Study on the Poverty Alleviation Effect of Financial Aid for College Students in Northern Anhui
--Based on Seven Universities in Bengbu

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Abstract
China has completely lifted itself out of poverty, but the relative poverty between urban and rural areas has not been solved. The relative gap between urban and rural areas has affected the problem of educational assistance for poor students. In order to evaluate the implementation effect of the current education subsidy, this paper measures the implementation of the current poverty alleviation subsidy policy in Colleges and universities from the perspective of the current student subsidy problem and the research scope of Bengbu City, based on the quantitative analysis of the poverty degree of poor students with mathematical expectations, and draws the following conclusions: first, the identification and evaluation method of poverty alleviation subsidy for poor students is relatively single. Second, there is a lack of objective identification standards for financial assistance. Third, the funding work lacks a follow-up mechanism.

Keywords
Current Situation of Student Financial Aid; Student Financial Aid Assessment; Bengbu City; Quantitative Identification Model.

1. Introduction
At present, the targeted poverty alleviation work promoted by the government has effectively solved the problem of excessive income gap between urban and rural residents in China. However, in some regions, the poverty alleviation work is too focused on the identification and income measurement of poor households, which is difficult to practically solve the problem of widening the education gap between urban and rural areas.

In the journey of realizing the great rejuvenation of the Chinese nation and the Chinese dream, poverty alleviation through education is the core component of the implementation of targeted poverty alleviation. At present, Chinas colleges and universities have issued many subsidy policies for students with financial difficulties, such as the guiding opinions of six departments including the Ministry of education on the identification of students with financial difficulties in 2019 (JC [2018] No. 16), national student loans, national awards and grants, which have achieved a breakthrough in quantity. However, in the process of implementing the student loan policy, there are real problems -that is, targeted poverty alleviation is only accurate [1]. Often, some students with financial difficulties do not get student loans because they do not understand the policy and do not have a harmonious relationship with their classmates. The occurrence of such problems is largely caused by the imperfection of the subsidy policy and the problems in the student management system of some colleges and universities.

At present, the financial aid for college students in China has achieved remarkable results, which can meet the needs of students with financial difficulties to a great extent. However, there are still many problems in student financial assistance in Colleges and universities [2]. Based
on the above problems, this research takes Bengbu colleges and universities as an example and uses a combination of various research methods to master the current implementation of student financial assistance in Bengbu colleges and universities. At the same time, listen to the true wishes of teachers and students. And conduct data analysis, establish a scientific evaluation standard and financial aid system for poor students, evaluate their poverty alleviation effect, and provide reference suggestions for solving the accuracy of financial aid for students in major colleges and universities and the implementation of financial aid.

2. Theoretical analysis

Tassone, V.C.; Van der duirn, V.R. (2008) discussed and studied the relationship among tourism, poverty alleviation and nature protection by analyzing some articles related to Social Sciences published in 17 scientific journals from 2003 to 2006, so as to summarize a development path of tourism poverty alleviation. The vulnerability of natural environment is often closely related to poverty. Srivastava, Sanjay K. (2009) summarized a set of poverty alleviation experience suitable for disaster management and poverty reduction in India based on the in-depth investigation of the typical case of using space technology to reduce natural disasters and alleviate rural poverty in the field of disaster management in India. Sheppard, Donna J.; Moehren-schlager, Axel; McPherson, Jana M. (2010) and others summarized an effective community-based community governance experience based on the systematic study of the hippo reserve in Ghana, West Africa. The study also found that this community governance model plays a significant role in protecting biodiversity and reducing extreme poverty. Mokgadi, J. Fikile; Oladele, O. idowu (2013) discussed the significance of sustainable development of agricultural projects for poverty alleviation in South Africa from the perspective of sustainable development. Nesengani, T. J.; Mudau, M.J.; The research of netshandama, V.O. (2016) and others also focused on poverty alleviation in South Africa, focusing on the contribution of food security projects to community poverty alleviation in Limpopo Province, South Africa. Zembe-Mkabile, Wanga; Surrender, Rebecca; Sanders and David (2015) discussed the significance of cash transfer plan in solving the development of poor children in developing countries from the perspective of cash transfer. Banda, Collium; Van der Merwe, ij (2017) paid more attention to the research on poverty alleviation strategies under the unique background of urban centers. Based on the detailed investigation of the current situation of urban poverty in Zimbabwe, he pointed out that churches in cities can be guided to make meaningful responses to urban poverty, thus highlighting the role of churches in poverty reduction.

Wang Sangui (2015) [3] targeted poverty alleviation is a measure that must be taken to offset the decline of poverty reduction effect, and will become the main way of poverty alleviation in rural China in the future. At present, Chinese difficulties in targeted poverty alleviation are reflected in three aspects: accurate identification, accurate support and accurate assessment. Therefore, we should reform the formulation method of poverty standards and improve the accurate identification mechanism; Improve the assessment mechanism of targeted poverty alleviation; Explore and establish the benefit mechanism for poor households; Reform the poverty alleviation fund management system, strengthen fund integration, and innovate the working mechanism of targeted poverty alleviation, so as to ensure the actual results of targeted poverty alleviation. Sun Yanli (2018) [4] investigated the current identification of poor students in Colleges and universities, and came to the conclusion that the general process is: submit a written application - submit a certificate - Review and review, publish the results and solicit opinions widely. If there is no objection to the publicity, it will be distributed regularly. The above research on poverty alleviation focuses on the poor people of all ages, and there are many measurement methods [5], but there is a lack of research on poverty alleviation of poor college students [6]. This paper attempts to take Bengbu City as an example to measure the effect of financial assistance for college students in Northern Anhui.
3. Research methods and sample selection

3.1. Research method

3.1.1. Combination of qualitative and quantitative analysis

Qualitative analysis and quantitative analysis are organic unity and complement each other; quantitative analysis must be based on qualitative prediction, and qualitative analysis should adopt quantitative methods for calculation and demonstration. Qualitative is the basis of quantitative analysis and quantitative is the concretization of qualitative analysis. The two complement each other and can be used together to achieve the best effect.

3.1.2. Likert scale method

Likert scale is one of the most commonly used scoring summation scales. Items belonging to the same concept are scored by summation, and individual or individual items are meaningless. It was improved by American social psychologist Likert on the basis of the original scale in 1932. The scale consists of a group of statements. Each statement has five answers of "very agree", "agree", "not necessarily", "disagree" and "very disagree", which are recorded as 5, 4, 3, 2 and 1 respectively. The total score of each respondent's attitude is the sum of the scores he answers to each question. This total score can explain his attitude or different status on the scale.

3.1.3. Comparative analysis method

Comparative analysis, also known as "comparative analysis", is an analysis method to compare objective things in order to understand the essence and law of things and make a correct evaluation. This paper mainly uses the form of relative number comparison to analyze the data in order to draw a conclusion.

3.2. Sample selection

3.2.1. Sampling unit

The survey objects of this paper are seven universities: Anhui University of Finance and economics, Bengbu Medical College, Anhui Institute of science and technology, Bengbu college, Bengbu business college, Anhui electronic information vocational and technical college and Bengbu Economic and technical vocational college. The survey plan adopts stratified four-stage sampling, and the sampling units of each stage are:

The first stage: Taking Bengbu City as the first-class sampling unit; The second stage: take each university as the secondary sampling unit; The third stage: take the departments of colleges and universities as the three-level sampling unit; The fourth stage: take each department as the final unit.

3.2.2. Determination of sample size

The sample size in this questionnaire survey is mainly random sampling, so we use simple random sampling to calculate the sample size, and the calculation formula is:

\[ n_0 = \frac{Z^2 \times p \times (1-p) \times N}{\frac{E^2}{N} + Z^2 \times p \times (1-p)} \]

2020In, the permanent resident population of Bengbu was 3.2964 million (data source: Bengbu Bureau of Statistics). In order to ensure the reliability of the questionnaire, when the confidence is 95% (at this time \( z=1.96 \)), the error value is \( E=5\% \), and the probability value \( P=0.5 \), the sample difference is the largest, and the sample size is obtained

\[ n_0 = \frac{3296400 \times 1.96^2 \times 0.5 \times (1-0.5)}{0.05^2 \times 3296400 + 1.96^2 \times 0.5 \times (1-0.5)} = 370.904 \]
Considering the effective recovery $P=0.85$, the sample size is $n = \frac{n_0}{P} = \frac{370.904}{0.85} \approx 436$. Therefore, it was finally decided to issue the 500 questionnaires.

### 3.2.3. Allocation of samples

<table>
<thead>
<tr>
<th>Name</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anhui University of Finance and Economics</td>
<td>203</td>
</tr>
<tr>
<td>Bengbu Medical College</td>
<td>111</td>
</tr>
<tr>
<td>Bengbu College</td>
<td>34</td>
</tr>
<tr>
<td>Anhui Institute of science and technology</td>
<td>36</td>
</tr>
<tr>
<td>Bengbu Business College</td>
<td>56</td>
</tr>
<tr>
<td>Anhui electronic information vocational and Technical College</td>
<td>28</td>
</tr>
<tr>
<td>Bengbu Institute of Business and Technology</td>
<td>32</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>500</strong></td>
</tr>
</tbody>
</table>

### 3.2.4. Survey accuracy

In this survey, 500 questionnaires were actually distributed and 462 valid questionnaires were recovered, with an effective rate of 92.4%.

## 4. Empirical analysis

### 4.1. Reliability Analysis

Cronbach used in this paper $\alpha$ Reliability coefficient is the most commonly used reliability coefficient at present. It is generally considered that the reliability coefficient should be between 0 and 1. If the reliability coefficient of the scale is more than 0.9, it means that the reliability of the scale is very good; Between 0.8 and 0.9, the reliability of the scale is acceptable; Between 0.7 and 0.8 indicates that some items of the scale need to be revised; Below 0.7 indicates that some items of the scale need to be discarded. Through the reliability analysis of the questionnaire, we can judge whether a questionnaire has stability and reliability. The reliability of the questionnaire is analyzed by SPSS software, and the Cronbach’s alpha coefficient table is as follows:

<table>
<thead>
<tr>
<th>Cronbach’s alpha coefficient based on standardized term</th>
<th>Number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.784</td>
<td>27</td>
</tr>
<tr>
<td>0.817</td>
<td></td>
</tr>
</tbody>
</table>

### 4.2. Validity Analysis

Validity is effectiveness, which refers to the accuracy of measurement tools in application. Specifically, it refers to the degree of coincidence between the measurement results and the investigated contents. The more consistent the measurement results with the investigated content, the higher the validity; On the contrary, the lower the validity. This validity analysis mainly uses expert judgment, statistical analysis and empirical speculation.

### 4.3. Quantitative analysis of poverty degree of poor students based on mathematical expectation

Based on the above research results, the following mathematical model is established to build a quantitative recognition system [7] [8].
E(X)=X_1P_1+X_2P_2+X_3P_3+X_4P_4+X_5P_5+X_6P_6+X_7P_7

Of which:
(1) E (x) indicates the degree of financial difficulty after considering the overall situation of students;
(2) X refers to the indicators to be considered in the subsidy identification (the higher the degree of economic difficulty, the higher the value of each indicator, the lowest is 0 and the highest is 100), X1 refers to the situation of sudden accidents and difficulties in the family; X2 indicates the situation of large family population and heavy burden; X3 represents the situation of single parent families; X4 indicates that parents’ income is low; X5 indicates serious illness of immediate family members; X6 represents the situation of household liabilities; X7 indicates other situations.
(3) P means that the weight is assigned according to the importance level of each index (the sum of each weight is 1), and the seven indexes are assigned according to the survey.

Table 3. Assignment table of quantitative model based on mathematical expectation

<table>
<thead>
<tr>
<th>P</th>
<th>P1</th>
<th>P2</th>
<th>P3</th>
<th>P4</th>
<th>P5</th>
<th>P6</th>
<th>P7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupied proportion</td>
<td>0.2797</td>
<td>0.1549</td>
<td>0.1066</td>
<td>0.2389</td>
<td>0.0705</td>
<td>0.1066</td>
<td>0.0428</td>
</tr>
</tbody>
</table>

The higher the mathematical expectation e (x), the poorer the students are.
At the same time, different classes can set the minimum value of E (x) to meet the conditions of poor students according to their own conditions, so as to screen out poor students who really need financial assistance.
At the same time, e (x) is divided into multiple gradients, and differentiated subsidy amounts are given to students with different levels of family economic difficulties, so as to ensure the fairness and rationality of subsidy work.

5. Conclusions and suggestions

5.1. Conclusion
At present, the selection of poor students is in full swing in various colleges and universities, but there are also some problems, such as difficult judgment of poor students, insufficient amount of grants, unfair selection process, students’ failure to apply according to facts and so on. The following conclusions are drawn from this investigation:

5.1.1. The identification and evaluation method of financial aid for poor students is relatively single
At present, the main basis for identifying students with financial difficulties in Colleges and universities is the guiding opinions on conscientiously identifying students with financial difficulties in Colleges and universities (JC [2007] No. 8) issued by the Ministry of education and the Ministry of finance. On this basis, colleges and universities only apply through students’ personal materials and are recognized after level by level review by various departments of the University. This model seems scientific. In fact, the details of various factors in the identification of poor students are not considered in place. The model is single and the identification is not accurate enough.

5.1.2. There is a lack of objective identification criteria for funding
At present, this way of identifying poor students based on paper materials and subjective judgment has the problems of fuzzy reference standards and great influence of human factors. It is prone to inaccurate financial assistance, which makes some students who really need financial assistance fail to get financial aid, while students with good family conditions benefit...
instead and fail to fully realize the fairness of financial assistance. At present, there is no objective identification standard for students with financial difficulties in college student financial assistance, which is difficult to accurately identify the object of financial assistance, and has a certain degree of restriction on the improvement of the overall level of college financial assistance.

5.1.3. Lack of follow-up mechanism for funding
Student financial aid work ends with the issuance of financial aid funds, which only works at the identification level of poor students, ignores the use and specific performance of students after receiving financial aid funds, and lacks the investigation and supervision of students’ daily behavior, learning and living conditions, so as to ensure that the financial aid can really play its value. Student financial aid only stays at the identification level, lacking follow-up guidance and appropriate tracking mechanism for poor students, which is not conducive to the later training and supervision of poor students. It is difficult to achieve the development oriented financial aid goal proposed by the current state, and can not accurately track the purpose of financial aid, which reveals a major lack of student financial aid at present.

5.2. Recommendations
Through this investigation, we have a comprehensive understanding and understanding of the financial assistance of college students in Bengbu. On the whole, it basically meets the requirements of fairness, impartiality and openness, but there are still some problems. In view of the problems found in the investigation process, we put forward the following suggestions:

5.2.1. Establish appropriate quantitative system
There are many reasons for the deterioration of students’ family status. We should grade these factors and establish an appropriate quantitative system. To improve the accuracy and fairness of the selection of poor students. For students with different levels of family economic difficulties, differentiated subsidy amounts are given to ensure the fairness and rationality of the subsidy work.

5.2.2. Implement the multi-level review system of certification materials to ensure the fairness of work
To a certain extent, it is difficult to avoid students with good family conditions from applying, resulting in students who really need help not getting help. You can review the materials submitted by the class, and then verify with their surrounding students to understand their daily life, Conduct a round of screening. Finally, we will pay a home visit to the remaining students.

5.2.3. Establish an appropriate follow-up mechanism to clarify the use of grants
Student aid work should not only realize the accuracy of the identification level of poor students, but also take into account their follow-up tracking of the use of student aid funds. With the gradual popularization of electronic payment, it is not difficult to grasp the whereabouts of funds. It is possible to confirm the specific uses and whereabouts of prizes, grants and student loans through regular checking of the consumption bills and consumption tracks of poor students (such as Alipay, WeChat, Baidu wallet, credit card payment, mobile payment, etc.). So as to ensure that students really use their funds to places in need such as daily study and life, rather than wasting them wantonly. At the same time, the regularly verified electronic bills will be archived and saved, and the integrity archives of poor students will be established, which will help to improve the integrity awareness of poor students and eliminate the occurrence of bad behavior.
References


