

# How Financial Management and Accounting Education Affect College Students' Consumption

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**Abstract:** In order to deeply understand that how financial management and accounting education affect college students' consumption decision-making behavior, this paper studies the influence of college students' majors, academic performance and grades on their enjoyment-oriented consumption and investment-oriented consumption through questionnaire survey and empirical analysis. Through empirical analysis it is concluded that students majoring in financial management or accounting, as well as those receiving financial professional knowledge are more inclined to give up consumption that lacks long-term beneficial effects on future development. Based on the conclusions, we suggest students consuming reasonably from the perspectives of both schools and individuals.

## 1. Introduction

In the education of applied undergraduate colleges, financial management and accounting education usually aim at cultivating financial and accountancy personnel needed by enterprises. But students majoring in business education always regard professional theories of financial management and accounting as something abstract. Definitely, college students are a special consumer group without a stable source of labor income but with a degree of financial freedom. They are easy to fall into the habit of blind consumption and excessive consumption without being properly educated and guided (Gu & Yu, 2017)[1]. Therefore, application-oriented undergraduate universities strive to promote the integration of production and education in order to create a simulated corporate financial practice environment for students. Teachers had better encourage students to consume scientifically in daily life to maximize their limited funds.

At present, most of existing researches are based on the theoretical analysis of the financial management curriculum from the perspective of higher education or economic environment. Few empirical researches focus on the daily consumption of college students' majoring in financial management or accounting. Whether students majoring in financial management or accounting can make better use of funds than students in other majors? This paper uses questionnaire survey data from an application-oriented undergraduate university to explore the influence mechanism of business education on college students' consumption.

In order to understand the relationship of major-consumption among college students, this paper divides students' consumption into two categories from the perspective of investment: enjoyment-oriented consumption and investment-oriented consumption (Yang & Yu, 2009)[2]. Enjoyment-oriented consumption is defined as daily necessary consumption (Zheng et al., 2017)[3] including daily meals, clothing expenditures and entertainment consumption. Investment-oriented consumption is defined as money devoted to improving themselves in essence, including spending on education and learning, or spending on beauty and fitness.

## 2. Questionnaire Design and Survey

### 2.1 Questionnaire Design

Based on the principles of objectivity, standardization and optionality, the questionnaire is designed as follows:

- (1) Basic information: gender, birthday, place of origin, household registration, height and weight, etc.
- (2) Education information: majors, grades, academic performance, etc.
- (3) Personal status: consumption habits, health status, confidence level, bookkeeping habits, appearance score, number of love affairs, reading habits, academic concepts, etc.
- (4) Family information: family income, parents' education level, number of siblings, etc.

### 2.2 Questionnaire Distribution and Recovery

This research uses the Internet professional questionnaire platform “Questionnaire Star” to publish questionnaires and collect data. In order to ensure scientific and reasonable data, samples with missing data and outliers of main variables were excluded, and the remaining 2,444 valid questionnaires were available for empirical analysis in this study. Among them, 510 questionnaires for boys and 1,934 questionnaires for girls were recovered, which were in line with the male-female ratio of the university.

## 3. Variable and Model

### 3.1 Variable Setting

In this study, the sample college students' clothing consumption, entertainment consumption, education consumption, as well as beauty and fitness consumption are selected as explained variables. The core explanatory variables are students' majors, academic performance and grades. Among them, financial management or accounting majors is an indicator that reflects whether students receive financial management or accounting curriculum. The score is an indicator of academic performance that reflects the effect of students' knowledge mastery after receiving business education. The grade is an indicator that reflects the scope of students' professional knowledge. In addition, other control variables about individual and family characteristics are added to the model. The relevant variable settings are shown in Table 1.

Table 1 Variable Definitions

Explained variables	Variable interpretation
lnClothes_c	Clothing consumption: rmb yuan/month
lnGame_c	Entertainment consumption: rmb yuan/month
lnStudy_c	Education consumption: rmb yuan/month
lnBeauty_c	Beauty and fitness consumption: rmb yuan/month
Explanatory variables	Variable interpretation
Major	1=financial management or accounting, 0=non-financial management or accounting
Academic_r	1-10  poor performance-good performance
Grades	1=freshman, 2=sophomore, 3=junior, 4=senior
Gender	1=male, 0=female
Love_exp	Number of existing relationships of love (including ongoing)
Reading_hab	Average number of extracurricular books read during college
Academic_view	Views on the importance of reading carefully for the future: 1-5 unimportant-important
Tall	1=yes, 0=no
Short	1=yes, 0=no
Fat	1=yes, 0=no
Thin	1=yes, 0=no
Urban	1=urban, 0=rural
Stzone	Place of student source: 1=eastern, 2=central, 3=western
Bookkeeping_hab	Accounting habits: 1-5  never-always
Health	1-5  unhealthy-healthy
Family_eco	Household income: rmb yuan/year
Siblings_n	Number of siblings
Father_edu	Father's education level
Mother_edu	Mother's education level

### 3.2 Model Setting

We constructed a simultaneous equation model in order to solve the inevitable endogeneity problem between ordinary linear regression variables and to explore the internal logical influence mechanism of each explanatory variable on college students' consumption decision-making. The simultaneous equations are set as follows:

$$\begin{cases} C_J = \alpha_0 + \alpha_1 M + \alpha_2 E + \alpha_3 G + \alpha_4 X_J + \varepsilon_{C_J} & (1) \\ C_I = \beta_0 + \beta_1 M + \beta_2 E + \beta_3 G + \beta_4 X_I + \varepsilon_{C_I} & (2) \\ E = \gamma_0 + \gamma_1 C + \gamma_2 X_E + \varepsilon_E & (3) \end{cases}$$

Among them, equation (1) is the enjoyment-oriented consumption equation and  $C_J$  is the logarithm of students' monthly enjoyment-oriented consumption. Equation (2) is the investment-oriented consumption equation and  $C_I$  is the logarithm of students' monthly investment-oriented consumption. The major explanatory variables of the model are the type of student's majors  $M$ , academic performance  $S$ , and grades  $G$ .  $X_J$  and  $X_I$  are respectively other control variables corresponding to the characteristics in equation (1) and (2). Equation (3) is the education equation of college students.  $E$  represents the variable student's achievement, which is an index reflecting the effect of students' knowledge mastery.  $C$  represents the logarithm of the two major categories of monthly consumption, and  $X_E$  represents other control variables. The final complete simultaneous equation model looks like this:

$$\ln Clothes\_c = \alpha_0 + \alpha_1 Major\_F.A_i + \alpha_2 Academic\_r + \alpha_3 Grade_i + \alpha_4 Love\_exp_i + \alpha_5 Gender_i + \alpha_6 Urban_i + \alpha_7 Stzone_i + \alpha_8 Health_i + \alpha_9 Family\_eco_i + \varepsilon_i$$

$$\ln Game\_c = \beta_0 + \beta_1 Major\_F.A_i + \beta_2 Academic\_r_i + \beta_3 Grade_i + \beta_4 Reading\_hab_i + \beta_5 Gender_i + \beta_6 Urban_i + \beta_7 Stzone_i + \beta_8 Health_i + \beta_9 Family\_eco_i + \varepsilon_i$$

$$\ln Study\_c = \gamma_0 + \gamma_1 Major\_F.A_i + \gamma_2 Academic\_r_i + \gamma_3 Grade_i + \gamma_4 Academic\_view + \gamma_5 Gender_i + \gamma_6 Urban_i + \gamma_7 Stzone_i + \gamma_8 Bookkeeping\_hab_i + \gamma_9 Health_i + \gamma_{10} Family\_eco_i + \gamma_{11} Sibings\_n_i + \gamma_{12} Father\_edu_i + \gamma_{13} Mother\_edu_i + \varepsilon_i$$

$$\ln Cosmetic\_c = \delta_0 + \delta_1 Major\_F.A_i + \delta_2 Academic\_r_i + \delta_3 Grade_i + \delta_4 Figure_i + \delta_5 Gender_i + \delta_6 Urban_i + \delta_7 Stzone_i + \delta_8 Bookkeeping\_hab_i + \delta_9 Health_i + \delta_{10} Family\_eco_i + \delta_{11} Sibings\_n_i + \delta_{12} Father\_edu_i + \delta_{13} Mother\_edu_i + \varepsilon_i$$

$$Grade = \varphi_0 + \varphi_1 \ln Clothes\_c_i + \varphi_2 \ln Game\_c + \varphi_3 \ln Study\_c_i + \varphi_4 \ln Cosmetic\_c_i + \varphi_5 Major\_F.A_i + \varphi_6 Grade_i + \varphi_7 Gender_i + \varphi_8 Urban_i + \varphi_9 Stzone_i + \varphi_{10} Health_i + \varphi_{11} Family\_eco_i + \varphi_{12} Sibings\_n_i + \varphi_{13} Father\_edu_i + \varphi_{14} Mother\_edu_i + \varepsilon_i$$

In the above formula,  $\ln Clothes\_c$  and  $\ln Game\_c$  respectively represents the logarithmic expressions of monthly clothing consumption and entertainment consumption.  $\ln Study\_c$  and  $\ln Cosmetic\_c$  represents the logarithmic expressions of monthly education consumption and beauty consumption, respectively. Core explanatory variables include  $Major\_F.A$ ,  $Academic\_r$  and  $Grade$ . The rest are control variables. The variable “*Figure*” is the student's body characteristics, which are measured by the following rules. “*Fat*” and “*thin*” are measured by BMI (body mass index): BMI index = weight/height<sup>2</sup>. This paper defines sample students whose BMI value above 0.7 points as “*overweight*”, below the 0.3 points as “*thin*”, and the rest are of moderate stature (Gu & Ji, 2019)[4].  $\alpha, \beta, \gamma, \delta, \varphi$  are the variable coefficient, and  $\varepsilon_i$  is the random disturbance term common to the simultaneous equations.

### 4. Empirical Results and Analysis

#### 4.1 Estimated Results

In this paper, the Three-Stage Least Squares method (3SLS) is used to estimate the parameters of the model and Table 2 shows the estimation results.

In Model 1, the impact of student majors on students' monthly clothing consumption is significantly negative, indicating that students majoring in financial management or accounting spend less on clothing. The insignificant coefficient of students' academic performance means that there is no obviously difference in the clothing consumption. Compared with the freshmen, clothing consumption of juniors and seniors increased significantly by 21.1% and 24.8%, respectively, which indicates that with grades growth, college students increase their expenditure on external decorations such as clothing.

In Model 2, the significant negative coefficient of majors indicates that students majoring in financial management or accounting spend less on entertainment. The insignificant coefficient of students' academic performance means that there is no significant difference in entertainment consumption. The impact of the sophomore year on entertainment expenditure is significantly positive. Moreover, the expenditure on entertainment by sophomores is 41.8% higher than that of freshmen. It proves that the sophomore year is a period when college students are relatively less stressed in terms of their studies, life, and funds, so college students are more willing to spend money on entertainment.

In Model 3, the impact of student majors and grades on education consumption is not significant, but the grade coefficient is significantly positive. Sophomore, junior and senior students' expenditure on education is increased by 51.6%, 131.5%, and 167.5% compared with the freshmen, which further proves that with the grades growth, college students pay more attention to the investment in learning and the return on investment in education. The positive effect of accounting habits on education indicates that college students receiving more frequent accounting lessons have stronger financial awareness (Fu, Pe & Gu, 2019) and invest more in schoolwork[5].

In Model 4, the significant negative coefficient of majors indicates that the expenditure on beauty and fitness of students majoring in finance or accounting is less. It exists a significant negative effect for academic performance on this, indicating that high-achieving students tend to reduce spending on beauty and fitness. The coefficient of the grade is significantly positive. The consumption on beauty and fitness of the sophomore, junior and senior students is increased by 33.1%, 93%, and 94.2% respectively compared with the freshman. It shows that with the increase of grades, college students pay more and more attention to their appearance.

In Model 5, clothing expenditure and education expenditure are significantly positive for student performance, indicating that increased investment in clothing and increased self-investment in education can help college students to improve academic performance.

Table 2 The Regression Results of Monthly Consumption of the Sample Students(Full Sample)

Variables	Enjoyment-oriented Consumption		Investment-oriented Consumption		Academic Performance
	lnClothes_c	lnGame_c	lnStudy_c	lnCosmetic_c	Grade
	Model 1	Model 2	Model 3	Model 4	Model 5
Major_F.A	-0.225** (0.091)	-0.328** (0.134)	-0.001 (0.158)	-0.293** (0.138)	-0.389 (0.266)
Academic_r	-0.072 (0.088)	-0.480*** (0.110)	-0.239 (0.279)	-0.315** (0.146)	
Sophomore	0.172 (0.121)	0.418** (0.179)	0.516** (0.203)	0.331* (0.183)	0.013 (0.377)
Junior	0.211* (0.121)	0.216 (0.180)	1.315*** (0.210)	0.930*** (0.183)	0.020 (0.674)
Senior	0.248** (0.122)	0.117 (0.180)	1.675*** (0.228)	0.942*** (0.185)	-0.211 (0.785)
Male	-1.089*** (0.119)	-0.450*** (0.172)	-0.238 (0.222)	-2.115*** (0.183)	-1.849 (1.376)
Love_exp	0.054*** (0.020)				

Reading_hab		0.008* (0.023)			
Academic_view			0.435*** (0.164)		
Tall				0.064 (0.107)	
Short				-0.264** (0.117)	
Fat				-0.209* (0.123)	
Thin				-0.041 (0.101)	
lnClothes_c					1.091** (0.505)
lnGame_c					-0.203 (0.937)
lnStudy_c					0.919*** (0.244)
lnCosmetic_c					-1.317 (0.970)
Urban	0.027 (0.089)	0.709*** (0.131)	0.185 (0.166)	0.199 (0.148)	0.518 (0.459)
Central_area	-0.117 (0.142)	-0.103 (0.210)	-0.436* (0.231)	-0.019 (0.217)	0.517 (0.450)
Western_area	-0.007 (0.136)	-0.967*** (0.193)	-0.356 (0.319)	-0.375* (0.223)	-1.193** (0.486)
Bookkeeping_hab			0.135*** (0.051)	-0.020 (0.036)	
Health	0.176*** (0.068)	0.225** (0.097)	-0.045 (0.117)	0.202* (0.104)	0.343** (0.174)
Family_eco	0.266*** (0.019)	0.297*** (0.028)	0.180*** (0.036)	0.255*** (0.029)	0.014 (0.137)
Siblings_n			0.224** (0.088)	0.226*** (0.079)	0.140 (0.237)
Father_edu			0.006 (0.029)	0.057** (0.025)	0.047 (0.050)
Mother_edu			0.008 (0.026)	0.013 (0.023)	-0.005 (0.033)
N	2444	2444	2444	2444	2444

## 4.2 Sample Heterogeneity Analysis

Table 3 is the estimated result of the gender grouping of the students. In order to judge whether the educational characteristics of college students have the same influence on the consumption expenditure of different groups of college students, and considering the differences in the consumption mechanism of different groups of college students, this paper conducts regression on students by gender.

In models 1 to 4, it can be found that learning accounting expertise will limit expenditure on clothing, games and entertainment, and beauty and fitness for girls, but has little impact on boys. Boys with excellent grades will spend more on clothing and clothing, while girls will have the opposite effect, and the ability of students to invest in education and learning with improved grades is stronger for boys. In addition, girls with excellent grades will also limit spending on beauty and fitness. Not only do girls spend significantly more on clothing and apparel compared to their freshman year, but girls in their sophomore year will significantly increase their spending on games and entertainment. In view of investment-oriented consumption, with the increase of grades, girls not only increase their investment in education and learning more than boys, but also pay more attention to the maintenance and management of appearance and body shape than boys. In Model 5, clothing and apparel consumption only positively affects boys' grades. This may be due to the fact that clothing and apparel consumption is a rigid demand for boys, and clothing expenditure to meet

the needs of daily life is obviously a necessary condition for good results. The increase in game and entertainment consumption has a stronger restraining effect on girls' performance than boys, while the increase in education and learning investment has a better effect on boys than girls.

From the above analysis, it can be concluded that the heterogeneity of the two groups of male and female students based on the regression results of gender grouping has a more significant impact on the empirical results.

Table 3 The Regression Results of Monthly Consumption of the Sample Students(Gender Grouping)

Variables	SEM-3SLS:male				
	Enjoyment-oriented Consumption		Investment-oriented Consumption		Academic Performance
	lnClothes_c	lnGame_c	lnStudy_c	lnCosmetic_c	Grade
	Model 1	Model 2	Model 3	Model 4	Model 5
Major_F.A	-0.313 (0.280)	0.240 (0.304)	-0.099 (0.344)	-0.372 (0.333)	0.508 (0.457)
Academic_r	0.473*** (0.137)	-0.014 (0.165)	0.641*** (0.191)	0.321 (0.223)	
Sophomore	0.441 (0.369)	0.623 (0.404)	0.960** (0.450)	0.620 (0.455)	-0.685 (0.558)
Junior	0.492 (0.352)	0.372 (0.382)	0.582 (0.429)	0.783* (0.425)	-0.550 (0.552)
Senior	0.422 (0.365)	0.034 (0.395)	1.153*** (0.447)	0.546 (0.435)	-1.389** (0.590)
Love_exp	0.033 (0.044)				
Reading_hab		0.006 (0.035)			
Academic_view			0.045 (0.152)		
Tall				0.250 (0.272)	
Short				-0.114 (0.307)	
Fat				0.015 (0.330)	
Thin				-0.105 (0.287)	
lnClothes_c					0.655*** (0.156)
lnGame_c					-0.885*** (0.224)
lnStudy_c					0.993*** (0.239)
lnCosmetic_c					-0.064 (0.263)
N	510	510	510	510	510
Variables	SEM-3SLS:female				
	Enjoyment-oriented Consumption		Investment-oriented Consumption		Academic Performance
	lnClothes_c	lnGame_c	lnStudy_c	lnCosmetic_c	Grade
	Model 1	Model 2	Model 3	Model 4	Model 5
Major_F.A	-0.282*** (0.094)	-0.487*** (0.151)	-0.075 (0.205)	-0.292* (0.155)	-0.796*** (0.302)
Academic_r	-0.230** (0.104)	-0.502*** (0.136)	-0.400 (0.361)	-0.384** (0.180)	
Sophomore	0.338*** (0.130)	0.464** (0.209)	0.712** (0.289)	0.470** (0.213)	0.501 (0.382)
Junior	0.313**	0.257	1.715***	1.093***	-0.319

	(0.129)	(0.209)	(0.294)	(0.213)	(0.737)
Senior	0.373***	0.201	2.041***	1.171***	-0.475
	(0.133)	(0.210)	(0.327)	(0.219)	(0.845)
Love_exp	0.013				
	(0.022)				
Reading_hab		0.005			
		(0.024)			
Academic_view			0.520**		
			(0.205)		
Tall				0.028	
				(0.114)	
Short				-0.274*	
				(0.142)	
Fat				-0.164	
				(0.138)	
Thin				0.072	
				(0.116)	
lnClothes_c					-0.130
					(0.615)
lnGame_c					-1.298**
					(0.652)
lnStudy_c					0.523*
					(0.267)
lnCosmetic_c					0.055
					(0.674)
N	1934	1934	1934	1934	1934

## 5. Conclusions and Suggestions

College students have gradually become the main force of consumption. Among this group, there are many students who are extravagant and squander their money on “beer and skittles”. Correctly and rationally use of funds is the ability that contemporary college students should have. Through empirical analysis of the survey data, it can be found that students majoring in financial management or accounting spend less on enjoyment-oriented consumption as well as investment-oriented consumption on beauty and fitness. The same goes for students with better academic performance. Additionally, with the increase of grades, all kinds of consumption expenditures also increase, especially investment-oriented consumption. The students having good bookkeeping habits are more willing to increase their investment in education, and the positive effect on academic achievement is significantly better than other consumption.

Based on this, this paper draws the following conclusions: (1) students majoring in financial management or accounting and those who have a good grasp of business knowledge are more inclined to give up consumption that lacks long-term beneficial effects on future development. Meanwhile, college students do not mind externally careful decoration, believing that “Beauty is only skin deep.” (2) Higher grades favor consumption with long-term beneficial effects. (3) College students having financial thinking prefer investment in education, and the output of education investment is proportional to money.

According to the above conclusions, this study puts forward the following suggestions for schools and college students. In terms of schools, applied undergraduate universities can take financial management and basic accounting courses as general courses. For the purpose of cultivate students' financial thinking, colleges can add knowledge of personal financial management to public education. Accordingly, college students can fully understand their own financial situation and guide them to consume scientifically. From the perspective of individuals, college students should apply their financial management and accounting theories to practice. They are supposed to spend more money on investment-oriented consumption which is beneficial to themselves, especially in education. All in all, college students are ought to firmly grasp the golden period of college, refusing to splurge at will. Only through the cooperation between schools and students can college

students promote their ability to make rational decisions on consumption, spending money where it makes sense.

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