

# Is the Improvement of the Social Status Conducive to Consumption? ——Analysis Based on CFPS Panel Data

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**Abstract:** Consumption has not only economic attributes but also social attributes. It is the main content of economics, sociology and psychology research. This paper takes the family as the research object, using the three issues of China's Family Panel Studies data (CFPS) from 2010 to 2014, and using the method of quantitative research, discusses the impact of family social status identification on consumption. It is found that there is an individual effect of family social status identification on family consumption. The results of the fixed effect model show that, under the condition of controlling other variables, family social status identification has a positive impact on consumption expenditure, specifically including household equipment expenditure, clothing, food and housing expenditure. The consumption expenditure and structure of families with different social status identity are different. The research results of this paper enrich the early research results on household consumption, and put forward suggestions on improving consumption level from the aspect of subjective choice in practice.

## 1 Introduction

With the advancement of science and technology, China's economy has developed rapidly, and the consumption level and structure of Chinese's residents have also been continuously changing and upgrading. People's consumption behavior is not only an economic activity. Reasonable consumption can promote the development of the national economy and the improvement of residents' living standards. It also has social attributes and is a symbol of social status and an external manifestation of status competition. Individuals of the same social status have the similar psychological or physical characteristics that affect consumption patterns, or consumption structure<sup>[1]</sup>.

The research at home and abroad mainly focuses on the relationship between objective social class and consumption. People in different social classes have different consumption behaviors which can reflect their social status. However, some studies have shown that there are differences between people's subjective social status identification and objective class status, and there are deviations in the unilateral interpretation of the relationship between objective social status and consumption. Moreover, the influence of individual's subjective social status cognition on consumption is rarely involved.

Therefore, based on the economic and social duality of consumption, this paper, from the sociological point of view, uses panel data to study the impact of family social status cognition on family consumption. The study of status and consumption from the perspective of subjective perception can better reflect the diversification and individuation of individual consumption behavior in different subjective social status, as well as the pursuit of the quality and experience of a better life.

## **2 Literature Review**

### **2.1 Research on Consumption**

Economists often pay attention to the impact of factors such as income, savings, and prices on consumption, and have thus formed several well-known hypotheses about consumption theory, including absolute and relative income hypothesis, life cycle hypothesis and long-term stable income hypothesis<sup>[2]</sup>. Psychologists also view consumption as a personal behavior, and consumption requires a certain psychological motivation. Due to the influence of values, customs, and independent choices, even under the same income conditions, willingness and behavior of consumers are different<sup>[3]</sup>. The above-mentioned mainstream consumption theory hypotheses assume that individuals are completely rational, but in contrast.

Consumption behavior is dualistic, with both economic and social attributes. Unlike economists' analysis, sociologists take consumption as social behavior with special social significance rather than economic behavior<sup>[4]</sup>. It was Veblen who noticed that social status competition had an important influence on consumption earlier. The conspicuous consumption he introduced laid social variables into consumption, and believed that consumption is not only peculiar to rational economic people, but also a manifestation of social status and face<sup>[5]</sup>. The goods that people consume are expressive and competitive, and different classes will use different goods to seek their place in the social structure. The issue of consumption has begun in the perspective of sociologists while talking with economics.

### **2.2 Literature Review of Class Status Identification and Consumption**

The traditional research on status and consumption mainly explores the impact of the status of specific objective social strata on individual (family) consumption behavior from the perspective of social strata. People of the same class or social status have the same or similar psychological or physical characteristics that affect consumption patterns, consumption demand or consumption structure<sup>[1]</sup>. It is found that the middle class has different consumption characteristics from other classes, and the consumption stratification phenomenon is more obvious<sup>[6]</sup>. Moreover, the study of the impact on consumption power of the stratified class based on comprehensive property possession, technical needs at work, and power control also found that migrant workers, working class, old middle class and middle class have different consumption tendencies. The former has a higher survival consumption tendency, and the latter has a higher development and enjoyment consumption tendency<sup>[7]</sup>. But the status of the objective class is not the most critical factor that determines people's consumption level and behavior<sup>[6]</sup>.

Some scholars have pointed out that only those groups who subjectively identify themselves as middle-class status have similar or identical consumption patterns, and they have certain class characteristics and consumption characteristics, that is, identification affects luxury consumption and high-end durable goods consumption more than the class<sup>[8,9]</sup>. Consumption is the external manifestation of class identification, and there are different consumption patterns for any class identification, that is, to show the class in which it is located<sup>[10]</sup>. The social identity of the new generation of migrant workers has a significant impact on their conspicuous consumption, and when they identify with their identity as migrant workers, they are more inclined to conspicuous consumption<sup>[11]</sup>. Based on different psychological motivations, whether there is an upward trend or a downward trend in the perception of their social status will have an impact on status consumption<sup>[12]</sup>.

Regarding the research on identification and consumption, most of them study the influence of economic factors and objective social classes on consumption. The research groups are mainly concentrated on special groups and individuals in China, it rarely involves the family as the research unit to explore the impact of family social status on family consumption. Moreover, most studies are based on individual cross-sectional data and explore the lack of dynamics. So, this article uses panel data synthesized from the 2010-2014 three-phase household tracking survey data to explore the impact of household social status awareness on consumption expenditure, and specific impact

on which consumer projects. It is hoped to explore the factors that affect consumption from the micro perspective of the family to supplement the improvement of consumption level and consumption structure.

### 3 Research Model and Data Processing

#### 3.1 Construction and Description of Econometric Models

The purpose of the model is to clearly examine the impact of family social status identification on consumption. The measurement model set in this article is as follows:

$$\text{Lncon}_{it} = \beta_0 + \beta_1 \text{fsostate}_{it} + \beta_2 X_{it} + \lambda_i + u_t + e_{it} \quad (1)$$

Among them,  $\text{Lncon}_{it}$  represents the logarithmic form of the  $t$ -th period of consumption expenditure (including various consumption expenditures) of the  $i$ -th family;  $\text{fsostate}_{it}$  represents the social status identification of the  $t$ -th period of the  $i$ -th family; and  $X$  represents other variables,  $\lambda_i$  represents the intercept term of individual heterogeneity that does not change with time, the purpose is to control the fixed effect of each family,  $u_t$  represents the intercept term of time heterogeneity that does not change with individual, it explains all the terms that are not included in the regression model time-dependent effects;  $e_{it}$  represents a perturbation term that changes with time from individual to individual, which obeys the same and independent distribution.

#### 3.2 Data Source and Statistical Description

This article uses the data from the China Family Panel Studies (CFPS) 2010 to 2014. CFPS officially started the baseline survey in 2010, and conducted full sample follow-up surveys in 2012 and 2014, respectively. The survey used a stratified, multi-stage sampling method, covering 25 provinces/cities/autonomous regions, and basically represented 95% of the population<sup>[13]</sup>. The survey includes a questionnaire of community, family and family relationship, adult and child, which are more comprehensive.

The following briefly introduces the variables and data processing used in this article. Firstly, the family questionnaire and the adult questionnaire information were matched to form a new data set, and the households participating in the three years were vertically merged to form the three-phase balanced panel data. Finally, the three-phase balanced panel data of 15,784 observations of 5,256 households were obtained. The key outcome variable is household consumption expenditures. The sum of the four aspects of clothing, food, housing (excluding home purchases and mortgages) is used as survival consumption expenditures; cultural and educational entertainment, health care, household equipment and other consumption expenditures is used as development enjoyment consumption. The key independent variable in this study was the family status score which was 1-5 in the personal questionnaire. According to the available literature and data availability, other control variables are named uniformly to avoid errors in the panel data.

### 4 Empirical Results

For comparison, this paper uses the hybrid model as the benchmark model. In order to reduce the effect of heteroscedasticity, this article performs a logarithmic transformation on household consumption and household per capita net income before regression. Table 1 reports three estimation methods of household social status identification and household consumption expenditure. The clustering standard error with household number "fid" as the clustering variable is reported in the table.

#### 4.1 Test of the Impact of Family Social Status on Consumption Expenditure

As a reference, before the analysis, the mixed OLS regression was conducted. It was assumed that there was no significant difference between the horizontal and vertical comparisons of individuals. From the comparison of the three estimation methods reported in Table 1, it is found that before the introduction of other variables, the coefficients estimated by the mixed OLS and the

random effect model have little difference. And after the introduction of family characteristics and individual characteristics, the influence coefficients of family social status estimated by the three estimation methods on household consumption are not significantly different. Generally speaking, the social status of the family has a positive impact on household consumption expenditure that is family social status identification helps to improve consumption expenditure.

In addition, we can also find that the influence coefficient of income on household consumption is large, which is also in line with "absolute income" hypothesis. The higher the future confidence level, the more their consumption expenditures are, and they tend to be ahead of consumption. The consumption expenditure with agricultural hukou is lower than that of non-agricultural; the higher the number of years of education, the higher the household's consumption expenditure is; the consumption expenditure of working households higher than those who have no job; the consumption expenditure of family living in urban areas is higher than that of rural; the size of the family is also a factor that affects household consumption. After eliminating the gender variable that does not change with time, the household consumption expenditure increases with age in the fixed effect.

Table 1. Analysis of the impact of family social status on consumption expenditure

	Model 1 OLS1	Model 2 OLS2	Model 3 FE1	Model 4 FE2	Model 5 RE1	Model 6 RE2
Family social status	0.0835*** (0.0088)	0.0531*** (0.0078)	0.0919*** (0.0100)	0.0518*** (0.0101)	0.0867*** (0.0083)	0.0529*** (0.0078)
Future confidence		0.0549*** (0.0069)		0.0644*** (0.0087)		0.0566*** (0.0069)
Household income		0.2212*** (0.0083)		0.1252*** (0.0100)		0.2138*** (0.0082)
Age		-0.0031*** (0.0006)		0.0036*** (0.0010)		-0.0026*** (0.0006)
Gender		-0.1702*** (0.0146)				-0.1744*** (0.0145)
Hukou		-0.2847*** (0.0210)		-0.2441*** (0.0415)		-0.2875*** (0.0208)
Years of education		0.0245*** (0.0020)		0.0094*** (0.0032)		0.0237*** (0.0019)
Working state		0.1369*** (0.0161)		0.2180*** (0.0209)		0.1476*** (0.0161)
residence		0.1924*** (0.0187)		0.5864*** (0.0638)		0.2020*** (0.0187)
Familr size		0.1112*** (0.0056)		0.1110*** (0.0130)		0.1129*** (0.0056)
area	Not control	control	Not control	control	Not control	control
_cons	9.7143*** (0.0273)	7.0232*** (0.0948)	9.6897*** (0.0292)	6.7329*** (0.4030)	9.7048*** (0.0260)	7.0589*** (0.0944)
N	15784	15784	15784	14634	15784	15784
F	89.5669	402.7852	84.4579	78.51		
p	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Note: Robust Standard Errors in parentheses, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

For a mixed regression of fixed effects, random effects, and reference, testing that model is more appropriate. The F test results of the fixed effects model and mixed regression showed that the F value was 1.29, and the corresponding p value was 0.000. Therefore, the null hypothesis "all the individual effects that do not change with time are zero", that is, the fixed effect model is better than mixed regression, and each family should be allowed to have its own intercept term. Next, the

Hausman test is performed on the fixed effect model and the random effect model. The family-level clustering robust standard error option is removed during the test. The chi-square value of the test result is 449.25, and the corresponding p-value is 0.0000. Therefore, individual fixation is strongly rejected. The null hypothesis that the error terms and explanatory variables are not related should use a fixed effect model rather than a random effect model. From the fixed effect model, without controlling other variables, the family's social status increases by one unit, and the household consumption expenditure increases by 9.63% ( $\exp(0.0919) - 1$ ). After controlling other variables, the effect is increased by 5.32% ( $\exp(0.0518) - 1$ ). The impact of other variables is eliminated, and the effect of the family's social status on the total consumption expenditure is reduced. , but still has a positive role in promoting. In order to further explore which type of consumption expenditure will be raised by the improvement of the family's social status, the following will examine the impact of the family's social status on the individual consumption expenditure.

#### 4.2 Analysis of the Impact of Family Social Status on Itemized Consumption Expenditure

The above analysis shows that the impact of family social status on consumer spending has a fixed effect at the family level, so it is used in the sub analysis. In the table2, FE1-FE6 represent the fixed-effect models of household social status identification on household itemized consumption expenditure, respectively.

Under the control of other variables, the social status of the family has a significant positive impact on the four aspects of household equipment and daily necessities, clothing, food and housing. The higher the social status identification of the household, the higher the consumption expenditure in these areas. Specifically, if the family's social status is improved by one unit, household equipment and daily necessities increases by 6.39%, clothing increases by 13.71%, food increases by 17.60%, and housing increases by 39.04%. The impact on cultural, educational and entertainment, health care, and transportation and communications (not included in the table) is not significant.

Table 2. Impact of family social status on each of consumption expenditure

Variables	FE1 household equipment	FE2 clothing	FE3 Entertainment and education	FE4 Food	FE5 Housing	FE6 Health care
Family social	0.0619*	0.1285**	-0.0179	0.1621***	0.3296***	0.0125
status	(0.0300)	(0.0432)	(0.0576)	(0.0319)	(0.0601)	(0.0485)
Future	0.0430	0.0758*	0.0836	0.1446***	0.2741***	0.0029
confidence	(0.0265)	(0.0376)	(0.0497)	(0.0282)	(0.0514)	(0.0428)
Household	0.1962***	0.3339***	0.0832*	0.2981	0.3551***	0.0805
income	(0.0271)	(0.0382)	(0.0547)	(0.0307)	(0.0558)	(0.0435)
Years of	0.0325***	0.0367**	0.0020	0.0239*	0.0520**	-0.0054
education	(0.0090)	(0.0121)	(0.0193)	(0.0099)	(0.0193)	(0.0143)
Working state	0.2983***	0.5158***	0.2265*	0.7265***	1.8441***	0.1168
	(0.0564)	(0.0818)	(0.1187)	(0.0637)	(0.1290)	(0.0972)
_cons	2.7004***	1.4531	-6.8413*	0.4880	-0.7810	2.2645
	(0.5252)	(2.1834)	(3.2391)	(0.9851)	(4.3253)	(1.2517)
Other variables	Yes	Yes	Yes	Yes	Yes	Yes
F	15.2601	24.9175	16.8987	65.0178	64.9648	4.5329
p	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
rho	0.34	0.44	0.6	0.39	0.31	0.45

Note: Robust Standard Errors in parentheses, \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

## 5 Conclusion

Based on three-year household tracking survey data from 2010 to 2014, this paper uses

mixed-effect models, fixed-effect models, and random-effect models to analyze the impact of family social status identification on total household consumption expenditure. According to the Hausman test results, fixed-effect models that remove individual (family) effects should be used. In this model, family social status identification has a significant positive impact on total household consumption expenditure. It was found that household social status only had significant positive effects on expenditures of household equipment, clothing, food, and housing.

The improvement of the family's social status helps to increase status consumption expenditure<sup>[12]</sup>. In the "face economy" era, status consumption has shown an upward trend. Expenditure on household equipment and daily necessities can reflect the social identity of a family. The improvement of the family's social status found in this article helps the improvement of household equipment consistent with previous research results. Yang Baoyu<sup>[14]</sup> used household equipment and daily necessities as status consumption research to study the positive impact of residents' social status awareness. It is also conducive to the increase in clothing consumption expenditure. Clothing consumption is also a medium of wealth, leisure and status<sup>[5]</sup>. It is found that the improvement of the family's social status is conducive to the increase of food expenditure. Although there is no specific type of food consumption and food quality, with the improvement of family status, it is more likely to improve the level of food consumption and the environment. This article does not distinguish between investment expenditures for housing, and only analyzes general residential expenditures. Living is a kind of daily necessities, but with the development of urbanization, the quality of housing is a symbol of class status<sup>[15]</sup>. The higher the identity of the family, the more resources it has at its disposal, and therefore the more choices there are for housing quality. This article finds that family social status identity has no significant impact on consumer spending on transportation, communications, culture, entertainment, and health care. The possible reason is that health care expenditure is related to health and aging<sup>[16]</sup>, and other service consumption expenditures will be affected by deeper psychological factors and other factors. Therefore, in future research, we can consider adding psychological influence mechanism and health and other factors to deepen the relationship between them.

What this paper finds is that consumption behavior is not only influenced by objective factors such as income and assets, but also by subjective factors such as social status identification and future confidence. The family is not only the specific environment in which the individual lives, but also the main consumption unit. Paying attention to the change of the social status of the family can effectively improve the level and structure of family consumption. At the same time with the development of economy, we should pay attention to improving residents' income level and promoting fairness, and specifically residents' subjective choice. Family's social status identification has different influence on different consumption expenditure. When the basic living needs such as food, clothing and housing are met, it is more important to pay attention to the quality and symbolization of these aspects. Therefore, the relevant units should urge the corresponding production departments to improve the production quality and specifications of products, so as to meet the needs of different classes of groups, and then improve the consumption level and quality.

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