International Journal of Evaluation and Research in Education (IJERE)
Vol. 14, No. 2, April 2025, pp. 1114~1123
ISSN: 2252-8822, DOI: 10.11591/ijere.v14i2.30543

The impact of revenue structure on the financial performance of general colleges and universities in China

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Article Info

Article history:

Received Mar 13, 2024
Revised Dec 6, 2024
Accepted Jan 7, 2025

Keywords:

Financial performance
General colleges and universities
Impact
Indicators
Revenue structure

ABSTRACT

Despite the continuous increase in total funding for general colleges and universities in China, these institutions face challenges related to insufficient educational funds and inefficient fund utilization, leading to suboptimal financial performance. Therefore, the main purpose of this study is analyzing their revenue structures, which comprise the proportion of financial subsidy revenue, career revenue and other revenue and to examine the impact of revenue structures on their financial performance (measured by talent cultivation, scientific research, and social services). This study builds linear regression models and combines panel data of general colleges and universities from 2010 to 2021 to study the impact of revenue structure on their financial performance. The findings indicate that the revenue of general colleges and universities in China is based mainly on financial subsidy revenue, with the proportion of such revenue increasing annually. The financial performance of these institutions also predicates an increasing trend. Most importantly, regression analysis shows that financial subsidy revenue has a positive impact on financial performance, whereas career revenue and other revenue negatively impact financial performance. Thus, Chinese general colleges and universities should prioritize increasing financial subsidy revenue while carefully managing career and other revenue to enhance financial performance.

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1. INTRODUCTION

Given the gradual expansion of general colleges and universities and the increase in their gross enrolment rate, the total amount of funding for these institutions has been constantly increasing. General colleges and universities in China are divided into higher undergraduate schools and vocational colleges. In 2020, there were 2,992 colleges and universities in China, comprising 2,738 general colleges and universities and 254 adult higher education institutions [1]. China's general colleges and universities invested 81.22 billion dollars in education funds in 2010 and 200.5 billion dollars in education funds in 2020. Compared with 2010, the investment in education funds of such colleges and universities in 2020 increased by 120.79 billion dollars, an increase of 151.54% [1], [2].

Despite the continuous increase in total funding for general colleges and universities in China, these institutions face challenges related to insufficient education funding and inefficient fund utilization, leading to suboptimal financial performance. In the context of limited resources, the allocation and effectiveness of

educational funds across various general colleges and universities significantly deviate from expectations. This misalignment has resulted in low funding efficiency, and the financial performance remains suboptimal due to inefficient fund utilization and an imbalanced revenue structure [3], [4]. The main sources of funding for colleges and universities are financial subsidies and career revenue, with a low portion of other revenue [3]. Moreover, there are significant differences in financial management, teaching, and research levels among different schools, resulting in a lack of unified standards for financial performance indicators in these colleges and universities [5]. This study seeks to address the issue of how revenue structure affects financial performance of these institutions.

In 2019, the Central Committee of the Communist Party of China and the State Council called on colleges and universities to accelerate the implementation of comprehensive budget performance management. This directive aimed to increase the effectiveness of the use of educational funds, optimize the distribution of educational resources, and raise the standard of educational services [6]. This study may assist general colleges and universities in increasing the effectiveness of fund utilization, optimizing resource allocation, and streamlining the expenditure structure, thus improving the financial management level and education quality of such colleges and universities and promoting their balanced development. Additionally, this study may contribute to the literature on the revenue structure and financial performance of Chinese general colleges and universities, as research in this specific area remains limited worldwide. Furthermore, the findings may validate the financial performance indicators of general colleges and universities.

This paper's primary goal is to develop a set of financial performance indicators suitable for general colleges and universities. The secondary goal is to analyze revenue structure and financial performance of general colleges and universities is the second goal. Finally, the tertiary goal is to analyze how the income structure affects financial performance of general colleges and universities is the third goal.

While there is extensive research on the revenue structure and specific aspects of teaching or research output in colleges and universities, there is lack of evidence of the relationship between revenue structure and financial performance, particularly concerning the impact of the revenue structure on the financial performance of general colleges and universities. Currently, financial subsidy revenue, career revenue, and other revenue combine to establish a diversified investment pattern that finances general colleges and universities in China [7]. Scholars generally believe that a college or university's revenue is composed of financial subsidy revenue, career revenue, and other revenue. Among these types of revenue, the proportion of financial subsidy revenue is the largest [7]–[9]. It is believed that the revenue structure is imbalanced, education funds are generally insufficient, and the efficiency of fund utilization is insufficient at general colleges and universities [4], [6], [8], [10].

Moreover, there is a scarcity of studies that comprehensively utilize the three roles of social services, scientific research, and talent cultivation to evaluate financial performance in colleges and universities. The outputs of these institutions can be categorized into three primary indicators based on these functions. Depending on its content, every major indication can be further broken down into a number of secondary indicators [10]–[13]. Whether colleges and universities can achieve sustainable development and have a significant societal impact depends on their talent cultivation, scientific research and social service [10], [14]–[17]. A comprehensive, scientific, and operable set of financial performance indicators has not been developed for the majority of the research on colleges and universities in terms of these indicators [6], [18]. When examining the financial performance of colleges and universities empirically, it is impossible to quantitatively evaluate financial performance indicators since they cannot be quantified [19]–[21]. A benefits analysis is lacking for several financial performance measures of colleges and universities [22]–[24]. The student-to-staff ratio, proportion of full-time teachers to staff, funds per staff, the annual growth rate of teaching activity revenue, the employment rate of students, the ratio of key disciplines and input of funds per student are generally accepted as teaching performance indicators [10], [17], [19], [25]. The scientific research revenue per full-time teacher, the proportion of project revenue to total revenue, the number of humanities and social science projects, the annual growth rate of total research funding, the number of national key projects, the number of natural science projects, the change rate of scientific research revenue per full-time teacher, and proportion of scientific research revenue to total revenue are some examples of research performance indicators [10], [17], [25]. The employment rate of graduates, social reputation, and number of graduates are among social service indicators [10], [26].

This study uses linear regression models and panel data analysis from 2010 to 2021 to examine the impact of revenue structure on financial performance in Chinese general colleges and universities. In system theory, a system's function is determined by its structure, which serves as the foundation of its function. Any significant changes in the system's structure can lead to the emergence of new functions [7]. The three major responsibilities of colleges and universities-talent cultivation, scientific research, and social services-also represent their financial performance. The revenue structure in colleges and universities serves as the foundation for these functions and directly influences their effectiveness. Consequently, the revenue structure

impacts financial performance as measured by scientific research, talent cultivation, and social services. Figure 1 presents the conceptual framework illustrating the connections between the revenue structure and financial performance.

Many factors influence the efficiency of education financing of colleges and universities including financial investment in higher education [20], [27], [28]. For general colleges and universities, the source of financial subsidy revenue is reliable and stable, and the greater the proportion is, the greater the support that it receives from the government, and the greater the possibility of completing various functional activities in these colleges and universities [7], [16], [21], [25], [29], [30]. When other factors affecting financial performance remain unchanged, the proportion of financial subsidy revenue has a positive impact on financial performance in general colleges and universities. Increasing financial subsidy revenue can improve financial performance at general colleges and universities. Therefore, this study proposes hypothesis H1 as: The proportion of financial subsidy revenue has a positive impact on financial performance.

An appropriate proportion of career revenue is conducive to the reasonable sharing of higher education costs, but if the proportion of career revenue is too large, the proportion of financial subsidy revenue will not be high [16], [21], [30], [31]. When other factors that affect financial performance remain unchanged, the proportion of career revenue negatively impacts financial performance, and increasing career revenue reduces financial performance in general colleges and universities. Therefore, we propose hypothesis H2: The proportion of career revenue has a negative impact on financial performance.

The greater the proportion of other revenue in colleges and universities is, the stronger their social fundraising ability and social influence, and the better their financial performance [7], [16], [21], [29], [32], [33]. While other factors affecting financial performance remain unchanged, the proportion of other revenue positively impacts financial performance, and increasing other revenue can improve financial performance of general colleges and universities. Therefore, we propose hypothesis H3: The proportion of other revenue has a positive impact on financial performance. According to system theory, revenue structure has an impact on financial performance, therefore these hypotheses were formulated to address the issues of inefficient fund utilization and suboptimal financial performance in Chinese general colleges and universities.

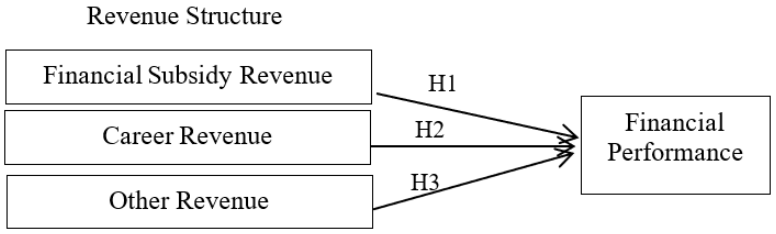

Figure 1. Conceptual framework

2. METHOD

2.1. Measurement

This paper uses seven indicators to measure financial performance in general colleges and universities [10], [16], [17]. Table 1 displays the particular indicators. The revenue of general colleges and universities includes financial subsidy revenue, career revenue, and other revenue. The financial subsidy revenue mainly includes education funding allocation, research funding allocation, and other funding allocation [7]. The measurement of the revenue structure is presented in Table 2.

Table 1. Financial performance indicators

Variable	Measurement	Indicators	Symbol indicators	Definition
Financial performance	Talent cultivation	Student to staff ratio	Y11	Number of students/number of staff
		Funds per staff	Y12	Total funds/number of staff
		Proportion of full-time teachers to staff	Y13	Number of full-time teachers/number of staff
		Input of funds per student	Y14	Input of funds/number of students
	Scientific research	Scientific research revenue per full-time teacher	Y21	Scientific research revenue/number of full-time teachers
		Proportion of scientific research revenue to total revenue	X22	Scientific research revenue/total revenue
	Social service	Number of graduates	Y3	

Table 2. The measurement of the revenue structure

Variable	Measurement	Symbol indicators	Definition
Revenue structure	Proportion of financial subsidy revenue	X1	Financial subsidy revenue/total revenue
	Proportion of career revenue	X2	Career revenue/total revenue
	Proportion of other revenue	X3	Other revenue/total revenue

2.2. Sample and population

The population consists of general colleges and universities in China. Chinese higher education institutions, abbreviated as colleges and universities, are divided into general colleges and universities and adult higher education institutions. Among these categories, general colleges and universities include higher undergraduate schools and vocational colleges. Based on their affiliation relationship, they are further divided into central affiliated general colleges and universities and local general colleges and universities. Local general colleges and universities refer to general colleges and universities managed by local governments. In 2020, there were 2,738 local general colleges and universities, accounting for 91.51% of the 2,992 colleges and universities in China [2]. Chinese colleges and universities are mainly local general colleges and universities. Therefore, we selected local general colleges and universities from 31 provinces in China as research samples.

2.3. Data collection

The revenue structure and financial performance data of local general colleges and universities are sourced from the Education Expenditure Statistics Yearbook and Education Statistical Yearbook from 2010 to 2021. Statistical package for the social sciences (SPSS) software was utilized to conduct regression analysis to examine the impact of the revenue structure on financial performance of Chinese local general colleges and universities.

Y is the dependent variable that represents financial performance, measured separately by talent cultivation, scientific research, and social services. *X* is an independent variable that represents the proportion of financial subsidy revenue, career revenue, and other revenue, as in (1). On the basis of this the research hypothesis, a linear regression model is constructed to investigate the relationship between variables Y and X.

$$Y_j = \alpha + \beta_i X_i \quad (1)$$

Where, β represents the coefficient of the independent variable. If β is greater than 0, the revenue structure has a positive impact on financial performance in general colleges and universities. Increasing revenue can enhance financial performance at general colleges and universities. α is a constant in the model.

2.4. Data analysis

Data analysis included data processing, descriptive statistics, unit root testing and correlation analysis [34], [35]. The correlation between revenue structure and financial performance is analyzed using correlation analysis. Panel data regression analysis was conducted to examine the impacts of the proportion of financial subsidy revenue, career revenue and other revenue on financial performance.

3. RESULTS AND DISCUSSION

3.1. Descriptive statistics

SPSS is used for data analysis. Table 3 presents the descriptive statistics. Overall, Figure 2 indicates that the proportion of financial subsidy revenue shows an increasing trend and then a stable trend year by year, the proportion of career revenue exhibits a decreasing trend and then a stable trend annually, and the proportion of other revenue shows an overall decline. Figures 3-5 and Figures 6-8 indicate that student-to-staff ratio, funds per staff, proportion of full-time teachers to staff, scientific research revenue per full-time teacher, proportion of scientific research revenue to total revenue, and number of graduates demonstrate an upward trend. Figure 9 shows that input of funds per student first decreases and then increases year by year. In other words, the financial performance of local general colleges and universities shows an increasing trend from 2010 to 2021. This supports the achievement of the second research objective of analyzing the revenue structure and financial performance of general colleges and universities.

3.2. Unit root test

The time span of the sample in this paper is 12 years. Before establishing the regression analysis of panel data, the data should be checked for stability. To determine whether the data were stable, a unit root test was carried out [36]. The specific test results are shown in Table 4, which indicates that the P value

significance of the augmented Dickey–Fuller test (ADF) unit root test for these variables is 0.000***, with a stable trend. The ADF test is used to ensure the stability of the data [32].

Table 3. Descriptive statistics

Variable	Maximum	Minimum	Mean	Standard deviation	Median
X1	0.921	0.312	0.615	0.105	0.605
X2	0.587	0.064	0.334	0.097	0.35
X3	0.168	0.001	0.049	0.031	0.042
Y11	20.62	13.93	17.518	1.161	17.64
Y12	622.564	26.152	292.985	92.58	283.988
Y13	0.775	0.48	0.663	0.05	0.665
Y14	18.341	0	3.439	3.459	2.216
Y21	0.031	0	0.008	0.007	0.006
Y22	173.901	5.864	19.082	17.192	14.031
Y3	650500	3700	224494.118	142048.328	202400

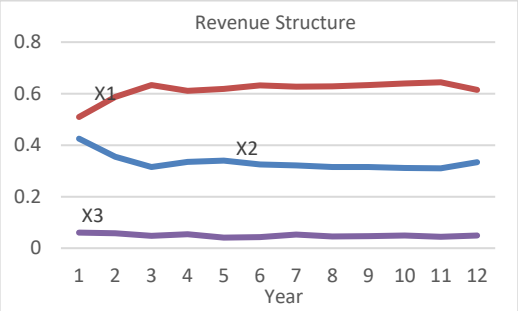

Figure 2. Annual trend of revenue structure

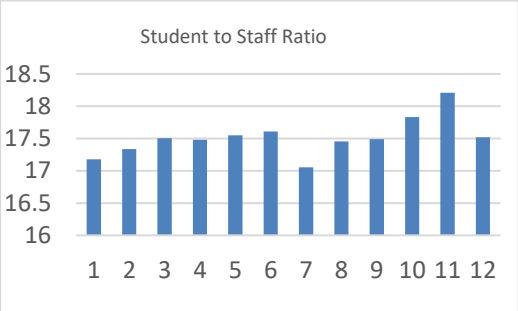

Figure 3. Annual trend of student-to-staff ratio

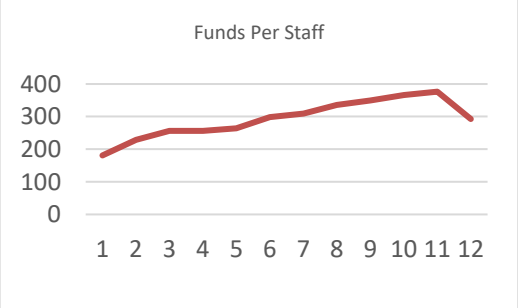

Figure 4. Annual trend of funds per staff

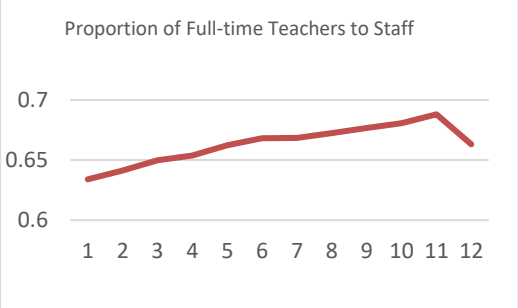

Figure 5. Annual trend of proportion of full-time teachers to staff

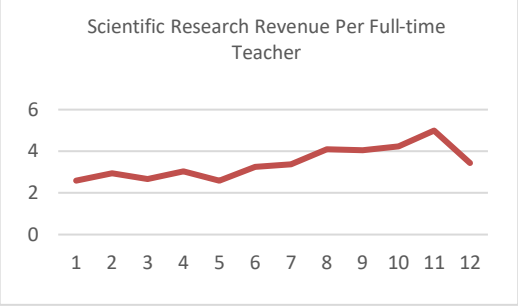

Figure 6. Annual trend of scientific research revenue per full-time teacher

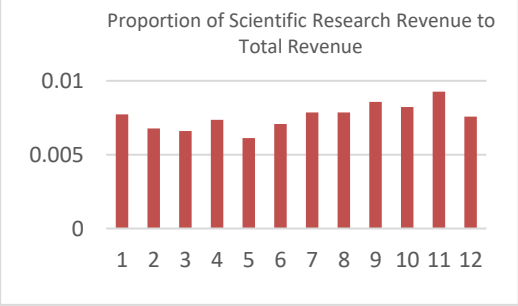

Figure 7. Annual trend of proportion of scientific research revenue to total revenue

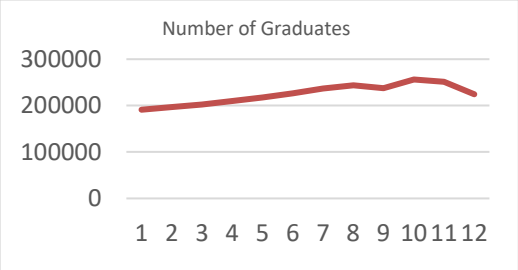

Figure 8. Annual trend of number of graduates

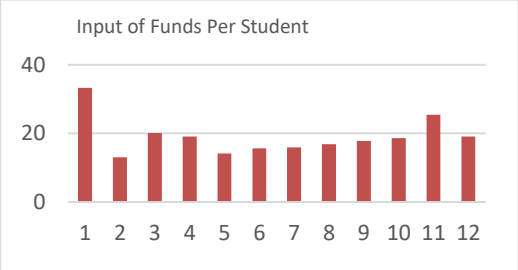

Figure 9. Annual trend of input of funds per student

Table 4. Unit root test of variables

Variable	X1	X2	X3	Y11	Y12	Y13	Y14	Y21	Y22	Y3
P Value	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***

Note: ***, **, and * represent significance levels of 1%, 5% and 10%, respectively.

3.3. Correlation analysis

The results indicated that the proportion of financial subsidy revenue was correlated with financial performance, except for proportion of full-time teachers to staff and proportion of scientific research revenue to total revenue as shown in Table 5. The proportion of career revenue was correlated with financial performance, except for proportion of scientific research revenue to total revenue. The proportion of other revenue was not correlated with financial performance, except for funds per staff.

Table 5. Correlation coefficient of Pearson correlation analysis

Variable	X1	X2	X3
X1	1(0.000***)		
X2	-0.919(0.000***)	1(0.000***)	
X3	-0.408(0.000***)	0.13(0.016**)	1(0.000***)
Y11	-0.194(0.000***)	0.219(0.000***)	0.065(0.232)
Y12	0.287(0.000***)	-0.395(0.000***)	0.09(0.097*)
Y13	0.058(0.288)	-0.117(0.030**)	0.061(0.263)
Y14	0.524(0.000***)	-0.573(0.000***)	-0.054(0.322)
Y21	0.151(0.005***)	-0.186(0.001***)	0.027(0.620)
Y22	0.064(0.237)	-0.073(0.178)	0.016(0.773)
Y3	-0.527(0.000***)	0.571(0.000***)	0.046(0.394)

Note: ***, **, and * represent significance levels of 1%, 5% and 10%, respectively.

3.4. Regression analysis of panel data

This paper studies the impact of revenue structure on financial performance of general colleges and universities. On the basis of the research objectives and research hypothesis, panel data regression analysis was used to build random effect or fixed effect models to conduct an in-depth analysis of the relationship between revenue structure and financial performance. Panel data regression analysis is mainly divided into the impact of the proportion of financial subsidy revenue on financial performance, the impact of the proportion of career revenue on financial performance, and the impact of the proportion of other revenue on financial performance.

3.4.1. The impact of the proportion of financial subsidy revenue on financial performance

Table 6 predicts that the proportion of financial subsidy revenue has a significant negative impact on student-to-staff ratio of talent cultivation. The proportion of financial subsidy revenue has a significant positive impact on funds per staff, proportion of full-time teachers to staff and input of funds per student. The proportion of financial subsidy revenue has a significant positive impact on scientific research revenue per full-time teacher and proportion of scientific research revenue to total revenue. The proportion of financial subsidy revenue positively impacts number of graduates. Overall, the proportion of financial subsidy revenue positively effects financial performance. Therefore, H1 is accepted.

3.4.2. The impact of the proportion of career revenue on financial performance

Table 7 shows that the proportion of career revenue has a positive impact on student-to-staff ratio of talent cultivation. The proportion of career revenue negatively impacts funds per staff, proportion of full-time

teachers to staff and input of funds per student. The proportion of career revenue has a significant negative impact on scientific research revenue per full-time teacher but has no significant impact on proportion of scientific research revenue to total revenue. The proportion of career revenue negatively effects number of graduates. Overall, the proportion of career revenue negatively impacts financial performance. Therefore, H2 is accepted.

Table 6. Regression analysis of the proportion of financial subsidy revenue and financial performance

Dependent variable		Model	coefficient	F	P	Constant	R^2	P of Hausman test
Talent	Y11	TFE	-4.342	55.382	0.000***	17.016	0.192	0.002
		RE	0.152	0.058	0.810	17.424	0.192	
Cultivation	Y12	TFE	118.47	8.941	0.003***	220.147	0.272	0.000
		RE	560.432	91.247	0.000***	-51.579	0.272	
	Y13	FE	0.190	55.504	0.000***	0.547	0.152	0.000
		RE	0.165	44.133	0.000***	0.562	0.152	
	Y14	TFE	73.517	80.385	0.000***	-26.118	0.686	0.000
		RE	35.974	13.514	0.000***	-3.036	0.686	
Scientific research	Y21	FE	8.112	8.033	0.005***	-1.548	0.043	0.526
		RE	7.098	8.941	0.003***	-0.925	0.043	
	Y22	FE	0.007	4.135	0.043**	0.003	0.024	0.984
		RE	0.007	2.452	0.096*	0.003	0.024	
Social service	Y3	FE	223684.864	35.559	0.000***	86968.469	0.382	1.000
		RE	191518.679	24.921	0.000***	106744.842	0.382	

Note: R^2 is the coefficient of measurement; F is the F statistic; P is the probability of significance; FE is the fixed-effect model; RE is the stochastic model; TFE is the time-fixed effect model.
***, **, and * represent p value 1%, 5% and 10%, respectively.

Table 7. Regression analysis of the proportion of career revenue and financial performance

Dependent variable		Model	Coefficient	F	P	Constant	R^2	P of Hausman test
Talent	Y11	TFE	4.812	59.371	0.000***	15.913	0.201	0.002
		RE	-0.011	0.000	0.988	17.522	0.201	
Cultivation	Y12	TFE	-233.082	31.925	0.000***	370.722	0.425	0.000
		RE	-831.301	173.213	0.000***	570.240	0.425	
	Y13	FE	-0.204	43.932	0.000***	0.731	0.124	0.000
		RE	-0.174	34.501	0.000***	0.721	0.124	
	Y14	TFE	-81.941	87.817	0.000***	46.411	0.684	0.000
		RE	-44.539	17.295	0.000***	33.936	0.684	
Scientific research	Y21	TFE	-4.926	5.939	0.015**	5.082	0.064	0.792
		RE	-5.294	3.807	0.052*	5.205	0.064	
	Y22	FE	0.001	0.010	0.921	0.007	0.027	0.434
		RE	-0.002	0.211	0.646	0.008	0.027	
Social service	Y3	FE	-280676.006	40.069	0.000***	318104.984	0.445	1.000
		RE	-228804.166	25.123	0.000***	300804.724	0.445	

Note: ***, **, and * represent significance levels of 1%, 5% and 10%, respectively.

3.4.3. The impact of the proportion of other revenue on financial performance

Table 8 indicates that the proportion of other revenue has a significant negative impact on student-to-staff ratio. The proportion of other revenue has a significant negative impact on funds per staff and proportion of full-time teachers to staff and has no significant impact on input of funds per student. The proportion of other revenue has a significant negative impact on scientific research revenue per full-time teacher and proportion of scientific research revenue to total revenue. The proportion of other revenue has a negative effect on number of graduates. Overall, the proportion of other revenue negatively impacts financial performance to a certain extent. Therefore, H3 is mostly accepted.

3.5. Discussion

The proportion of financial subsidy revenue has a positive impact on financial performance and increasing it can improve the financial performance of local general colleges and universities. This could be related to the fact that the average student allocation standard is multiplied by the student population to determine the financial subsidy revenue of local general colleges and universities. This indicates that the number of students has an impact on financial subsidy revenue. This finding is consistent with earlier research showing that financial subsidy revenue positively impacts financial performance of colleges and universities. Studies have shown that the higher the proportion of financial subsidy revenue is, the better education offered by colleges and universities [16], [21], [25], [37].

The proportion of career revenue has a significant negative impact on financial performance. This is perhaps because the regular tuition charges and number of students are used to determine career revenue. Most previous studies indicate that the proportion of career income is too large, which inevitably affects the financial performance of colleges and universities [16], [21], [38].

The proportion of other revenue significantly impacts some financial performance aspects. This could be due to the notion that other revenue is not related to students. This finding is in disagreement with previous studies. Previous studies have indicated that the higher the proportion of other income is, the better the teaching quality and research level of colleges and universities [16], [21], [39], [40].

This paper achieves the third research objective of analyzing the impact of revenue structure on financial performance by employing the three roles of scientific research, talent cultivation, and social service to measure financial performance of general colleges and universities. This approach differs from previous studies, which mostly focused on exploring various aspects of university funding, and the relationship between revenue and a certain aspect of teaching and research output in colleges and universities. The study finds that financial subsidy revenue positively impacts financial performance, whereas career revenue has a negative impact on financial performance. Additionally, contrary to some expectations, other revenue also negatively impacts financial performance.

This study provides practical recommendations for decision-makers to improve the financial performance in Chinese general colleges and universities. The findings show that the proportion of financial subsidy revenue positively impacts financial performance. Thus, decision-makers at general colleges and universities in China should prioritize increasing financial subsidy revenue while carefully managing career and other revenue to improve the financial performance of these institutions so that they can improve talent cultivation and scientific research output, raise the bar of financial management and operational quality, strengthen their comprehensive competitive advantages and core competitiveness, and better serve society in the long term.

Table 8. Regression analysis of the proportion of other revenue and financial performance

Dependent variable		Model	Coefficient	F	P	Constant	R^2	P of Hausman test
Talent	Y11	FE	-0.279	0.027	0.870	17.532	0.000	0.986
		RE	-0.272	0.870	0.027*	17.531	0.000	
Cultivation	Y12	FE	-343.258	3.114	0.079*	309.881	0.106	0.012
		RE	-158.854	0.779	0.378	300.804	0.106	
	Y13	FE	-0.255	13.632	0.000***	0.676	0.042	0.073
		RE	-0.233	11.746	0.001***	0.675	0.042	
	Y14	FE	49.051	1.693	0.194	16.667	0.023	0.192
		RE	28.542	0.694	0.406	17.677	0.023	
Scientific research	Y21	TFE	-21.757	8.576	0.004***	4.510	0.033	0.025
		RE	-17.582	6.808	0.009***	4.305	0.033	
	Y22	FE	-0.029	4.480	0.035**	0.009	0.014	0.254
		RE	-0.023	3.315	0.070*	0.009	0.014	
Social service	Y3	FE	-187159.160	3.465	0.064*	233706.753	0.011	0.965
		RE	-186698.535	3.485	0.063*	233684.079	0.011	

Note: ***, **, and * represent significance levels of 1%, 5% and 10%, respectively.

4. CONCLUSION

The results of this study indicate a significant impact of revenue structure on financial performance of general colleges and universities in China. This helps these institutions understand how to allocate limited resources to optimize fund utilization and financial performance. Additionally, the findings broaden the field of financial performance research by establishing methods to measure and optimize financial performance in higher education. First, financial performance is assessed through three aspects: talent cultivation, scientific research, and social services. Indicators for measuring talent cultivation include student to staff ratio, funds per staff, proportion of full-time teachers to staff, and input of funds per student. Indicators for scientific research consist of scientific research revenue per full-time teacher and proportion of scientific research revenue to total revenue. Indicators for social services include number of graduates. Second, the findings is revealed that the revenue primarily relies on financial appropriations, with the proportion of financial subsidy revenue increasing annually and eventually stabilizing at general colleges and universities in China. The overall financial performance of these institutions has shown a consistent upward trend. Finally, the study results indicate that the proportion of financial subsidy revenue has a positive impact on financial performance, while the proportion of career revenue has a negative impact on financial performance. Additionally, the proportion of other revenue also negatively impacts financial performance. Since revenue structure has an impact on financial performance at general colleges and universities in China, it is important for these institutions to strive for more financial subsidy revenue to enhance their fund utilization efficiency

and financial performance. In addition, there is potential for future research to further refine financial performance indicators. Moreover, not all factors that influence financial performance are considered in this study. Future research may examine mediating factors such as expenditures, as well as other influencing factors such as institutional mechanisms and the quality of management personnel.

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