the assisted counties.

Table 2. Baseline Results of Health Assistance

	(1)	(2)	(3)
VARIABLES	Hospital Beds per 10,000 People	Health Technicians per 10,000 People	Doctors per 10,000 People
Treat_Post	3.570***	1.908	1.277
	(1.204)	(1.900)	(0.991)
Saving	-3.512***	-1.357	-1.280
	(1.255)	(2.027)	(1.291)
Finance	0.155	2.442	4.113***
	(0.917)	(1.552)	(0.663)
Population	-193.0**	-54.94	-156.6***

Density			
	(74.70)	(94.24)	(46.79)
Public Budget	0.259	2.451	-1.881
	(0.971)	(1.712)	(1.401)
Constant	36.25***	1.573	36.36**
	(11.78)	(20.61)	(17.13)
County Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Observations	5,645	1,680	1,082
R-squared	0.755	0.884	0.783

Robust standard errors in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 3 presents the results of examining the university education assistance. Columns (1) and (2) use Students in Primary Schools and Students in Middle Schools as response variables, respectively, to test the effect of the university education assistance on the fundamental education resources in the assisted counties. Column (3) uses Students in Vocational Education Schools as the response variable to test the effect of the university education assistance on vocational education in the assisted counties.

In column (1), the coefficient of Treat_Post is 2240, which is significantly positive at the 5% level. This indicates that the university education assistance has significantly increased the number of Students in Primary Schools by 2240, reflecting the significant improvement of primary education resources in the assisted counties and promoting the enrollment of school-age children. In column (2), the coefficient of Treat_Post is 1307, which is significantly positive at the 10% level. This indicates that after the implementation of the university targeted poverty alleviation policy, the number of Students in Middle Schools has significantly increased by 1307, and the university education assistance has effectively improved the resources of middle school education in the assisted counties. In column (3), the coefficient of Treat_Post is -92.45, but it is not significant. This indicates that the university education assistance has not had a significant impact on the students in vocational schools in the assisted counties.

Table 3. Baseline Results of Education Assistance

	(1)	(2)	(3)
VARIABLES	Students in Primary Schools	Students in Middle Schools	Students in Vocational Education Schools
Treat_Post	2,240** (883.2)	1,307* (681.1)	-92.45 (677.3)
Saving	-2,419** (1,033)	-2,140*** (743.1)	-644.7** (264.2)
Finance	1,480** (708.4)	253.5 (574.9)	296.1 (187.1)
Population Density	175,451 (109,868)	73,858 (93,929)	31,734* (17,385)
Public Budget	2,432*** (799.4)	3,592*** (638.8)	886.0** (362.4)
Constant	-926.0 (10,135)	-22,946*** (8,212)	-8,748** (4,331)
County Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Observations	5,643	5,646	2,642
R-squared	0.968	0.955	0.834

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

3.4 Robustness Test

In order to address the potential sample self-selection bias between the treatment and control groups and enhance the reliability of the empirical findings, propensity score matching was employed to match the two groups. The matching was based on the control variables and utilized the nearest neighbor one-to-one method. The balance test results are presented in Table 4, which demonstrate a significant reduction in the deviation of each control variable after matching. Moreover, the p-values are no longer significant after matching, indicating that the matching outcomes are good.

Table 4. PSM-DID Balance Test

Variable	Unmatched	Mean		%reduct		t-test	
	Matched	Treated	Control	%bias	bias	t	P> t
Saving	U	0.756	0.846	-25.3		-5.26	0.00
	M	0.756	0.757	-0.3	98.9	-0.05	0.961
Finance	U	0.682	0.669	3.3		0.70	0.482
	M	0.682	0.661	5.6	-72.9	0.90	0.368
Population Density	U	0.014	0.019	-27.8		-5.21	0.00
	M	0.014	0.013	5.3	80.8	1.19	0.233
Public Budget	U	12.199	12.212	-2.3		-0.49	0.627
	M	12.199	12.177	4.1	-79.8	0.69	0.488

The regression results after propensity score matching are shown in Table 5 and Table 6.

Table 5. Regression Results of Health Assistance after PSM-DID

	(1)	(2)	(3)
VARIABLES	Hospital Beds per 10,000 People	Health Technicians per 10,000 People	Doctors per 10,000 People
Treat_Post	3.719***	0.0759	2.291**
	(1.195)	(1.924)	(0.997)
Saving	-2.811	-5.229	-5.725
	(2.568)	(6.571)	(3.699)
Finance	-0.435	0.310	3.504

	(1.900)	(4.515)	(2.139)
Population Density	-120.0	371.2	-322.4*
	(216.1)	(413.9)	(189.9)
Public Budget	-2.006	1.431	-3.005
	(2.119)	(4.913)	(2.632)
Constant	49.29**	3.617	52.89*
	(24.68)	(58.12)	(30.89)
County Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Observations	1,024	232	154
R-squared	0.651	0.670	0.488
Number of id	375	116	70

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 5 reports the regression results of the university health assistance after propensity score matching. Columns (1), (2), and (3) use Hospital Beds per 10,000 People, Health Technicians per 10,000 People, and Doctors per 10,000 People, respectively, as response variables to conduct the DID test again. From Table 5, it can be seen that after nearest neighbor one-to-one propensity score matching, the regression coefficients of the Treat_Post on Hospital Beds per 10,000 People and Doctors per 10,000 People are 3.719 and 2.291, respectively, and are significantly positive at the 1% and 5% levels, while the regression coefficient on Health Technicians per 10,000 People is still not significant. This indicates that after using nearest neighbor one-to-one propensity score matching, the university health assistance has significantly increased Hospital Beds per 10,000 People and Doctors per 10,000 People in the assisted counties, but has not had a significant impact on Health Technicians per 10,000 People, demonstrating the robustness of the above conclusion.

Table 6 reports the regression results of the university education assistance after propensity score matching. Columns (1), (2), and (3) use Students in Primary Schools, Students in Middle Schools, and Students in Vocational Education Schools, respectively, as response variables. Table 6 shows that after nearest neighbor

one-to-one propensity score matching, the regression coefficients of the Treat_Post on Students in Primary Schools and Students in Middle Schools are 1435 and 1019, respectively, and are significantly positive at the 10% level, while the regression coefficient on Students in Vocational Education Schools is still not significant. This indicates that after using nearest neighbor one-to-one propensity score matching, the university education assistance has significantly improved the fundamental education resources in the assisted counties, but has not had a significant impact on vocational education, which is consistent with the above conclusion and also demonstrates the robustness of the above conclusion.

Table 6. Regression Results of Education Assistance after PSM-DID

	(1)	(2)	(3)
VARIABLES	Students in Primary Schools	Students in Middle Schools	Students in Vocational Education Schools
Treat_Post	1,435**	1,019*	629.9
	(682.5)	(596.7)	(527.0)
Saving	-2,816*	-985.2	-21.10
	(1,467)	(1,282)	(726.8)
Finance	-503.8	-894.7	-285.5
	(1,085)	(948.6)	(443.0)
Population Density	-564,740***	-427.2	44,851
	(123,430)	(107,913)	(38,319)
Public Budget	2,921**	3,888***	-757.5
	(1,210)	(1,058)	(507.0)
Constant	6,487	-23,266*	10,478*
	(14,096)	(12,324)	(5,871)
County Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Observations	1,024	1,024	485
R-squared	0.148	0.110	0.037
Number of id	375	375	234

Robust standard errors in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

4 Conclusions

This article uses health, education, and economic data from 592 impoverished counties between 2010 and 2019 as research samples, and uses the DID model and PSM-DID method to test the policy effects of education and health assistance of the university targeted poverty alleviation policy. The research results show:

Firstly, the implementation of health assistance of the university targeted poverty alleviation policy provides strong support for the improvement of medical resources and talent cultivation in the assisted counties. Specifically, in terms of medical physical investment, universities have effectively improved the medical conditions of the assisted counties by setting up medical facilities and increasing hospital beds. In terms of human resource investment, universities have expanded the medical teams in the assisted counties by forming medical teams and training medical personnel, improving the accessibility of medical resources for local residents. These measures not only help alleviate the shortage of medical resources and talent in the assisted counties but also provide better medical services for local residents, which is beneficial to the development of local medical and health services.

Besides, the education assistance of university targeted poverty alleviation policy significantly improves the fundamental education resources in primary and middle schools in the assisted counties. Specifically, in terms of basic education resources in primary and middle schools, universities have significantly improved the education resource conditions in the assisted counties by investing funds, setting up schools, and sending teaching teams, increasing the education opportunities for students in the assisted counties. However, the impact of the university targeted poverty alleviation policy on vocational education is not statistically significant, which may be related to the relatively backward development of vocational education in impoverished counties and insufficient policy support.

The findings presented in this study not only broaden the research scope regarding university targeted poverty alleviation policy but also offer empirical evidence to reinforce and extend the current poverty alleviation accomplishments. These outcomes can facilitate the enhancement of the performance evaluation system for targeted poverty alleviation, augment the social service capabilities of universities

under the Ministry of Education, and provide theoretical guidance for the implementation of the rural revitalization strategy.

References

1. Yue Z.. (2020). The Logic Mechanism of Poverty Alleviation through Education in Colleges and Universities and the Optimization Suggestions for the Relative Poverty Alleviation Stage. *Economic Review Journal*, 418(09), 70-76.
2. Tao Z., Feng J., Zhengbo S.. (2018). Analysis on the Way of the Fixed-point Anti-poverty Work for Colleges and Universities:Take Tsinghua University's Fixed-point Anti-poverty Work in Nanjian County,Dali State,Yunnan Province as an Example. *Journal of Henan Institute of Education(Philosophy and Social Sciences Edition)*, (06), 92-95.
3. Jianwei S., Tianyuzi Z., Keyou W.. (2020). Exploring the Long-term Mechanism for Building Targeted Poverty Alleviation in Universities--Taking Beijing Institute of Technology to Help Fangshan County in Shanxi Province as an Example. *Industry and Information Technology Education*, (10), 45-49.
4. Lanfang W., Deping X.. (2016). Research on the Mechanism and Effectiveness of Technology Governance in Anti-Poverty--Taking Huazhong Agricultural University's Targeted Poverty Alleviation as an Example. *Journal of South-Central University for Nationalities(Humanities and Social Sciences)*, 36(6), 145-148.
5. Huadong C., Kun L.. (2017). Study on Model of Precise Poverty Alleviation from Higher Education——A Case Study between Huazhong Agricultural University and Jianshi County. *Journal of Huazhong Agricultural University(Social Sciences Edition)*, 129(03), 17-22+149-150.
6. Lingping Y., Junxiao L.. (2021). The Evolution Logic and Future Prospect of China's Higher Education Poverty Alleviation Policy since the Founding of the People's Republic of China——Based on the Perspective of Historical Institutionalism. *Tsinghua Journal of Education*, 42(05), 126-139.
7. Ying Z., Zhilei S., Yuanping L.. (2021). How can Public Policies Change the Accumulated Disadvantage of Individuals? Based on the Perspective of Education Poverty Alleviation. *Journal of Finance and Economics*, 47(02), 79-93.
8. Hong S., Jigang L., Wei H.. (2022). Educational Poverty Alleviation and Human Capital Accumulation:Evidence, Mechanisms and Policy Implications. *The Journal of World Economy*, 45(10), 3-27.

9. Hong Z., Shi L., Zhengyu G., Jialu C.. (2023). The impact of education on relative poverty and its intergenerational transmission — Causal identification based on the Compulsory Education Law. *China Economic Review*, 82, 102071.
10. Xiaoying L., Emily H.. (2017). Early poverty exposure predicts young adult educational outcomes in China. *China Economic Review*, 44, 79-97.
11. Phillip B., David J. (2020). Educational expansion, poverty reduction and social mobility: Reframing the debate. *International Journal of Educational Research*, 100(C), 101537-101537.
12. Chu C., Ting C., Jie P.. (2023). Effect of Health Poverty Alleviation Project on the Economic Burden of Disease Among Poor Households: Empirical Evidence from Sichuan Province. *Journal of Sichuan University(Medical Sciences)*, (02), 393-399.
13. Zulan L., Geyao Z., Song H., Xue L., Yuhong M.. (2022). Consolidating the Achievements of Grassroots Health Poverty Alleviation of Traditional Chinese Medicine and Effectively Connecting with Rural Revitalization Sampled with Guizhou Province. *Chinese Health Service Management*, (02), 134-138.

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