Education Reform and Development, 2025, Volume 7, Issue 11
https://ojs.bbwpublisher.com/index.php/ERD
Online ISSN: 2652-5372
Print ISSN: 2652-5364

Analysis of Factors Affecting the Academic Performance of College Students from Economically Disadvantaged Families and Pathways for Improvement: A Case Study of a Higher Vocational College in Sichuan

Diyi Chen*

Urban Vocational College of Sichuan, Chengdu 610100, Sichuan, China

**Author to whom correspondence should be addressed.*

Abstract: Assisting financially disadvantaged college students in successfully completing their studies and achieving personal growth constitutes the primary objective of educational support policies. To gain deeper insights into this cohort's academic circumstances and formulate appropriate support measures, this study employs questionnaire surveys and SPSS data processing. Using 61 financially disadvantaged students from the Automotive Inspection and Maintenance Technology programme at a higher vocational college in Sichuan as a case study, it analyses the impact of four factors on their academic performance: learning investment, psychological capital, financial pressure, and institutional support. Finally, based on these influencing factors, corresponding improvement pathways are proposed in three aspects: financial aid policies, academic support, and psychological assistance, thereby better helping financially disadvantaged students enhance their academic performance.

Keywords: Financially disadvantaged students; Academic influencing factors; Improvement pathways

Online publication: December 12, 2025

1. Research background

Economically disadvantaged college students constitute a distinct and substantial cohort within China's higher education system. Their ability to complete studies successfully, contribute to families and society post-graduation, and achieve high-quality development represents a critical national priority in social welfare. This is also pivotal to realizing educational equity and human resource development. With college expansion and the widespread implementation of financial aid policies, an increasing number of economically disadvantaged students are entering higher education. However, their academic performance remains constrained by multiple factors. Therefore, investigating these factors is crucial for enhancing educational outcomes.

2. Research questions

This study aims to examine the following questions:

(1) Do the four factors of learning engagement, psychological capital, financial pressure, and institutional support influence college students' academic performance?

(2) Do these factors exhibit any mediating or moderating effects?

3. Research method

This study employs a quantitative cross-sectional questionnaire survey methodology.

3.1. Research participants

The subjects comprised 61 second-year students specializing in Automotive Inspection and Maintenance Technology at Urban Vocational College of Sichuan, all officially recognized by the institution as facing financial hardship. Most hailed from rural or low-income backgrounds with relatively weak economic foundations. Consequently, all 61 eligible students were included to ensure the sample authentically reflected this specific demographic.

3.2. Research tools

The study employed a self-designed questionnaire comprising four sections: student demographics, household economic hardship and perceived stress, academic performance, and open-ended questions. The third section was further divided into four subsections: objective academic performance, learning engagement, psychological capital and social adaptation, and perceived institutional support systems. The learning engagement subsection utilized the Utrecht Work Engagement Scale-Student (UWE-S), which employs a five-point Likert scale to measure students' learning motivation and psychological investment. Following questionnaire collection, data processing and analysis were conducted using SPSS 27.0, encompassing descriptive statistics, reliability and validity testing, correlation analysis, and regression analysis.

3.3. Data collection

Questionnaires were distributed and collected via Wenjuanxing, yielding 61 valid responses. Prior consent was obtained from all participants, and questionnaire data underwent anonymisation to safeguard privacy. All data were exclusively utilized for this academic research.

4. Data analysis

4.1. Analysis of sample characteristics

Descriptive statistical analysis of the sample's basic information was conducted using SPSS. The sample characteristics are presented in Figure 1: males constituted 90.2%, aligning closely with the traditional gender selection bias in automotive inspection and maintenance technology programmes; over eighty percent of students originated from rural areas (83.6%); non-only children accounted for 80.3%; 100% of the sample had been officially recognised as "students from economically disadvantaged families," ensuring the accuracy of the sample; Household income was heavily reliant on unstable migrant labour (52.5%) and farming (29.5%), which together constituted over 80% of sources. This fragile economic model directly impacted the level of family

support available to students. Finally, students' personal financial circumstances were equally strained, with 68.9% having less than ¥1,000 per month for total living expenses.

In summary, the research sample reflects the most prevalent category of economically disadvantaged students within China's higher vocational institutions: male students from rural, multi-child households, for whom vocational education represents the primary pathway to higher education. They typically pursue engineering disciplines, possess weak family economic foundations, and face severe constraints on personal living expenses. This establishes a robust foundation for subsequent research into the academic influencing factors affecting this cohort.

Table 1. Analysis of sample characteristics (n = 61)

Variable	Option	Frequency	Percentage
Gender	Male	55	90.2
	Female	6	9.8
Year	Second Year	61	100
Place of Origin	Urban	10	16.4
	Rural	51	83.6
Whether an only child	Yes	12	19.7
	No	49	80.3
Have you been recognised by your school as a student from a financially disadvantaged background?	Yes	61	100
Your family's primary source of income	Agriculture	18	29.5
	Parents working away from home	32	52.5
	Parents have stable local employment	2	3.3
	Parents without stable employment/ unemployed	5	8.2
	Government subsistence allowance or social welfare	1	1.6
	Other	3	4.9
Your average monthly disposable income for living expenses (including food, transport, daily necessities, etc.) is approximately	£100 or less	42	68.9
	1,001–1,500 yuan	19	31.1

4.2. Analysis of key factors influencing the academic performance of students from economically disadvantaged families

The third section of the questionnaire examined four dimensions: financial pressure, academic engagement, psychological capital, and satisfaction with school support [1], thoroughly considering both internal factors and external environments influencing this student group's academic performance. Financial pressure primarily manifests as low household income and monthly living allowances, indirectly affecting academic engagement; academic engagement reflects students' vitality, effort, and focus on learning, resulting in different learning outcomes [2]; psychological capital indicates the mental state and social adaptation abilities of economically disadvantaged students; satisfaction with institutional support reveals this group's understanding of and contentment with the institution's financial aid policies, employment, and academic guidance. Specific analysis is

as follows.

4.2.1. Academic engagement

As shown in **Table 2**, a significant positive correlation exists between academic commitment and GPA (r = 0.321, $p < 0.05$). However, within the regression model (**Table 3**), academic commitment's independent predictive effect on GPA failed to reach statistical significance ($p = 0.074$). This outcome may stem from the small sample size, which may have prevented the capture of academic commitment's independent effect. Nevertheless, its standardised coefficient (Beta = 0.317) was the highest among all variables. This suggests that, for the specific cohort in this study, maintaining high levels of focus and effort in academic pursuits may represent a potential internal factor contributing to GPA variations, potentially outweighing the significance of external factors such as financial pressures.

Table 2. Correlation analysis results

	Financial Pressure	Study Commitment	Psychological Capital	Satisfaction with School Support	Last Semester GPA
Financial Pressure	1				
Academic Engagement	0.214	1			
Psychological Capital	0.106	0.643**	1		
Satisfaction with School Support	0.110	0.607**	0.677**	1	
Previous Semester GPA	-0.037	0.321*	0.259*	0.176	1

Table 3. Regression coefficient table

Model	Unstandardised Coefficient		Standardised Coefficient	t	Significance	Collinearity Statistics	
	B	Standard Error	Beta			Tolerance	VIF
(Constant)	2.015	0.566		3.564	0.001		
Economic pressure	-0.017	0.019	-0.109	-0.850	0.399	0.952	1.050
Learning Investment	0.020	0.011	0.317	1.818	0.074	0.514	1.947
Psychological Capital	0.018	0.025	0.128	0.692	0.492	0.456	2.195
Satisfaction with School Support	-0.009	0.019	-0.091	-0.512	0.610	0.491	2.036

a. Dependent variable: Previous semester GPA

4.2.2. Psychological capital

This study found that students' possession of positive psychological capital, such as self-efficacy beliefs, optimism, and confidence, may be crucial factors in helping them withstand economic pressures and maintain good academic performance. As shown in **Table 2**, psychological capital exhibits not only a significant positive correlation with academic performance (r = 0.259, $p < 0.05$) but also a highly positive correlation with learning commitment (r = 0.643, $p < 0.01$). This indicates that a positive mindset is likely to guide students towards actively engaging with their studies and investing greater energy in their learning. Consequently, these findings

suggest that the challenges posed by financial hardship extend beyond material constraints to encompass psychological dimensions. Robust psychological capital may assist students in effectively adjusting their mindset, adopting an optimistic approach to academic pursuits, and transforming external pressures into intrinsic motivation for learning.

4.2.3. Financial pressure

It is often assumed that greater financial pressure leads to poorer academic performance. However, this study found no data supporting a simple linear relationship between financial pressure and GPA. Analyses in **Table 2** and **Table 3** revealed that the correlation between financial pressure and GPA ($r = -0.037$, $p > 0.05$) and regression analysis ($p = 0.339$) both failed to demonstrate a significant direct impact of financial pressure on GPA. Nevertheless, this does not imply that financial pressure is inconsequential for GPA. Qualitative research from Part IV of the questionnaire indicates its impact is indirect and subtle. Students commonly reported needing to "devote substantial time to part-time work" and "frequently feeling anxious about living expenses," suggesting financial pressure primarily disrupts studies by "consuming study time" and "draining energy." This indirect mechanism finds support in the data. As shown in **Table 2**, financial pressure exhibits a positive correlation with academic engagement ($r = 0.214$). Though not statistically significant, this suggests that students under greater financial strain may devote more time to part-time work and related matters, thereby reducing their academic commitment. More significantly, financial pressure may exert an indirect effect through its potential depletion of psychological capital ($r = 0.106$). Thus, financial pressure does influence academic performance, but its impact is obscured by mediating variables such as "academic engagement" and "psychological capital." This explains why it does not demonstrate an independent direct effect on GPA within the regression model.

4.2.4. Institutional support

This study also examined the factor of school support. According to **Table 2**, a direct association between students' satisfaction with the support system (including financial aid, academic assistance, and career guidance) and their academic performance has not been fully established ($r = 0.176$, $p > 0.05$). Given the excellent reliability and validity of the measurement scale for this variable (Alpha = 0.953, KMO = 0.904), as demonstrated by the reliability and validity tests in **Table 4** and **Table 5**, the possibility of non-significant results due to measurement inaccuracy is excluded. This finding suggests that the existing school support system has room for improvement in precisely meeting students' actual needs and translating these into interventions that enhance academic performance.

Table 4. Reliability analysis

Variable	Cronbach's Alpha	Number of Items
Financial Pressure	0.791	5
Learning Investment	0.943	15
Psychological Capital	0.871	6
Satisfaction with School Support	0.953	7

Table 5. Validity analysis

Variable	KMO	Approximate chi-squared	Significance
Economic pressure	0.800	88.888	0.000
Academic Engagement	0.896	645.548	0.000
Psychological Capital	0.825	178.910	0.000
Satisfaction with School Support	0.904	463.904	0.000

5. Discussion

Based on the aforementioned data analysis and research, the author proposes several recommendations for academic support for college students from economically disadvantaged backgrounds.

Firstly, fully implement higher education funding policies to ensure comprehensive coverage for financially disadvantaged students. Currently, this higher vocational institution strictly adheres to the National Student Aid Centre's requirements, advancing financial assistance policies for all economically disadvantaged students across the institution to achieve all-encompassing educational support. Concurrently, by integrating national, institutional, and corporate scholarship and grant schemes, the college provides economic security for disadvantaged students [3]. However, addressing the frequent weekend part-time work undertaken by students to cover living expenses, the institution could offer diverse on-campus work-study positions, such as office assistants, library assistants, and canteen staff, enabling students to work conveniently alongside their studies.

Secondly, the level of effort and commitment to studies directly impacts academic performance. Educators should focus on students' future development by actively implementing targeted academic and career support measures. With the expansion of higher education and the universalisation of national financial aid policies, an increasing number of children from disadvantaged families are accessing tertiary education. Acquiring solid, practical professional skills and knowledge, and securing a satisfactory and respectable job, represent the primary educational objectives for many students from impoverished backgrounds. Firstly, academic and career guidance should commence from enrolment. Through class meetings and career planning sessions, students should be guided on structuring their college studies and professional development. This helps alleviate confusion and anxiety, fostering clear aspirations for both academic and career pursuits while revealing multiple pathways to achievement. For students with strong aspirations for further study, actively explain policies regarding undergraduate-to-postgraduate progression and postgraduate entrance examinations, alongside requirements and application pathways for state-sponsored overseas study programmes, thereby bolstering their resolve to pursue advanced qualifications. Regarding academic engagement, educators should enhance students' performance by assisting those facing financial hardship to refine study methods, improve learning efficiency, and increase their sense of academic achievement. This may include organizing study sharing sessions and academic exchange meetings featuring high-achieving peers. For students from disadvantaged backgrounds with strong post-graduation employment aspirations, guidance should be tailored to their professional development and future career goals. This includes advising on vocational certification requirements, recommending relevant internships, providing support for career planning competitions, and facilitating participation in job fairs. Such measures cultivate career planning awareness and a proactive approach to employment, thereby enhancing their competitiveness in the job market.

Finally, dual-track support through psychological assistance and life-view education should propel

the academic growth of economically disadvantaged students, fostering their holistic development through humanistic care. This study reveals that positive psychological capital enables students to approach their studies with optimism, thereby achieving academic progress. However, the open-ended responses in the questionnaire indicate that many students from economically disadvantaged backgrounds face significant psychological challenges. These include feelings of inferiority and anxiety stemming from financial hardship, guilt over prioritizing part-time work over studies, a sense of financial strain, and resignation towards their circumstances [4].

Educators should tailor interventions to the psychological characteristics of this group, offering targeted support to cultivate optimistic and proactive mindsets. This involves helping them adopt noble worldviews, outlooks on life, and values in their interactions with others, thereby strengthening their ideals and convictions to serve society. Organizing diverse practical activities for economically disadvantaged students, such as charitable initiatives in impoverished mountainous regions, community eldercare, or environmental conservation projects, can stimulate their social service awareness and nurture a commitment to giving back to society. Concurrently, implement one-to-one counselling, group psychological support sessions, or leverage peer-to-peer psychological guidance to alleviate negative emotions, bolster self-confidence, and promote mental wellbeing.

Disclosure statement

The author declares no conflict of interest.

References

[1] Hua Y, 2022, Research on Developmental Characteristics and Influencing Factors of Economically Disadvantaged Students in High-Level Universities. Chinese Higher Education Research, 2022(05): 68–69.

[2] Chang X, 2024, Factors Influencing Academic Engagement Among Economically Disadvantaged College Students. Hebei College, 2024: 40–43.

[3] Niu W, 2025, Research on the Impact of Diversified Financial Aid Policies in Higher Education Institutions on the Academic Development of Economically Disadvantaged Students. College of Electronic Science and Technology of China, 2025: 30.

[4] Yin S, Zhou J, Xian C, 2023, Have Economically Disadvantaged College Students Achieved "Overcoming Disadvantage" Through Higher Education? — A Dual Examination of Academic Performance and Physical Health. Exploration in Higher Education, 2023(6): 123–128.