THE ROLE OF REGIONAL INCOME INEQUALITY IN CONSPICUOUS CONSUMPTION: A CASE OF TURKEY*

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ABSTRACT

Veblen effect of consumption might be said to be still valid in the 21st century and associated with an increase in inequality, individuals might try to maintain consumption expenditures disproportionate to an increase in their income. Similarly, Relative Income Hypothesis points to conspicuous consumption by assuming consumption expenditures of individuals not only depending on their own income level but also on income and consumption level of status group they pertain to. The purpose of this study is to analyze the possible linkage between income inequality and conspicuous consumption on economic perspective. The relationship between the share of conspicuous consumption items in total expenditures and Gini coefficient is investigated in Turkey by regions via panel ordinary least squares estimators. In this context 2006-2014 annual period is considered. According to results, the effect of inequality on conspicuous consumption is generally positive. Another finding is that the income share of higher quintiles ordered by equalized household disposable income has a significant effect on conspicuous consumption of lower quintiles.

Keywords: Veblen effect, conspicuous consumption, income inequality, panel data, Turkey

ÖZ

Veblenci tüketim yapısının 21. yüzyılda da geçerli olduğu söylenebilmekte, eşitsizlik artışıyla birlikte bireyler gelirlerindeki artışla orantısız bir tüketim harcaması düzeyini sürdürebilmektedir. Benzer şekilde Nispi Gelir Hipotezi de, bireylerin tüketim harcamalarının kendi gelir düzeylerinin yanında içinde bulundukları sosyal statü gruplarının gelir ve tüketim düzeylerine bağlı olduğunu kabul ederek gösterişçi tüketimeişaret etmektedir. Bu çalışmada amacımız Türkiye'de gelir eşitsizliğive gösterişçi tüketim arasındaki olası bağlantının yönünü iktisadi perspektiften ele almaktır. Çalışmada Gini katsayısı ileseçili gösterişçi tüketim harcama kalemlerinin toplam harcamalar içindeki payı arasındaki ilişki Türkiye'de bölgesel düzeyde panel en küçük kareler tahmincileri aracılığıyla konmaya çalışılmaktadır. Analiz kapsamında 2006-2014 periyodu esas alınmaktadır. Bulgular,eşitsizliğin gösterişçi tüketim harcamalarını genel olarak pozitifetkilediğini ortaya koymaktadır.

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Eşdeğer hanehalkı kullanılabilir fert gelirine göre sıralı gruplardan yüksek grupta yer alanların tüketimlerinin düşük grupların tüketim harcamaları üzerinde etkili olduğu da elde edilen başka bir bulgudur.

Anahtar Sözcükler: Veblen etkisi, gösterişçi tüketim, gelir eşitsizliği, panel veri, Türkiye

1. Introduction

Stability of consumption in economies with developed financial markets and no liquidity constraint is noteworthy. However, when evaluated together with the effect of the increase in domestic inequality, a stable but a debt-driven consumption structure which is considered as a result of the development in financial markets has encouraged us to make a research in a different field (Kapaller and Schütz, 2015; Carr and Jayadev, 2015). One of the questions to be answered at this point will be how conspicuous consumption is affected by this situation. While searching for this issue, we are confronted with a path from Veblen to Duesenberry, from Keynes to Friedman, from an ordinal-cardinal debate to marketing, from psychology to sociology-anthropology.

The conspicuous consumption may be explained as the willingness to signal higher social status in a society, and Veblen stated that the superiority of the American aristocracy is proved by means of "prominently consumption" except for "pecuniary competition" and "considerable leisure" (Jaikumar et al., 2018; Veblen, 2003). The indicators of this type of consumption are either directly or indirectly indicated by the wearing of the Aristocratic women and the houses of those from the aristocracy, and they are one of the most effective ways of attracting the attention of the society (Veblen, 2003). However, Veblen's perception of competition does not consider only people living in affluent countries. Hence, one could also observe the rich in developing countries living in luxurious houses, driving expensive imported cars and conducting outrageously expensive weddings. All these might be regarded as conspicuous consumption (Eaton and Eswaran, 2009). Thus, it would be a much more realistic approach to address the conspicuous consumption issue more broadly than to just associate it with the developed countries or with the higher income group. In this regard, Chai and Kaus (2012) empirically investigated both income groups, indicating that jewellery seems to be the only visible good to signal status used by low income households in the largest social group of the sample (black South Africans). Conversely, the expenditure categories such as clothing, footwear, automobiles and jewellery all are used for status among high income households. These goods are used to determine the status as they are associated with income distribution of social groups.

Having analyzed the relationship between income inequality and conspicuous consumption in Turkey in terms of economic aspects, this study initially presents the theoretical framework and related explanations in the relevant literature. Then the relationship between income inequality and the share of selected consumption expenditure categories of 20% groups ranked according to equivalent household disposable income is empirically investigated at regional level. The relevant literature suggests that these effects may vary across income groups. Thus, empirical analysis is conducted by considering different groups ordered by equivalent household disposable income. Due to the lack of empirical literature on the subject for emerging markets, this study is expected to make a contribution to the literature in this regard. Moreover, this study is of great importance as it is one of the first empirical studies addressing the relationship between income inequality and conspicuous consumption at regional level in Turkey.

2. Conspicuous Consumption and Income Inequality

The fact that ownership is based on a general reputation as an indicator of credibility and this situation becomes an inevitable condition of the person to be satisfied by himself/herself reveals various dimensions in which the conspicuous consumption issue might be related. The implicit coercion here is: The more the person has the goods and the more the number of goods can be increased compared to those around him, the more he will be satisfied to possess something more than others. This, in turn, gives rise to a new pecuniary classification based on the comparison of one's self with one's neighbours (Veblen, 2003). At that point, we see that Veblen made a distinction between two motives for consuming particularly conspicuous goods: "invidious comparison and pecuniary emulation" (Veblen, 2003; Bagwell and Bernheim, 1996).

The first refers to situations in which a member belonging to a higher class consumes conspicuously to distinguish himself from the members of a lower class. Pecuniary emulation emerges when a member of a lower class consumes conspicuously in order that he will be thought of a member of a higher class. The members of higher classes expose to some costs by knowing that these costs must be high enough to encourage imitation (pecuniary emulation) and that they voluntarily incur costs to distinguish themselves from the member of lower classes (invidious comparison). The striking point here is that the trend towards consumption expenditures has increased for households at the lower level of the income ladder (Relative Income Hypothesis). Because households' attitude towards consumption and savings is considerably influenced by the relative position in terms of household income rather than the abstract standard of living (Duesenberry, 1949). Just as in their previous study (Hopkins and Kornienko, 2004), Hopkins and Kornienko (2009) examine how the income is distributed between the consumption of normal goods and conspicuous consumption goods. They concluded that when relativity is considered, individuals will respond to an increase in the welfare of those who are below them through increasing their own conspicuous consumption so as to maintain their social position.

In this context, it is evident that conspicuous consumption is used as an indicator of wealth with a desire to achieve social status. That is, consumers are willing to pay a higher price for functionally equivalent goods (Bagwell and Bernheim, 1996). On the other hand, the choice of status goods is strategic as one can compare the car with that of the neighbour's while he is interested in the car's qualifications. In this respect, the choice of the neighbour's consumption affects the counterparty's payoffs and the counterparty's choices, in turn, affect theirs. As individuals are competing for their status, their choice of consumption for different goods will be strategic. The distribution of conspicuous consumption is endogenously determined due to social status. Thus, a rational individual makes a consumption choice in the expectation of consumption choices of other individuals (Hopkins and Kornienko, 2009).

Even though economists generally agree that social status is related to economic behaviour, four issues with regard to the economic foundations of social status are still object of a hot discussion (Bilancini and Boncinelli, 2012). The first is why people give value to their status, while the second is what is the status-bearing object. The third issue is relevant to the second one: is the status-bearing object thoroughly observable? The last issue is related to how one's status depends on the distribution of the status-bearing object – or, more clearly, how on earth the distribution characteristics determine one's social status. Frank (1985) states that in the event that some individuals make their arrangements of consumption bundles for conspicuous goods, those who do not do will be perceived at a lower level than the actual in the distribution of

productive talent. In the end, too many resources are devoted to the consumption of status goods. Robson (1992) mentiones an approach in which social status is determined by the distribution of wealth. Here, an approach is considered that the potential benefit is dependent on the wealth of others. The small increases in wealth in the context of the place and the degree in the distribution may create great increases in status. However, it is obvious that there can be no equilibrium distribution in this way.

Having examined the relationship between conspicuous consumption and income distribution, Hopkins and Kornienko (2009) note that the disintegration expressed by Frank (1985) would be eliminated if the distribution changed in favour of the lower class. Findings (Hopkins and Kornienko, 2009) reveal that more equality provided greater incentives to spend on goods for conspicuous consumption since it becomes easier to surpass one's neighbour or reach a higher position. An increase in equality which increases income even at the lowest percentage of the income distribution will make the poor much better. However, as an increase in equality goes up the degree of social competition, the condition of the middle class will worsen even if they have high incomes. A similar result is also approved in the study conducted by Heffetz (2011) on income elasticities and conspicuous consumption for high-income households. According to the findings obtained by Heffetz (2011), a negative income or wealth shock which first influences higher-income households will lead to consumption cutbacks at the top, thus disproportionately affecting visible expenditures. In another study conducted for Indian rural region, visible expenditures were found to increase despite the decrease in inequality, but the great emphasis was attributed to education (Roychowdhury, 2017). Arman (2013) examines the effect of income distribution on consumer behaviours and found a relationship between income distribution and consumer behaviours and that the propensity to consume increases as income increases. Research findings demonstrated that the consumption expenditures of households are mostly affected by income distribution. In particular, demographic characteristics of the participants, their education level, and place of residence, income, and propensity to consume are various factors that have an impact on income-consumption behaviours and expenditures (Arman, 2013). Chai and Kaus (2012) analyze how the distribution of income among social groups in South Africa influenced household consumption of conspicuous goods. Accordingly, they found a strong relationship between the two variables. An increase in the number of people with similar income levels for a given household leads to an increase in the expenditure of conspicuous goods. This result supports the models of status competition, where households consume conspicuous goods in order to obtain intra-group status among their peers.

However, studies that confirm the positive relationship between inequality and conspicuous consumption cannot be neglected. Based on their curiosity in whether conspicuous consumption is related to increasing income inequality and decreasing personal savings rates, Bertrand and Morse (2016) examine the subject within the context of trickle-down theory and suggested that the over-consumption of the middle-income households may be related to the increase in the supply of 'rich' goods in the market. Furthermore, the desire for not being left behind by the richer settlements through more conspicuous spending may be a reason for this additional expenditure. In their study for India representing emerging economies, Jaikumar and Sarin (2015) put forward that increased income inequality is associated with increased expenditures on conspicuous consumption particularly for low-income households and those living in rural settings. Besides, Bilancini and Boncinelli (2012) conclude that a lesser degree of inequality could decrease the value of social status and the social waste. Bagwell and Bernheim (1996) show that those in the

lower rank of wealth distribution find conspicuous consumption more costly. In contrast, Hwang and Lee (2017) find that when the average income is stable, as income inequality increases, the poor class decreases status consumption and the rich decreases status consumption due to the smaller marginal utility of status consumption. Walasek and Brown (2016) conclude that there is a positive relationship between income inequality of a country and concerns about the status competition of that country, and this trend is stronger among developed countries. In other words, the effect of income inequality is stronger in richer countries. Moreover, income inequality is associated with greater concerns with positional goods.

According to the findings of their study conducted to explore the paradoxical relationship between per capita income and perceived prosperity in affluent societies, Eaton and Eswaran (2009) emphasize that we get more affluent in time, but not happier. This result increases the possibility of deterioration in affluent countries. We might consume resources and plunder the environment without any good intentions. This also suggests that the emphasis of the society (and our profession) on growth has been misguided. This finding is in contrast with the study of Jaikumar et al. (2018). The related study shows that higher conspicuous consumption may create a subjective economic development and hence, the effect will be higher for households at the bottom of the pyramid. The issue that needs to be interpreted here is the long-term social impact of the contribution of criteria such as wealth, prosperity, growth and equality to the rise of conspicuous consumption. This is a new object of curiosity for our further studies.

Differently, Antinyan, Horvath and Jia (2019) by using an agent-based model of conspicuous consumption have analysed the impact of income inequality and redistribution on social status and welfare of individuals. The distinctive finding of the study is that redistribution of income does not significantly affect the relative status of individuals and the share of income spent on status goods. The overall impact of income redistribution on welfare is negative. The findings also suggest that the underlying networking process might be important when assessing the impact of income equality and redistribution policies on status consumption and individual well-being.

3. Data

In response to the studies in the literature investigating inequality-conspicuous consumption relationship in perspective of developed countries (e.g. Christen and Morgan, 2005; Hicks and Hicks, 2014; Walasek and Brown, 2016; Hwang and Lee, 2017), some studies reveal that the relationship is also valid for developing countries (e.g. Harriger, 2010; Banerjee and Duflo, 2011; Khamis et al., 2012). Thus, aiming to examine the impact of income inequality on conspicuous/visible consumption expenditures, this study utilized household data at 12 regions level (Level 1 Statistical Region Unit Classification) for Turkey as a representative for developing countries. [1] According to consumption expenditure data in Turkish Statistical Institute (TUIK) database, households ranked from small to large based on equivalent household disposable income, and five different household groups were formed starting from the first 20% to the fifth 20%.[2] Here,

1 These Level-1 regions are comprised of Istanbul, West Marmara, Aegean, East Marmara, Western Anatolia, Mediterranean, 4entral Anatolia, Western Black Sea, Eastern Black Sea, Northeast Anatolia, Middle East Anatolia, Southeast Anatolia.

2 TUIK publishes the distribution of consumption expenditures according to regions and expenditure categories in three-year periods starting from 2004. Accordingly, 2016 data published in newsletters is the combined result of 2014, 2015 and 2016. The same procedure is followed in our study and the data expressed in the databases as the period of 2004-2006 were used as 2006 data. According to the 2017 dated bulletin, the household sample in which the survey was applied were combined in 2014, 2015 and 2016 and the expenditures in 2014 and 2015 were withdrawn to the prices of the relevant month of 2016 in order to generate estimates on the basis of region based on data of Household Budget.

the first 20% income represents the lowest and the fifth refers to the highest income group.

Gross Domestic Product (GDP) per capita was obtained on Level 1 basis. As a measure for income inequality Gini coefficient on regional basis is also available for the period of 2006-2016 according to the equivalent household disposable income. The conspicuous consumption items in Khamis et al. (2012) were taken into consideration, and consumption expenditure shares were formed by summing up those which are common with TUIK expenditure groups,[3] by year and region. Data is obtained for the annual period of 2006-2014, considering the availability of each variable. All of the series were defined in logarithmic form. Data descriptions for the variables are presented in Table 1. Following the definitions of data, Table 2 displays descriptive statistics and correlation matrix.

Table 1. Data Description

Variable	Definition	Source
CC	Total conspicuous consumption share	TUIK, Regional Statistics (Level 1)
CC_n	Conspicuous expenditure share of the n. 20% group ranked according to income (n=1,2,3,4,5)	TUIK, Regional Statistics (Level 1)
Gini	Income Inequality Index (0-100)	TUIK, Regional Statistics (Level 1)
GDPPC	Gross Domestic Product per capita ($)	TUIK, Regional Statistics (Level 1)

Considering conspicuous consumption as a share of total expenditure (CC), the minimum and maximum values are approximately 44 and 63 percent respectively, and the standard deviation is not very high. Standard deviation of inequality is not very high as well, and the coefficient has an average value of 37. Correlation coefficients indicate a high link in the shares of conspicuous consumption expenditure of different groups. While there is a positive relationship between Gini and consumption expenditures for highest 20% group, there is a negative correlation among others. This raises the question of whether there is a positive relationship for lower-income groups. On the other hand, the correlation between income and consumption is positive and quite high as expected.

Table 2. Correlation Matrix and Descriptive Statistics

	CC	GDPPC	Gini
Mean	56.23954	15.34073	37.34
Median	56.30000	13.73850	37.50
Maximum	62.90000	43.64500	43.60
Minimum	44.10000	5.163000	30.90
Standard deviation	3.719612	7.654757	0.029134
Number of Observations	108	108	108

3 These expenditure components are, clothing and footwear, housing and rent, furniture and houses appliances, transportation, entertainment and culture and education services.

Table 2. Correlation Matrix and Descriptive Statistics (Continues)

	CC1	CC2	CC3	CC4	CC5	GDP	Gini
CC1	1.000000	0.937533	0.878099	0.817465	0.746737	0.884427	-0.272419
CC2	0.937533	1.000000	0.924595	0.875186	0.815020	0.840214	-0.189693
CC3	0.878099	0.924595	1.000000	0.874153	0.830563	0.811044	-0.208192
CC4	0.817465	0.875186	0.874153	1.000000	0.882334	0.716909	-0.081697
CC5	0.746737	0.815020	0.830563	0.882334	1.000000	0.736500	0.061716
GDP	0.884427	0.840214	0.811044	0.716909	0.736500	1.000000	-0.263185
Gini	-0.272419	-0.189693	-0.208192	-0.081697	0.061716	-0.263185	1.000000

Figure 1 portrays the distribution of Gini coefficients by region. As the descriptive statistics reveals Gini does not demonstrate significant deviations across regions. Thus this graph illustrates that using panel data at regional level is appropriate without a distinction between rural and urban areas.

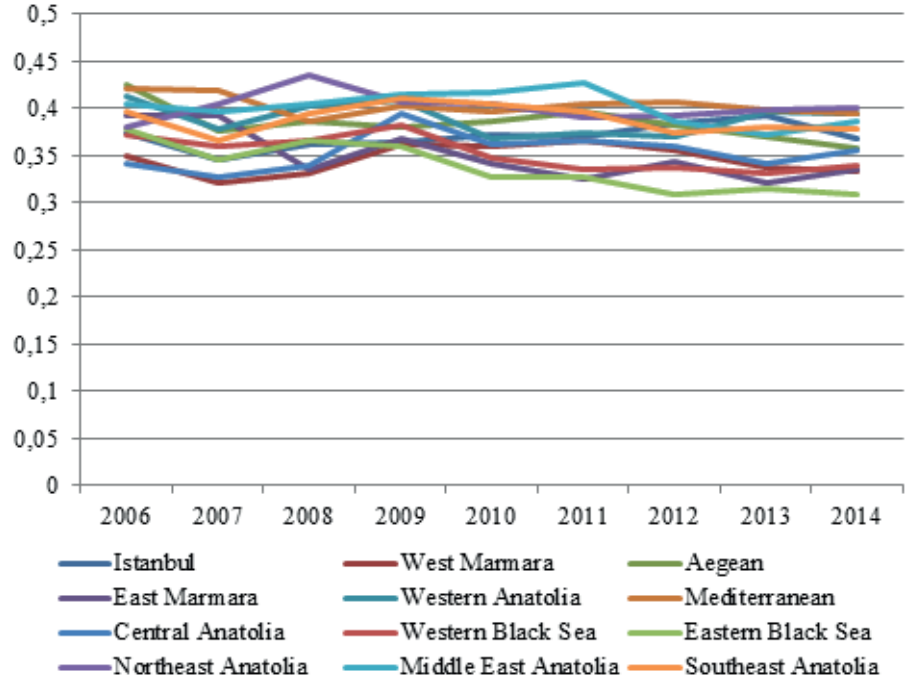

Figure 1. Distribution of Gini coefficient (by region)

Source: Created by authors based on TUIK data.

Figure 2 presents mean of annual consumption expenditure shares at regional level and total conspicuous consumption share and consumption shares for each 20% group. Figure 2 displays that the share of the selected consumption expenditures in the total expenditures for all groups increases for the period of 2006-2014.

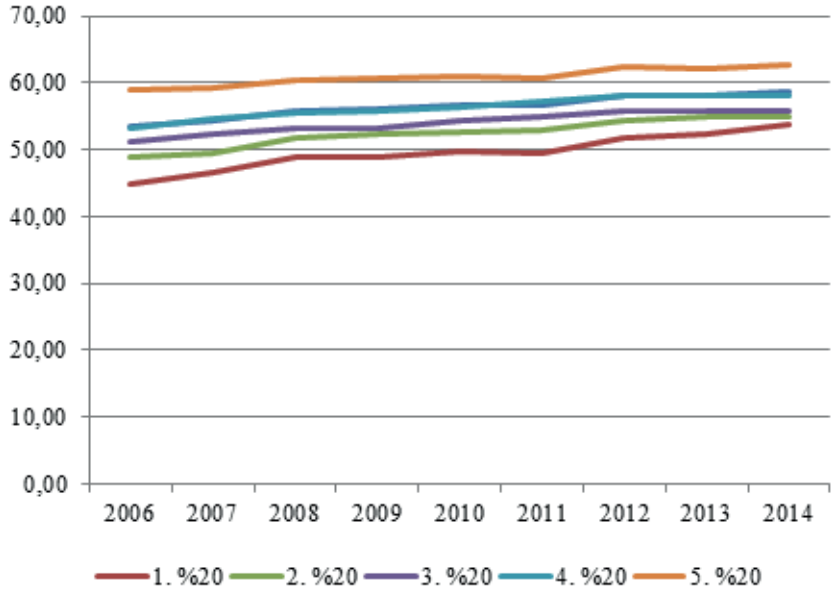

Figure 2. Distribution of Conspicuous Consumption Expenditure Shares by Groups (Average of Regions)

Source: Created by authors based on TUIK data.

In Figure 3, consumption expenditure shares for each region are included for the analysis period. As illustrated in Figure 3, highest conspicuous consumption expenditures are observed for Western Anatolia region during the period, while an increasing trend in Southeast Anatolia region which has the lowest level of consumption expenditure share is striking. Besides, there exists an increase for all regions.

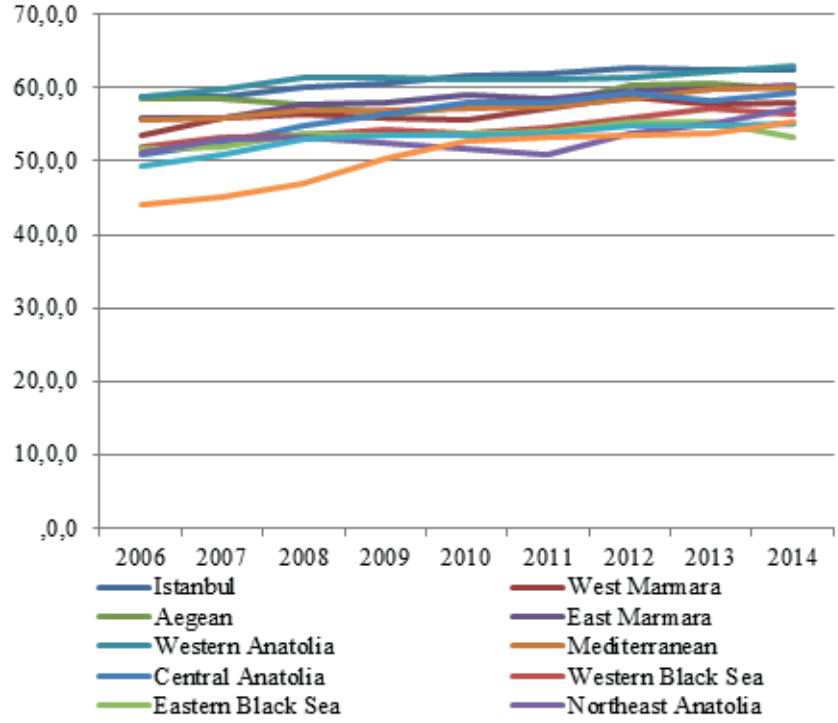

Figure 3. Distribution of conspicuous consumption expenditure shares by region (2006-2014)
Source: Created by authors based on TUIK data.

4. Methodology

Given multiple regions and a certain time interval rather than a single time, this study utilizes panel data including both time series and cross-sections. Linear panel data models are examined in three categories as the models in which constant term is common for all units, fixed-effect models and random-effect models. The common constant model, also called as pooled least squares (POLS), provides consistent estimates when there are no individual and/or time effects in error terms. When these effects are present, POLS method will give consistent estimates only if there is no correlation between these effects and explanatory variables $\left[E(X_{it}\mu_{it}) = 0 \; and \; E(X_{it}\lambda_{it}) = 0\right]$. Here, μ_{it} refers to individual effects and λ_{it} to time effects (Tatoglu, 2016). If this assumption is not ensured, POLS method will lead to biased and inconsistent results (Wooldridge, 2010). In addition, model is more likely to have fixed or random effects. In this regard, fixed effects, that is, unobserved effects, are those that are not varying over time and specific to countries/units/regions (Asteriou and Hall, 2011).

When a specific cross-section is considered, the fixed effects model (FEM) is the appropriate model. On the other hand, if these effects are random rather than fixed, the random effects model (REM) becomes much more preferable. However, REM requires that independent variables and random effects must be uncorrelated, that is the exogeneity assumption (Tatoglu, 2016). Thus,

Hausman test of which null hypothesis and alternative hypothesis are expressed by the system of equations below is used.

H_0: $E(X_{it}\ \mu_{it}) = 0$ (There is no correlation between explanatory variables and unobservable effects) (1a).

H_1: $E(X_{it}\ \mu_{it}) \neq 0$ (There is a correlation between explanatory variables and unobservable effects) (1b).

5. Model

Panel data model is formed as equation 2 referring to the parameters that *n* signifies 1, 2,……, 5 (from the first 20% to the last 20%) groups ordered by equivalent household disposable income, *i* indicates cross-sections, *t* is time dimension, μ_i implies unobservable fixed effects, v_{it} signifies the error term including random effects (since group effect is not fixed in REM, it exits in error term as it is random rather than a fixed parameter).

$$CCn_{i,t} = \alpha_i + \beta\ GINI_{i,t} + \lambda\ GDPPC_{i,t} + \eta\ X_{it} + \mu_i + \nu_{it} \quad (2)$$

Here, $\lambda > 0$ is expected which means that an increase in per capita income leads to an increase in conspicuous consumption. If β coefficient, which constitutes the main subject of our analysis, is larger than 0, an increase in inequality leads to an increase conspicuous consumption expenditures in line with theoretical framework and our expectations. According to Christen and Morgan (2005), as income gap increases, those in lower position of income distribution are not satisfied with their position and this loss of social status directs them to conspicuous consumption (keep up with the Joneses). On the other hand, as a result of these efforts to increase their status, lower-status groups in search for higher-status may tend to save with an increase in inequality, which may result in a reduction in conspicuous consumption. For Moav and Neeman (2012), conspicuous consumption expenditures in developing countries result from the lack of high-yielding financial institutions or substitution to education and more professional areas (as in developed countries). In other words, poor households may tend to spend on other conspicuous consumption expenditures as substitutes for education. However, the expenditures in our analysis also cover educational expenditures.

In the literature, another relationship that requires to be analyzed in relation with relative income hypothesis and 'keeping up with the Joneses' is *expenditure cascade* which is defined in current literature as a process whereby increasing expenditure by those having higher income leads others behind them to spend more as well (Frank et al., 2014). For this purpose CC5 is used as a control variable.

6. Findings

Table 3 shows the estimation results of the models in which the conspicuous consumption expenditures of the first three 20% groups (from the lowest to the third row 20%) ordered by equivalent household disposable income are dependent variables.

Table 3. Estimation Results - I (First three 20% groups)

Independent variables	Dependent variable					
	CC1 (Model1)		CC2 (Model2)		CC3 (Model3)	
	Fixed effects model	Random effects model	Fixed effects model	Random effects model	Fixed effects model	Random effects model
Gini	0.098 (0.163)	0.082 (0.191)	0.133** (0.035)	0.134** (0.020)	0.121* (0.073)	0.112* (0.057)
GDPPC	0.188*** (0.000)	0.191*** (0.000)	0.144*** (0.000)	0.152*** (0.000)	0.113*** (0.000)	0.127*** (0.000)
F Test	6.949*** (0.000)		10.311*** (0.000)		7.570***(0.000)	
Hausman Test	Chi-square: 1.091***(0.579)		Chi-square: 3.796 (0.149)		Chi-square: 9.213 (0.010)	

Note: *, ** and *** show statistical significance levels of 10%, 5% and 1%, respectively. Probability values are in parentheses.

F test results show the existence of unobservable individual effects. Hausman test results reveal that null hypothesis $E(X_{it}\ \mu_i) = 0$ is rejected in the first model. While first two models could be estimated by REM and the other by FEM, there is no considerable difference in estimation results with respect to coefficient significance. Table 4 displays estimation results of conspicuous consumption models of last two 20% (the highest) groups

Table 4. Estimation Results - II (Last two 20% groups)

Independent variables	Dependent variable			
	CC4 (Model4)		CC5 (Model5)	
	Fixed effects model	Random effects model	Fixed effects model	Random effects model
Gini	0.130* (0.062)	0.142** (0.019)	0.202*** (0.001)	0.228*** (0.000)
GDPPC	0.109*** (0.000)	0.111*** (0.000)	0.077*** (0.000)	0.089*** (0.000)
F Test	4.852*** (0.000)		4.096*** (0.0001)	
Hausman Test	Chi-square: 0.238*** (0.887)		Chi-square: 4.781 (0.092)	

Note: *, ** and *** show statistical significance levels of 10%, 5% and 1%, respectively. Probability values are in parentheses.

Similarly, F test results indicate the presence of individual effects. The Hausman test results suggest that the null hypothesis $E(X_{it}\ \mu_i) = 0$ is rejected in the first model, while it is not in the second. Thus, both models could be estimated through REM. However, the results do not vary much across estimators. The coefficient estimations show that an increase in income inequality for all groups except for the lowest 20% group increases the share of conspicuous consumption expenditure. This result is in line with Bilancini and Boncinelli (2012), Jaikumar and Sarin (2015) and Walasek and Brown (2016) while contrasts with Hwang and Lee (2017). In addition, there is a significant and positive effect of income on conspicuous consumption expenditures for all 20% groups. As expected, the size of this effect decreases from the lowest to the highest group.

The results in Table 5 show whether the consumption expenditures of CC5 group has an effect on those of CC1 and CC2 groups by means of 5th and 6th models. [4]

Table 5. Estimation Results - III

Independent variables	Dependent variable			
	CC6 (Model6)		CC7 (Model7)	
	Fixed effects model	Random effects model	Fixed effects model	Random effects model
CC5	0.232** (0.036)	0.229** (0.029)	0.463*** (0.001)	0.477*** (0.000)
GDPPC	0.167*** (0.000)	0.169*** (0.000)	0.106*** (0.000)	0.109*** (0.000)
F Test	6.947*** (0.000)		10.955*** (0.000)	
Hausman Test	Chi-square: 0.486*** (0.784)		Chi-square: 1.848 (0.397)	

Note: *, ** and *** show statistical significance levels of 10%, 5% and 1%, respectively. Probability values are in parentheses.

Taking into account the effect of consumption expenditures of the highest 20% group on lowest two 20% groups, positive coefficients of CC5 show that low-income households determine their expenditures by considering the expenditures of high-income group in line with Frank et.al. (2014). Indeed, Hopkins and Kornienko (2009) also emphasize that a rational individual while deciding on their consumption takes into account their own expectations on consumption of other individuals.

7. Conclusion

This study analyses the effect of income inequality on conspicuous consumption in 12 different regions of Turkey for 5 income groups ordered by equivalent household disposable income for the 2006-2014 period. The results reveal that an increase in inequality increases the share of conspicuous consumption expenditures except for the lowest 20%. Moreover, an increase in per capita income, which is expected to have a positive impact on consumption expenditures, also increases conspicuous consumption expenditures in all groups. The size of this increase decreases from the lowest 20% expenditure group to the highest 20%, which is in line with the assumptions of fundamental consumption hypothesis.

The fact that effect of inequality on consumption expenditures in the lowest 20% group is not statistically significant is an indication of income is much more dominant determinant for this group and that inequality rather utilises the higher groups. Decreasing effect of an increase in per capita income on conspicuous consumption expenditures from the lowest income group to the highest may be due to the fact that we might underestimate the effect of wealth and savings in high-income groups. On the other hand, the effect of conspicuous consumption of the highest 20% group on the consumption expenditures of the lowest two 20% groups is also found to be significant and positive. Therefore, the results favours both the relative income hypothesis and current discussions in the literature.

4 Since there is a correlation between income inequality and CC5, estimation is conducted with the exclusion of Gini coefficient from these models.

Policy responses carried out to develop a financial environment in which financial institutions will serve to have the poor enjoy higher income may reduce the conspicuous consumption needs of this groups and reduce the status gap through savings which moderate consumption. Conspicuous consumption based on only leverage/debt with high risk may also decrease. Tax reform may also be discussed in the further phase of the study in terms of the redistribution of income. The distribution mentioned here is from high-income individuals for whom status goods are attainable to those with low-income. As emphasized by Cooper et al. (2001), by this means aggregate demand for status goods is expected to decrease. Expenditure on the conspicuous consumption may also be reduced due to a redistribution from the groups in which there is an incentive for status goods to lower-income groups.

Ethics Statement

No human studies are presented in this manuscript.

Author Contributions

The authors confirm being the sole contributor of this work and have approved it for publication.

Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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