

Family Socioeconomic Status and Profit-seeking Fraud: The Intermediary Role of Materialistic Values

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Abstract

To study the relationship between family socioeconomic status, materialistic values and college students being cheated. A large-scale fishing experiment in a university in southern Jiangsu to simulate the fraud situation, screening the cheated group (92) and the undeceived group (800). The Family socioeconomic Status Scale (SES) and materialistic Values Scale (MVS) were used. Results: Significant differences in the family SES and materialistic values between the cheated and undeceived groups, There was a significant positive correlation between family socioeconomic status and materialistic values ($P=0.04 < 0.05$); There was a significant positive correlation between family SES and acquisition of property centered ($P=0.001 < 0.05$); Materialistic values were significantly and positively associated with parents' educational background and parents' occupation ($P=0.023 < 0.05$, $P=0.027 < 0.05$); There was a significant positive relationship between parental occupation and property acquisition ($P=0.011 < 0.05$, $P=0.000 < 0.05$); In the influence of family socioeconomic status on college students, Materialist values play an intermediary role. Conclusion: College students who pursue money and wealth and low family socioeconomic status are more likely to be cheated, and materialistic values play a bridge role between family socioeconomic status and whether they are cheated.

Keywords

Materialistic Values; Family Socioeconomic Status; Profit-seeking Fraud.

1. Foreword

Fraud is a kind of illegal behavior, its essence is for the purpose of illegal possession, by fabricating lies or concealing the truth means, defraud others a large amount of property. Nowadays, with the development of Internet technology, fraudsters constantly update technology, means, and fabricate new scams with telecommunication network as the main channel. At present, the techniques of telecommunication fraud can be divided into three categories: profit-seeking, damage avoidance, social [1]. This study focuses on profit-seeking fraud.

Profit-seeking fraud, also known as interest-driven fraud, refers to the use of people's greed and the pursuit of interests, through false commitment, bait or deception means, so that the victim has a wrong understanding, so as to defraud the victim's property or information [2]. The researchers divided profit-seeking scams into five categories: winning, discount, points exchange, low-interest loan, and special needs fraud. This fraud occurs around the world, and its means and forms are constantly changing with the development of technology.

As an important network user subject, college students are cheated very seriously. Fraud not only damages the economic interests of college students, but also has a negative impact on their mental health and social trust. College students have the characteristics of pursuing personality and being full of vigor, and they have become mature in physical development, but they relatively lag behind in psychological development [3]. They lack the necessary social experience

and identification ability, and their self-prevention awareness is relatively weak. In the face of profit-oriented fraud is easy to produce "lucky", "greedy" and other mentality, leading to college students become an important target of fraudsters.

Compared with the traditional fraud, the characteristic of the new network fraud is that the fraudsters will design personalized fraud according to the characteristics of different groups of people in the society, and its accuracy and customized fraud means lead to the victims to eventually fall into the scam [4]. Therefore, the study of the characteristics and influencing factors of college students cheated group can provide support for the design of anti-fraud prevention interventions and school public safety management.

Through literature combing, it is found that values are likely to be an important factor affecting the fraud of college students. Driven by college students' own values, utilitarianism and enjoyment doctrine, they may take the initiative to contact various websites and platforms containing fraud information, so as to be cheated in the case of seeking cheap and occupying small profits. In the study of the process of fraud victims, researchers often take materialistic values as an important variable to understand the psychological characteristics and behavior patterns of victims.

In addition, when visiting several relevant departments of the security department of colleges and universities, the researchers noticed that among the fraud cases filed by the school, many students' families had low economic level. socioeconomic Status, SES, is a multi-dimensional concept, it is mainly based on the family's economic status of the family, parents' education level and parents' occupational status and other factors, these factors together constitute the core of the individual growth environment, representing the comprehensive evaluation of the family members in the social field and economic status [5]. A large number of studies have shown that family socioeconomic status is significantly associated with individual cognitive behavior, career planning, choice judgment, and social behaviors [6-7]. Therefore, it is necessary to explore the relationship between family socioeconomic status and cheating and profit-seeking behaviors.

In conclusion, this study intends to explore the influence of family socioeconomic status and materialistic values on college students' fraud behavior. By simulating the fraud situation, the reaction of college students' behavior of fraud is observed, and combined with the questionnaire, the influence of family socioeconomic status and materialistic values on the fraud is discussed through data analysis, and the mediation model is summarized. The results will provide ideas for the research on campus anti-fraud policy, help enhance college students' awareness of fraud, reduce fraud incidents and maintain social stability.

2. Research Methods

2.1. Screening of Cheated College Students

The first step is to determine A general undergraduate university in southern Jiangsu province as the target university. According to the official data, School A belongs to A public institution of higher learning at the undergraduate level, covering seven disciplines, including literature, science, engineering, economics, management, law and art. The number of students in the university is about 12,000, and no graduate students have been enrolled for the time being. To sum up, school A meets the basic requirements of this experiment.

The second step is to choose the appropriate path of the simulation experiment. The experiment needs to choose the appropriate path to screen out the deceived group as accurately as possible. This path needs to meet the following requirements: to be close to the real fraud situation to accurately identify; to be able to be completed in a short time to control the timeliness of the experiment; to ensure that a large number of students can receive the relevant situation information in a limited time; to meet the ethical requirements to can not

expose the privacy and harm the physical and mental health of students. After consultation with the anti-fraud department of the public security and the school security management department, the path of publishing false links in the "dormitory QQ group" of students in school A was finally proposed for the experiment. The group is founded and managed by the campus dormitory administrator. The group function is to issue notices and affairs related to dormitory management. The number of students in the group reaches more than 4,000, and the major basically covers all majors in the university. QQ group chat is a common scene of college students' fraud. In addition, this group has complex messages and fast update speed, so students do not have their real names, which is an ideal situation for simulated fraud experiments.

The third step is to screen the gullible college students. The researchers conducted a simulated fraud situation experiment in the "dormitory QQ group". During the experiment, a total of about 2,000 students were online, which entered the experimental situation. Among them, 166 people filled in their personal information in the phishing links, regarded as cheated group, accounting for 8.3% of the total number. The 1,834 people who did not fill in their personal information were initially regarded as not cheated, accounting for 91.7% of the total number.

2.2. Simulated Fraud Experiment Design

The experimental procedure is performed as follows:

(1) According to the domain name of the official website, build A website similar to the official website. The title of the website link is "Application for A College accommodation fee refund". In the link, students need to fill in the student number and name independently, and the student number cannot be deleted or modified.

(2) After being filed by the security management department of the A school, the researcher joins the "dormitory QQ group" as an ordinary student, and inform the safety committee and the apartment management personnel of the process, significance and confidentiality of this experiment in advance.

(3) One week after entering the QQ group, the researcher chooses the non-class time to post the prepared simulated dialogue in the group, and publish the phishing link. Simulation dialogue is a common auxiliary means of fraud, which can enhance the "persuasion" of fraud.

(4) When the experiment lasts 30 minutes or most of the students in the group detect the fraud, it will be regarded as the end of the experiment. The security department and the apartment administrator will clarify the above information in the group and publicize the anti-fraud knowledge.

2.3. Survey Questionnaire

After the experiment, all the participants involved in this experiment were surveyed. The fraud group will be organized by the security department of School A, and fill in the online questionnaire. A total of 94 questionnaires were collected, including 92 valid questionnaires with a response rate of 97.8%. In the undeceived group, the class counselor of each class will issue the questionnaire QR code to the class group, and inform the students who participated in the experiment but were not cheated to fill it out voluntarily. The participants completed the same questionnaires. A total of 1236 questionnaires were collected, including 870 valid questionnaires with an effective rate of 70.4%.

2.3.1. Family Socioeconomic Status Scale

The family socioeconomic status scale compiled by Bradley and Corwyn (2002) [8], which includes three measures of parental education level, parental occupation and annual family income. However, it is often recommended to cancel because of the difficulties in measuring annual household income, and the subjects of this study were college students and did not know the annual family income, so the two dimensions of parental education level and parents'

occupation were adopted in this study. The questionnaire divided the parents' occupation into five grades, and assigned a value of 1 to 5 points in order from low to high. Parents' education level was divided into six grades, with points of 1 to 6 from low to high. Family socioeconomic status was measured by summing the scores of students' parental education scores and parental occupation, and the Cronbach's α coefficient of this study was 0.86.

2.3.2. Materialistic Values Scale

The revised of materialistic values Scale of Richins and Dawson by Li Jing and Guo Yongyu is adopted [9]. There are 13 items, with five points for scoring (1= very disagree, 5= very agree), of which 2,4,5,6,10 are reverse scoring questions. According to the content of materialistic values, the scale can be divided into three dimensions: 1,4,7,10,12 the success (success); 2,5,8,11,13 the acquisition of property (center); 3,6,9 the pursuit of happiness (happiness), the higher the score, the higher the tendency of materialistic values. In this study, the α coefficient of success in the materialistic values variables was 0.834, the central α coefficient was 0.863, the happiness α coefficient was 0.787, and the α coefficient of each variable was above 0.7, indicating the high reliability and validity of the scale.

3. Results

The data were analyzed accordingly using the SPSS 26.0 software, the R package, as follows

3.1. Description and Statistics of Family Socioeconomic Status, Materialistic Values and Their Various Dimensions of the Cheated and Undeceived Groups

Table 1. Description statistics of family socioeconomic status and materialistic values

group	variable	average value	standard deviations	least value	crest value
cheated group	Family socioeconomic status	11.93	3.21	4.00	22.00
	Materialistic values	40.90	6.10	26.00	64.00
undeceived group	Family socioeconomic status	12.70	3.95	4.00	22.00
	Materialistic values	39.77	4.06	19.00	51.00

Table 2. Description statistics of various dimensions of family socioeconomic status and materialistic values

group	variable	dimension	average value	standard deviations	least value	crest value
cheated group	Family socioeconomic status	Parents education	6.97	1.67	2	12
		Parents career	4.97	1.95	2	10
	Materialistic values	Property definition is successful	15.51	2.73	10	25
		Access to property as the center	14.86	2.78	9	25
		Financial pursuit of happiness	10.53	1.96	5	15
undeceived group	Family socioeconomic status	Parents education	7.31	2.02	2	12
		Parents career	5.39	2.3	2	10
	Materialistic values	Property definition is successful	15.14	1.89	9	21
		Access to property as the center	15.25	2.06	6	22
		Financial pursuit of happiness	9.38	1.6	3	15

It can be seen from Table 1 and 2 that the average level of the parents is the same as the occupation of the parents, with the average educational background is "junior high school" and the average occupation is "general management personnel or general technical personnel".

In terms of materialistic values, the score of the cheated group is higher than that of the undeceived group, and the materialism value of the cheated group is higher than that of the undeceived group, indicating that the materialistic values of the cheated group are higher.

3.2. Test of Differences between Family Socioeconomic Status and Materialistic Values between Cheated Group and Undeceived Group

Table 3. Test of differences between cheated and undeceived groups in family socioeconomic status, materialistic values and their dimensions

dimension	cheated group		undeceived group		t	p
	M	SD	M	SD		
Family socioeconomic status	11.93	3.21	12.70	3.95	-2.119	0.036**
Parents education	6.967	1.667	7.31	2.022	-1.823	0.071*
Parents career	4.967	1.947	5.393	2.297	-1.945	0.054*
Materialistic values	40.9	6.1	39.771	4.063	2.38	0.018**
Property definition is successful	15.511	2.728	15.138	1.889	1.703	0.089*
Access to property as the center	14.859	2.78	15.251	2.065	-1.659	0.097*
Property pursues happiness	10.533	1.958	9.383	1.601	6.367	0.000***

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

According to Table 3, there were significant differences between the cheated and undeceived groups in the total score of family socioeconomic status and all dimensions of materialistic values. Higher family economic status (M=12.70, SD=3.95) (p <0.05); lower parental education (M=6.967, SD=1.667) (p <0.01); lower level of materialistic values (M=39.77, SD=4.06) (p <0.01); lower financial pursuit of happiness (M=9.383, SD=1.601) (p <0.001).

3.3. The Correlation Test of College Students in Their Family Socioeconomic Status, Materialistic Values and Various Dimensions

Table 4. The correlation test of college students in their family socioeconomic status, materialistic values and various dimensions

dimension	Family socioeconomic status	Parents education	Parents career	Materialistic values	Property definition is successful	Access to property as the center	Financial pursuit of happiness
Family socioeconomic status	1						
Parents education	0.900**	1					
Parents career	0.924**	0.672**	1				
Materialistic values	.069*	0.081*	0.074*	1			
Property definition is successful	0.009	0.029	0.015	0.721**	1		
Access to property as the center	0.114**	0.100**	0.125**	0.802**	0.353**	1	
Financial pursuit of happiness	0.020	0.041	0.01	0.652**	0.195**	0.330**	1

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

According to Table 4, family socioeconomic status and materialistic values; materialistic values are positively correlated with family socioeconomic status, parents' education and occupation; acquisition of property status is positively correlated with parents' occupation and education.

3.4. The Intermediary Role of Materialistic Values

Since the independent variable in this study was dichotomous, we used two Logistics regression analysis in the calculation.

Table 5. Linear regression of family socioeconomic status and materialistic values

		B	standard error	Beta	t	conspicuousness	Z
Step 1a	(constant)	38.923	0.492		79.157	0	
	Family socioeconomic status	0.076	0.037	0.069	2.052	0.04	2.054

a. Dependent variable: materialistic values

Table 6. Linear regression of family socioeconomic status and materialistic values to whether being cheated

		B	standard error	Wald	free degree	conspicuousness	Exp(B)	Z
Step 1a	Family socioeconomic status	0.058	0.03	3.872	1	0.049	1.06	1.933
	Materialistic values	-0.065	0.026	6.329	1	0.012	0.937	2.5
	constant	4.068	1.09	13.919	1	0	58.434	

a. Variables entered in step 1: family economic status, materialistic values

According to Table 5 and Table 6, family socioeconomic status has a significant effect on materialistic values, $P=0.04 < 0.05$; family socioeconomic status and materialistic values both significantly influence the influence of fraud, $P=0.049 < 0.05$, $P=0.012 < 0.05$.

Among them, in the regression of the independent variable family economic <status and the dependent variable materialistic values, $P=0.040.05$, that is, whether the independent variable family economic status and the dependent variable were cheated passed the significance level test. It can be concluded that $A=0.076$, $SE=0.037$, and $Z_a = 2.054$.

In Table 6, $P=0.0060.05$ corresponds to the path coefficient of the dependent variable, that <is, whether the mediation variable materialistic values and whether the dependent variable was cheated passed the significance level test. It can be concluded that $B= -0.065$, $SE=0.026$, and $Z_b = -2.50$.

Referring to the product distribution method of MacKinnon and performing the test using the RMediation software package of R software, the test code of the product distribution method in this study is:

```
medci(mu.x=0.076,mu.y=-0.065,se.x=0.037,se.y=0.026,rho=0,alpha=0.1,type="prodclin")
```

The conclusion is:

```
$`90% CI`
```

```
[1] -0.0109443376 -0.0005045177
```

```
$Estimate
```

```
[1] -0.00494
```

\$SE

[1] 0.00325792

Based on the data, the 90% confidence interval is [-0.0109443376-0.0005045177], this interval does not contain 0, so we can say that the mediation effect is significant at the 90% confidence level, and the estimate (Estimate) is -0.00494, indicating that the dependent variable decreases by 0.0049 units through the role of the independent variable by one unit.

In conclusion, the mediation variable materialistic values played a significant mediator between the independent variable family SES and whether the dependent variable was cheated.

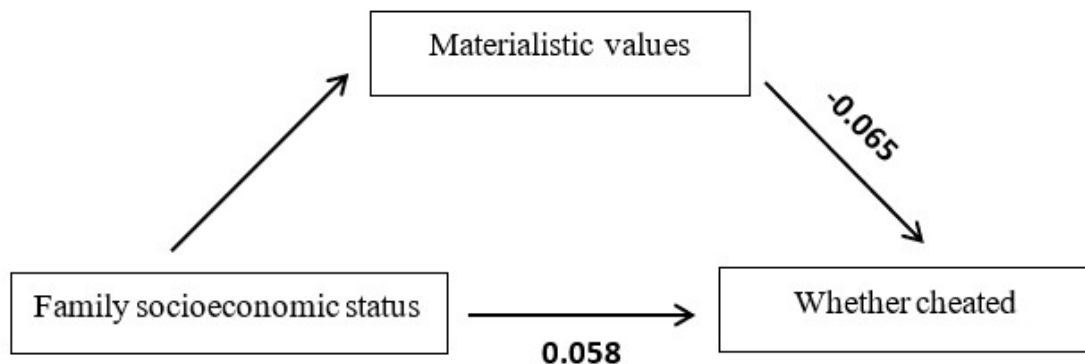


Figure 1. Schematic diagram of the mediating role of materialistic values in family socioeconomic status and whether they are cheated

4. Discussion

According to the data analysis, the family socioeconomic status plays a positive role in predicting whether college students are cheated. The family socioeconomic status and average annual income of the college students are significantly lower than those of the college students. This suggests that college students with poor family socioeconomic status may be more cheated, which may also be related to their financial pressure, limited access to information and insufficient awareness of social risks. In a college campus, college students with lower family socioeconomic level are inevitably more anxious and self-inferior about their wealth and value level, and hope to prove themselves through material resources. Moreover, due to the limited family economic conditions, these college students may need to be more economical and cautious in life. And some fraudsters just use their desire for money and expectations to improve life, designed a variety of seemingly reasonable fraud, in the face of these profit fraud, these college students are often difficult to resist the temptation, easy to be cheated [10].

In terms of materialistic values, the scores of the cheated group were significantly higher than that of the undeceived group, and the scores of the three dimensions of property-pursuit happiness, property definition success and property acquisition were significantly higher than that of the undeceived group. This shows that cheated college students often pay more attention to material enjoyment, pursue money and wealth more, and even think that only by pursuing wealth can they obtain happiness and happiness. This may make college students lose their rational judgment in the face of material temptation, and then become the victims of fraud.

In addition, materialistic values and family socioeconomic status do not exist in isolation, but are interrelated. Among them, materialistic values are significantly related to parents' educational background and parents' occupation, and family socioeconomic status is significantly related to the values of obtaining property centered. Materialistic values and family socioeconomic status have a predictive effect on whether they are cheated. This shows that

individual value formation and behavior choice do not originate entirely from individuals, but are deeply influenced by family background and social environment.

According to the results of the intermediary analysis, college students with low socioeconomic status are more likely to form materialistic values. They may pursue property more, believing that property can define happiness, which in turn increases their risk of being cheated. As an intermediate factor, materialistic values play a bridge between the family socioeconomic status and the fraud of college students. Specifically, college students with low family socioeconomic status may be more eager to seek external recognition and satisfaction through material accumulation and display due to the limitation of economic conditions. They tend to regard property as a measure of happiness, believe that have more material wealth can bring higher quality of life and satisfaction, for their behavior may be more pursuit of property, ideological property can define happiness, and the material values, which makes them in the face of fraud, more vulnerable to the interference of material temptation, reduce their vigilance and judgment, virtually increased the risk of fraud in daily life. Therefore, the materialistic values not only reflect the impact of family socioeconomic status on the psychological level of college students, but also directly related to whether they are easy to be cheated in real life.

The intermediary role of materialistic values not only provides a new perspective for us to deeply understand the relationship between materialistic values and family socioeconomic status and the risk of fraud, but also provides a new idea for us to prevent and reduce the problem of college students being cheated. While paying attention to the external factors of family socioeconomic status, we should also pay attention to the cultivation of college students' correct values and consumption concept, guide them to rationally view the relationship between material and happiness, and enhance the ability to identify and prevent fraud, so as to effectively reduce their risk of being deceived by material temptation.

5. Limitations and Prospects

There are several deficiencies in this study. First of all, on the experimental design, the research using the fishing link into the dormitory group chat, although has certain confusion, but in the domain name, the website icon, fill in the information is still flawed, make the students quickly see through the fishing links, plus the fishing link on the range is wide, within the school quickly attracted the attention of the students and discussion, and joint attack website report, makes the fishing link experiment can only 30 minutes, collect personal information is not enough.

Second, on the research object, originally planned to Suzhou universities fishing link simulation, but due to the simulation experiment reported to the public security bureau, and the school related department personnel communication and consultation, and need some manpower, so the subsequent simulation fishing link only for Suzhou a university, the last collected samples with less number, underrepresentation.

Finally, in the research dimension, this study mainly explores the influence process of family socioeconomic status and materialistic values on college students. However, there are many factors affecting college students 'fraud, and future research can further expand other dimensions, such as gender, age, parents' education level, etc., so as to reveal the complex mechanism of college students being cheated more comprehensively. At the same time, more detailed classification research can be carried out for different dimensions, which is helpful to have a deeper understanding of the internal logic of college students being cheated.

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