*gizem.acet@marmara.edu.tr

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The Nexus Between Conspicuous Consumption and Credit Cards: Evidence from Turkish Households

Gizem Acet Dönmez and Hurşit Güneş

Gizem Acet Dönmez and Hurşit Güneş are in the Department of Economics at Marmara University in Istanbul, Turkey. *The authors are grateful to Robert H. Scott, III and Ebru Çağlayan Akay for their valuable contributions to the article. An earlier version of this study was presented at the Sixth International Conference on Economics (EconAnadolu) in Eskişehir, Turkey. The authors would like to thank conference participants, especially İnsan Tunalı and Alpay Filiztekin, for their valuable comments. Any remaining errors belong to the authors.*

Abstract: Overconsumption and overborrowing are prevailing problems in many countries nowadays. The conspicuous consumption phenomenon, first asserted by Thorstein Veblen in the late nineteenth century, can play an important role in explaining the current excess consumption and may have a connection with the spread of credit cards. This study aims to reveal the nexus between credit card use and conspicuous consumption expenditures of households in Turkey where credit card debts are massive. For this purpose, a Tobit model is carried out utilizing micro-level data from the Household Budget Survey for the year 2019. Findings reveal that possession of credit cards is associated with a 25% increase in conspicuous expenditures of households on average after controlling for household income and demographic characteristics. Once households are grouped by income, credit card use is associated with a higher level of conspicuous expenditures for households just below the highest income group and households just above the lowest income group. This finding implies that while the former group purchases more conspicuous products relying on credit cards to look like the highest income group, the latter group probably does that to distinguish themselves from the lowest income group.

Keywords: overconsumption, conspicuous consumption, credit cards

JEL Classification Codes: C34, D12, D91, G51

Overconsumption is a globally widespread phenomenon currently. Capitalist consumption culture has influenced the consumption habits of individuals all around the world through marketing strategies and media tools (Torlak 2000). It has led to excess consumption and therefore deterioration of the environment because the more consumption, the higher levels of production and waste (see, for example, Princen 1999; Shove and Ward 2002). It hinders the achievement of the 12th Sustainable Development Goal of *ensuring sustainable consumption*

and production patterns.[1] Overconsumption also harms economies by generating saving account deficits and current account deficits if the rising consumption demand goes to imports. A consuming society that consumes more than what it produces would inevitably become a foreign-dependent country. Besides, some studies argue that overspending and overborrowing by American households were the main culprits of the 2008 financial crisis (e.g., Mian and Sufi 2011 and 2014).

The term consumption, which was traditionally based on needs, has evolved to rely on desires in the post-modern era and thereby has lost its rational characteristic. Homo economicus who was ideally productive and rational has turned into a person whose life goal is to consume. Part of the rise of excess consumption can be explained by the Veblenian conspicuous consumption behavior. According to Thorstein Veblen (1899), products attributed to conspicuous consumption have social meanings beyond their functions, and consumer preferences might be driven by social motives and emulation. Many individuals desire to be identified as if living at a higher standard through conspicuous consumption. Veblen defines expenditures on conspicuous products as wasteful.

The proliferation of credit cards might be attributed to the current rise in conspicuous consumption. Credit card debts have reached unprecedented levels in the last decades. Robert Scott (2007) argues that neoclassical economic theory fails to explain the rise in debts, but the Veblenian *conspicuous consumption* theory can. Credit cards might encourage conspicuous behavior by allowing individuals to equate their living standards to that of the next higher class. Even if credit cards offer some advantages (e.g., installment payment, late payment possibility, short-term credit, easing the necessity of carrying cash, and reducing informal economy) they might be hazardous since they change the willingness-to-pay (Prelec and Simester 2001), and lead to consuming more (Soman 2003; Liu and Chou 2020; Acet Dönmez and Güneş 2021). Consumers usually perceive the cost of a product lower when they pay with a credit card compared to cash since they focus on the amount of monthly payment rather than the total cost. Similarly, the "buy-first-pay-later" strategy leads consumers to forget about the payment at the time of buying because nothing needs to be paid at that moment. Hence, credit cards often give rise to individuals consuming at a higher level than their ability to pay, thereby making them fall into a debt trap. Credit cards may pave the way for increasing consumption among those who do not have adequate income to purchase items tempted by advertisements. These cards are not used only for satisfying real needs, but also for meeting the "needs" generated by advertising strategies. Incentives to consume by overborrowing may lead low-income groups to crime or even suicides.

Even though theoretical predictions and some empirical findings show that individuals tend to consume more if they use credit cards, there is little evidence about what kind of consumption is triggered by these cards. This study, therefore, aims to examine the nexus between conspicuous consumption and credit card usage in Turkey. A national survey of the Turkish Statistical Institute (TurkStat) called Household Budget Survey (HBS) for the year 2019 has been utilized for this purpose. According to the The Banks Association of Turkey Risk Center (2020), 803,319 credit card customers have been transmitted to legal follow-up for unpaid credit card debt in 2019. According to HBS 2019, 52% of households use credit

[1] The 12th Sustainable Development Goal, for example, targets by 2030 to substantially reduce waste generation through prevention, reduction, recycle, and reuse; and to ensure that people everywhere have information and awareness for sustainable development and lifestyles in harmony with nature.

cards in Turkey, while 48% of households do not have any credit cards. These features make Turkey a good case to investigate this nexus instead of a country where overborrowing is not prevalent or the credit card usage ratio is too low or too high. This study also tests if the relationship between credit card usage and conspicuous consumption differs for various income groups. To the best of our knowledge, this is the first article investigating this nexus in Turkey, and one of very few internationally. The next section provides a brief literature review, followed by our empirical analysis and conclusion.

Literature Review

Veblen (1899) is regarded as the first theorist who shed light on the status-seeking consumption behavior in which individuals consume some items to generate social networks and to look like higher social classes. Veblen's concept of *conspicuous consumption* puts forward the idea that consumers engage in consumption not only for the intrinsic value (i.e., functional benefit) of the good but also for its value as a signal. Similarly, James Duesenberry (1949) adds social and psychological factors into the preference function and addresses that the tastes of consumers are interdependent. He states that even if there is no change in income or prices, frequent contact with superior goods leads individuals to increase expenditures on these goods and calls this the *demonstration effect*. There are also various terms in the literature closely related to the phenomenon of conspicuous consumption; the *dependence effect*[2] of John Kenneth Galbraith (1998), the *Veblen effect*[3] and the *snob effect*[4] of Harvey Leibenstein (1950), *social spending*[5] of Philip Brown, Erwin Bulte, and Xiaobo Zhang (2011), and *visible consumption*[6] of Kerwin Kofi Charles, Erik Hurst, and Nikolai Roussanov (2009). Even though the terms differ, they all refer to consumption behavior induced by social motives rather than the functionality of goods and services. The accumulation of wealth after the Industrial Revolution motivated Veblen to research the consumption practices of the middle and upper classes (Patsiaouras and Fitchett 2012). While the usage of arms and being a warrior or hunter were regarded as signs of honor in agrarian societies, according to Veblen, the symbol of honor was replaced with the acquisition of wealth after the emergence of private property. Technological development, geographical mobility, and rising incomes gave rise to a change in socioeconomic conditions and cultural norms, thereby to the evolution of conspicuous consumption. Sidney Levy (1959) argues that goods have symbolic significance in the modern marketplace, and consumers are not functionally oriented because modern consumers are less satisfied with a survival level of existence compared to the past. Hence, the era of mass consumption since the post-war period has been closely associated with ostentatious consumption. Furthermore, the rise of conspicuous consumption that began in the United States has expanded to several European countries and then later to emerging economies.

[2] In this view, production first generates desires through advertising campaigns and then supplies them. If the process of production had not created desires, people most probably would not know these "missing items".

[3] It occurs if demand for a product rises since it bears a higher price.

[4] The desire of an individual to differentiate themself from other people.

[5] Expenditures motivated by the spending of others.

[6] Consuming items that are easily observable and portable across social interactions. Consuming more of these visible items signals a better economic situation.

With the evolution of financial markets since the 1980s, the ability to get debt has highly cut down liquidity constraints. It is known that credit cards allow individuals to better coordinate their expenses and smooth their consumption (Evans and Schmalensee 2005). The rise of mass credit facilities has also allowed consumers to acquire more status symbols (Ritzer 2001). The well-known phenomenon of *keeping up with the Joneses* states that in case of a rise in a neighbor's income, individuals would tend to consume more through debt even if they have no income increase. Signaling models of status-seeking support the connection between visible consumption and group income (e.g., Charles, Hurst, and Roussanov 2009; Kaus 2013). Some researchers address that credit cards are a symbol of status (Bursztyn et al. 2017). Many credit card users feel modern and empowered thanks to this plastic (Mathur 2010).

Özlem Albayrak (2020) finds that household consumption is negatively associated with relative income and positively connected with income inequality in the reference group in Turkey for the 2005 to 2012 period. This finding confirms the behavior of *keeping up with the Joneses* in Turkey. The same results are also found for conspicuous consumption (i.e., cars, telephones, clothing, and jewelry) and it is concluded that households tend to expend more on conspicuous goods to compensate for their lower level of income. Finally, an association between household consumption and debt status is found, suggesting that relatively worse-off people attempt to compensate themselves with borrowing.

The internet is regarded as another factor raising conspicuous consumption in the twenty-first century. Social media, in particular, is a channel to transmit conspicuous behavior to others. Social media users are very likely to be influenced by the consumption behaviors of other users and tend to imitate them (see for example Thoumrungroje 2014; Serour, Elsharnouby, and Mahrous 2022; Pellegriono, Abe, and Shannon 2022).

Through a series of lab experiments, Sheheryar Banuri and Ha Nguyen (2020) find that conspicuous consumption leads to an increase in loan-taking, and this rise is driven by individuals at the lowest levels of income. Their causal evidence shows that conspicuous consumption results in increased wasteful loan-taking.

In a series of studies, it is reported that the poor devote a quite high fraction of their income to luxury items, and thereby end up in a poverty trap (Moav and Neeman 2008; 2010; 2012). While Veblen (1899) asserts that women are more likely to be engaged in conspicuous consumption, the mentioned studies of Omer Moav and Zvika Neeman claim that women tend to place less importance on social status than men. In a study on observable spending in rural China, it is found that socially observable spending is highly connected to social spending by neighbors and this behavior is common even among the poorest poor (Brown, Bulte, and Zhang 2011). Excessive expenditures on weddings, funerals, and festivals are indicated as the most common examples of conspicuous expenditures by the poor (Anderson 2007; Case et al. 2013; Halliday 2021).

In sum, the conspicuous consumption phenomenon asserted first in the nineteenth century is prevalent in modern times and might be associated with easing borrowing opportunities. Furthermore, this kind of consumption is probably not restricted to high-income groups. Still, there is limited empirical evidence on this nexus.

Empirical Analysis

Before the empirical analysis, we first need to detect a bundle of conspicuous items. The next sub-section discusses how we determine the conspicuous items for our empirical analysis. Then, the data set is introduced, and descriptive analysis is conducted for some preliminary implications. Empirical specifications and the estimation results are presented at the end of this section.

Detecting Conspicuous Items

We first require a bundle of goods attributed to conspicuous consumption. According to Veblen, clothing is a very clear example of conspicuous consumption because it is readily observable and gives out substantial information about one's financial situation even at the first glance. Indeed, he attributes a special chapter for clothing titled *Dress as an Expression of Pecuniary Culture* in his ground-breaking book and expresses that "no line of consumption affords a more apt illustration than expenditure on dress. It is especially the rule of the conspicuous waste of goods that finds expression in dress" (Veblen 1899, 67). He also states that wasteful expenditures on clothing are more universal than any other spending.

In a study on differences in conspicuous consumption across races, Charles, Hurst, and Roussanov (2009) define visible consumption items as expenditures on apparel (i.e., clothing, jewelry, and watches), personal care, and vehicles through common sense and an online survey. In a similar study, Wolfhard Kaus (2013) defines conspicuous spending as the sum of household expenditures on clothing, footwear, accessories, personal care, and cars. Brown, Bulte, and Zhang (2011) accept social spending as expenditures on funerals, weddings, and gifts. By applying a national telephone survey in the United States, Ori Heffetz (2011) concludes that the most visible category is cars, followed by clothing, furniture, and jewelry, respectively. In a macro-level study on the connection between conspicuous consumption and income inequality in Turkey, clothing and footwear, housing and rent, furniture, transportation, entertainment, and education services are assumed as conspicuous consumption items (Tekin and Akar 2020).

Considering the previous literature, especially the particular emphasis by the pioneer of this concept, this study assumes clothing, footwear, and accessories (i.e., jewelry and watches) as conspicuous goods and generates a bundle including these items. According to the Interbank Card Center of Turkey (n.d.), these sectors constitute an enormous share of credit card transactions. Even if other items such as cars or mobile phones are thought to have conspicuous aspects, we do not include them in our conspicuous consumption bundle because these items cannot be purchased with credit cards in Turkey. An important assumption of the study is that expenditures on these items are accepted as conspicuous consumption only after a threshold because especially clothing and footwear up to a point are a necessity for every individual regardless of conspicuous incentives. Therefore, we specify the median value of the log of expenditures on these items as a threshold and define individuals as conspicuous consumers only if their expenditures on these items exceed the threshold.

Data Set and Descriptive Analysis

In this study, we use the Household Budget Survey (HBS) of the year 2019 generated by TurkStat. It is a nationwide survey in which weights are used to predict the whole country.

11,521 households participated in this survey. Six extreme outliers (i.e., observations that have an extremely high level of income but a very low level of conspicuous expenditure and that have an extremely high level of conspicuous expenditure but a very low level of income) are removed from the sample. 382 observations are also removed because of the missing age, gender, or education information so that the sample of our analysis consists of 11,133 observations. Around 8.5 thousand households in the survey purchased at least one of our conspicuous consumption items. Table 1 indicates the definitions of our main variables—conspicuous expenditures and credit card use—and the control variables.

Table 1. Definitions of the Variables

Variable	Definition
conspicuous	Monthly household expenditures on conspicuous consumption bundle (TL)
credit card	A binary variable that takes zero for households who do not use any credit card, and one for households using credit card
income	Monthly household income (TL) is generated by dividing yearly household income by twelve
household size	Number of household members
age	Age of the household head
gender	A binary variable that takes zero for households with male household heads, and one for households with female household heads
education	Years of schooling completed by the household head. No degree: 0; primary school: 4; secondary school: 8; high school: 12; bachelor's: 16; master's: 18: PhD: 22 years

Summary statistics can be seen in table 2 and table 3. We provide these statistics separately for households who use a credit card and for those who do not use any credit card to demonstrate the differences in the characteristics of credit card users and others.

Consumption in the tables refers to the household consumption expenditures in Turkish Lira in the survey month. Even if this variable does not exist in the empirical model, we put it into the tables here to provide information on how the total consumption expenditures differ by credit card use. It is seen that total consumption expenditures, conspicuous consumption expenditures, household income, and education level of the household head are higher for credit card users compared to those who do not use any card, on average. Moreover, it seems that younger household heads are more likely to use credit cards. Most of the household heads are male in both groups, but there are fewer female household heads in the group of credit card users compared to the other group.

Table 2. Summary Statistics for the Households using Credit Cards

Variable	Observations	Mean	Std. Dev.	Min	Max
consumption	5,772	5,947	4,160	645	61,419
conspicuous	5,772	357	972	0	37,468
ln(conspicuous)[7]	5,772	4.32	2.39	0	10.53
income	5,772	6,749	4,793	433	82,108
household size	5,772	3.37	1.46	1	14
Characteristics of household head					

[7] To include the households whose conspicuous expenditures are zero in the analysis; we add one for each observation of the conspicuous consumption variable. Otherwise, more than three thousand households would be out of the empirical analysis since the natural logarithm of zero is undefined.

age	5,772	49.42	14.27	16	98
gender	5,772	.26	.44	0	1
education	5,772	9.23	5.46	0	22

Table 3. Summary Statistics for the Households Who Do Not Use Any Credit Card

Variable	Observations	Mean	Std. Dev.	Min	Max
consumption	5,361	3,272	2,330	175	44,574
conspicuous	5,361	174	597	0	19,902
ln(conspicuous)	5,361	3.09	2.52	0	9.90
income	5,361	3,732	2,527	42	36,589
household size	5,361	3.36	2.04	1	27
Characteristics of household head					
age	5,361	56.96	16.2	16	98
gender	5,361	.37	.48	0	1
education	5,361	4.66	4.28	0	22

Figure 1 shows the kernel density distribution of the natural log of conspicuous consumption expenditures of households depending on using a credit card or not. The density curve of the credit card users shifts right compared to those without any card implying that households who have a credit card usually spend more on these products.

There might be other factors influencing conspicuous expenditures. Figure A.1 in the Appendix implies that households with higher income levels have more expenditures on these items. Figure A.2 demonstrates that households with older household heads—especially those older than 66—have a lower level of conspicuous expenditures even though there is no considerable difference among the younger age groups. Figure A.3 indicates that conspicuous expenditures increase as the education level of the household head rises. However, this relationship should be considered carefully because a more educated household head usually means a higher level of household income which is probably associated with a higher level of conspicuous consumption.

Figure 1. Distribution of Conspicuous Consumption Expenditures

Empirical Specification

In this study, the model below is utilized to estimate the association between credit card use and conspicuous consumption expenditures of Turkish households in 2019. Household income is incorporated into the model since it is expected that household income plays a key role in consumption decisions. Hence, we control household income as well as the demographic characteristics of households. Our model is, therefore, as follows.

$$\ln(\text{consp})_i = \alpha_0 + \alpha_1 \text{ credit card}_i + \alpha_2 \ln(\text{income})_i + \gamma X_i + u_i$$

where *ln(consp)* denotes the natural logarithm of monthly household expenditures on conspicuous consumption bundle and u_i is the error term. *Credit card* is a binary variable which takes one for the households using a credit card and zeroes for those who do not use any credit card. In this study, our parameter of interest is α_1. *ln(income)* is the natural logarithm of monthly household income (TL). Log-log specification allows α_2 to be

interpreted as income elasticity of conspicuous consumption expenditures. X_i is a vector of other control variables including household size, gender, education level (i.e., years of schooling completed), and age of the household head. These household characteristics very likely influence conspicuous consumption behavior. Furthermore, educated household heads are more likely to have credit cards, and education might also affect the consumption of conspicuous products. Similarly, the age of the household head might have effects on both credit card usage and expenditures on conspicuous items. Common causes of credit card usage and conspicuous consumption would lead to confounding. By controlling these factors in the model, we aim to estimate the connection between credit card usage and conspicuous consumption expenditures more precisely.

As expressed previously, a threshold is used here to distinguish conspicuous consumption from essential needs. In this context, we assume expenditures on clothing, footwear, and accessories as conspicuous consumption only if the household's spending on these items is greater than the median value of the log of these expenditures. We use the median value since it is a more useful indicator of central tendency and less sensitive to the outliers in the sample compared to the mean. However, the threshold may not be the same for all households in the population and may vary according to the socioeconomic situation. Products that are needs or conspicuous might be different for a household in the low-income group and another household whose members work as executives, for example. Wearing elegant clothes might be essential for individuals working at some jobs, while it might just be a conspicuous behavior for others. Therefore, we accept income as a proxy for the socioeconomic situation and group households based on monthly equivalized income. Then, we utilize a threshold of the median value of the log of conspicuous expenditures for each income group separately.

To ensure consistency, sampling weights are used in the empirical analysis provided by HBS. Sampling weights reflect unequal probabilities of being included in the sample and correct this disproportionality (Pfeffermann 1993). We utilize the Tobit model generated by James Tobin (1958) which is a widely known regression model used in the case of censored data. If we estimate the model through ordinary least squares (OLS), estimators would be inconsistent and biased as the model would not contain the households whose expenditures on our conspicuous bundle are below the threshold. Indeed, 3,077 households in the survey have no expenditures in our conspicuous consumption bundle. A Tobit model with a lower limit (i.e., threshold to be considered as conspicuous consumption) permits us to cover all the households even those whose conspicuous expenditures are below the threshold (including zeros). Hence, it can produce consistent estimates through maximum likelihood estimation. In the Tobit model, the dependent variable, $ln(consp)i^*$, is a censored variable that can take zero or positive values. If a household's expenditure on our conspicuous bundle is lower than the threshold, the Tobit model does not count them as conspicuous consumption, whereas expenditures above the threshold are considered as a continuous variable. Therefore, our left censored dependent variable can be indicated as follows.

$$ln(\text{consp})_i^* = \begin{cases} \ln(\text{consp})_i, & \text{if } \ln(\text{consp})_i > \text{median value of } \ln(\text{consp}) \\ 0, & \text{if } \ln(\text{consp})_i \leq \text{median value of } \ln(\text{consp}) \end{cases}$$

Findings

OLS and Tobit estimates of the general model in which households are not grouped by income are given in table 4. In the Tobit model, the lower limit is the median value of the log of expenditures on our conspicuous bundle in the population. According to both OLS and Tobit estimations, credit card user households spend statistically more on conspicuous items, on average, than households without any credit cards. Even if the coefficients become lower in the Tobit model, signs and significances remain the same in both estimations. A limitation of the OLS estimation is that it does not have any threshold and therefore it takes all expenditures on clothing, footwear, and jewelry as conspicuous consumption. If we add a threshold to the OLS model, estimation would be biased and inconsistent since it would contain only the households whose spending on our conspicuous bundle is greater than the threshold. Therefore, we interpret only the Tobit estimates here. Since the model has a logarithmic dependent variable, dummy variables (i.e., credit cards and gender) are interpreted through Halvorsen-Palmquist (HP) (1980) correction throughout the study.[8] When we apply this correction, it is revealed that credit card user households, on average, spend 25% more on conspicuous items in the Tobit model at a 99% confidence interval.

Table 4. General Estimation Results: OLS vs. Tobit (dependent variable is ln(consp))

variables	OLS	Tobit
credit card	0.359***	0.224***
	(5.77)	(6.01)
household size	0.216***	0.111***
	(13.16)	(10.76)
ln(income)	1.060***	0.775***
	(22.03)	(24.93)
age	-0.02***	-0.012***
	(-10.07)	(-9.75)
education	0.0287***	0.0190***
	(4.54)	(4.91)
gender	0.242***	0.175***
	(4.24)	(4.91)
constant	-5.304***	-1.903***
	(-14.24)	(-7.81)
Observation	11,133	11,133
R^2	.189	
Pseudo R^2		.09

Note: t statistics in parentheses (p<0.05, ** p<0.01, *** p<0.001).*

Furthermore, larger households spend more on conspicuous items. One unit increase in household size raises these expenditures by around 11% on average. As it is expected, households with higher incomes spend more on conspicuous items. More specifically, a 10% increase in household income is, on average, associated with a 7.75% increase in these expenditures. Coefficient of *ln(income)* can be interpreted as income elasticity. The elasticity is higher than one in the OLS estimation which means that items in our conspicuous

[8] According to Robert Halvorsen and Raymond Palmquist (1980), coefficients of dummy variables in semi-log models should be interpreted as $100x(e^{\alpha}-1)$ where α is the estimated coefficient of the dummy variable.

consumption bundle are characterized also as luxuries in the OLS model. The age of the household head has a statistically significant and negative correlation with conspicuous expenditures. A one-year increase in household head age corresponds to a 1.2% decrease in conspicuous consumption expenditures. It means that younger generations are more likely to be engaged in conspicuous behavior. Households with more educated heads spend significantly more on conspicuous items even after controlling income. A one-year increase in the years of schooling completed by the household head is associated with a 1.9% increase in conspicuous consumption expenditures, on average. A higher level of education probably increases the possibility of having a job that requires dressing professionally, thereby conspicuous expenditures might rise. Finally, households with female heads have 19% more expenditures on conspicuous items. Even if some variables such as household income and the education level of household heads are correlated, perfect multicollinearity does not exist in our estimations. The pseudo R^2 of the Tobit model is lower than the R^2 of the OLS model, but it is not appropriate to compare them because the Tobit model has a pseudo R^2.

We further investigate these associations by grouping households by income per adult equivalent (the modified OECD adult equivalent scale is used to appropriately compare different-sized households), so that we can distinguish the lower limit as being counted as conspicuous consumption for various income groups. An individual's consumption behavior depends on their percentile position in the income distribution (Duesenberry 1949). Similarly, overconsumption differs for individuals according to their income level, occupation, social status, or society (Torlak 2000). Therefore, we use income as a proxy for the socioeconomic situation. Income groups and distribution of this variable can be seen in table 5. After assigning each household to an income category,[9] we have estimated our Tobit model for each category and compared them in table 6.

Table 5. Household Groups According to Monthly Equivalized Income

group	percentile	corresponding income level (TL)
lowest	≤10%	≤1051
low	10–30%	>1051, ≤1723
low middle	30–50%	>1723, ≤2375
middle-high	50–70%	>2375, ≤3337
high	70–90%	>3337, ≤5582
highest	>90%	>5582

Table 6. Estimation Results by Income Groups (dependent variable is ln(consp))

variables	lowest income	low income	low middle	middle high	high income	highest income
credit card	0.237	0.268***	0.041	0.27***	0.279**	0.129
	(1.58)	(3.34)	(0.56)	(3.5)	(2.9)	(0.69)
household size	0.163***	0.0356	0.0592	0.186**	0.0704	0.107*
	(4.68)	(0.84)	(1.06)	(3.22)	(1.33)	(2.02)

[9] The empirical analysis is also conducted by using different classifications for income groups, and it is seen that the significances and signs of coefficients are not sensitive to the choice of classification.

ln(income)	0.735***	1.321***	1.048***	0.508*	0.833***	0.674***
	(4.12)	(5.97)	(3.99)	(2.01)	(3.73)	(5.04)
age	−0.009*	−0.01***	−0.01***	−0.01***	−0.01***	−0.01***
	(−2.04)	(−4.44)	(−4.73)	(−5.01)	(−4.83)	(−3.41)
education	0.0219	0.00713	0.0244**	0.0067	0.0247**	0.0270*
	(1.12)	(0.68)	(2.63)	(0.83)	(3.21)	(2.47)
gender	0.0719	0.0891	0.0783	0.177*	0.177*	0.217*
	(0.52)	(1.03)	(0.98)	(2.18)	(2.24)	(2.24)
constant	−2.294	−6.05***	−3.89	0.311	−2.25	−0.809
	(−1.82)	(−3.72)	(−1.94)	−0.16	(−1.22)	(−0.68)
Observation	1,321	2,428	2,286	2,185	2,031	882
Pseudo R^2	.080	.067	.065	.065	.053	.065

Note: t statistics in parentheses (* p<0.05, ** p<0.01, *** p<0.001).

According to the estimation results, the role of credit cards in purchasing more conspicuous items is statistically significant only for three groups: low-income, middle-high-income, and high-income groups. Credit cards trigger conspicuous consumption at most for the high-income group. Indeed, it is observed that credit card usage in the high-income group is associated—after HP correction—with a 32.18% increase in conspicuous consumption at a 95% confidence interval. They might tend to compare themselves with the highest strata, and therefore often purchase conspicuous items via credit cards to be seen like them. Similarly, households in the middle-high-income group might rely on credit cards to purchase more conspicuous items to look like higher-income groups. Households in the low-income group might do that to distinguish themselves from the lowest-income group through conspicuous consumption. Still, this significant connection for the low-income group may partly be driven by need rather than emulation.

While household size is statistically significant only for the households in the lowest, middle-high, and highest-income groups, household income is positively and significantly associated with conspicuous consumption expenditures for all income groups. Indeed, income emerges as a very important factor explaining conspicuous spending for all income groups even if the magnitudes of the coefficients differ. The sensitivity of conspicuous consumption expenditures to income is highest in the low-income group, followed by the low-middle and high-income groups. More specifically, a 10% increase in household income is associated with a 13.2%, 10.5%, and 8.3% increase in conspicuous consumption among these three groups, respectively. The income elasticity of conspicuous products is higher than one for low and low-middle-income groups implying that our conspicuous bundle is also comprised of luxuries for these two groups. Age of household head emerges as a statistically significant factor for all groups indicating that a younger household head is associated with more spending on conspicuous items. Years of schooling completed by household heads is positive and statistically significant only for households in the low-middle income, high-income, and highest-income groups. The gender of the household head is only significant for the three highest income groups implying that a female household head increases conspicuous consumption expenditures only for the households with higher income. For

instance, a household with a female head in the highest income group has on average 24% more spending on conspicuous items compared to a male-headed counterpart.

It seems that credit cards do not have a statistically significant relationship with conspicuous consumption expenditures for the lowest, low-middle, and highest-income groups. Since households in the lowest income group do not spend much on conspicuous items, having a credit card or not is probably not important in this decision. The insignificant coefficient of the credit card for the highest income group might be because they are already the reference group and do not have a higher group to emulate Also, even if they purchase conspicuous items, they probably do not rely on credit cards to finance these expenditures because they already have quite high levels of income. As for the low-middle income group, these households are away from the lowest and highest income groups and therefore probably have an incentive to neither distinguish themselves from the lowest group nor emulate the highest group by consuming more conspicuous items through credit cards.

Conclusion

The rise of consumerism and overborrowing are among the most pervasive issues of our time. This study targets to figure out the possible connection between conspicuous consumption and credit card use in Turkey where the indebtedness of consumers is prevalent. Expenditures on clothing, footwear, and accessories after a threshold are assumed as conspicuous consumption. A Tobit model is estimated utilizing HBS for the year 2019.

Findings reveal that credit card usage is associated with an increase in expenditures on conspicuous products. This positive and statistically significant connection prevails even after controlling for the monthly income level of the household as well as demographic characteristics. More specifically, credit card user households in our general model spend 25% more on conspicuous items, on average, compared to the households who do not use any credit cards. Furthermore, household income, household size, and education level of the household head are found positively and statistically significantly associated with conspicuous expenditures as well. It is also observed that younger generations are engaged in higher levels of conspicuous consumption. As discussed in the literature section, there are controversial arguments about conspicuous consumption and gender. Our findings support the view of Veblen since households with female heads tend to spend more on conspicuous items compared to households with male heads. This finding might change if a different bundle of conspicuous goods—including luxury cars, for example—was employed.

We also conduct the same analysis by grouping households with respect to equivalized household income. The role of credit cards in purchasing more conspicuous items is found statistically significant only for low, middle-high, and high-income groups. These findings imply that households in the low-income group tend to distinguish themselves from the lowest-income group by purchasing more conspicuous items relying on credit cards, and households in the middle-high and high-income groups might try to emulate the highest-income group by purchasing conspicuous products through credit cards.

Consumption is a decision and consuming conspicuously might increase individuals' utility. However, public consciousness about overconsumption and overborrowing need to be increased because excess consumption leads to savings gaps as well as environmental hazards. Consumers should be informed about the aim of consumption, the difference between need and zeal, the reasonable limit of needs, and the possible consequences of excess

consumption (Torlak 2000, 134). Improving financial literacy and sustainability literacy would be a long-run goal to reduce overborrowing and overconsumption. Awareness about the negative impacts of overconsumption has started to rise recently and some movements such as *minimalism* or *voluntary simplicity* have emerged, but more steps should be taken on a large scale.

The findings of the study suggest that policymakers should generate policies such as restricting the number of installments for purchasing conspicuous items. The Banking Regulation and Supervision Agency of Turkey already puts some restrictions on credit card installments to prevent persistent indebtedness. According to these regulations, installment payments cannot be used in expenditures on minted and ingot gold, food, alcohol, fuel oil, telecommunication, cosmetics, office supplies, and imported goods at the time of writing. In jewelry purchases—except for minted and ingot gold—the maximum number of installments is restricted. There are also various ceilings in installment payments in some sectors such as electronics, furniture, airlines, travel agencies, health products, clubs, and associations. This kind of implementation might be appropriate to distinguish needs from lavishness. In this context, adding limitations on installment payments in spending on clothing, footwear, and accessories whose price exceeds a particular threshold might be a useful policy to reduce wasteful spending.

In this study, the bundle of conspicuous products is limited to the goods that can be purchased through credit cards since our main goal is to examine the linkage between conspicuous consumption and credit card use. Hence, it does not cover conspicuous items that are not amenable to credit cards such as mobile phones, private air travel, large houses, yachts, and so on. Future studies extending this bundle would be helpful to get a more comprehensive understanding of conspicuous consumption.

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No potential competing interest was reported by the author(s).

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APPENDIX

Figure A.1 Household Income and Conspicuous Consumption

Figure A.2 Conspicuous Consumption by Age Group

Figure A.3 Conspicuous Consumption by Education Group