

Emulation vs. Socializing Consumption:

The Hispanic Consumer

by

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ABSTRACT: There is mounting evidence that there is some differential in consumption according to race and ethnicity. There is also some new evidence that this difference in consumption by race and ethnicity may not be as strong when one takes into account the notion of conspicuous consumption first outlined by Veblen (1899). This paper adds to this literature by first pointing out that Hispanics, more so than any other groups, are likely to shop with companions and that this fact may alter their consumption patterns when compared to Whites or Blacks. Furthermore, we find that consumer emulation also suggested by Veblen (1899) may not be as persistent as he indicated but it is at least wide spread. Nonetheless, even with the Veblen effects, the racial and ethnic differences in consumption are not eliminated in all expenditure categories.

The Hispanic population is the fastest growing demographic group in the US. The Hispanic population in 2009 accounted for 15.8% of the US population up from 12.5% in the 2000 Census and 9% in 1990.¹ In real terms, the dollar value of Hispanic expenditures increased by 167.2% between 1990 and 2008 as compared to an increase of only 34.9% for the population as whole.² As such, there is an increasing interest in understanding Hispanic consumer behavior (Deshpande (1986), Webster (1994), Pauling (1998, 2003), DeCicca et al. (2000), Lanfranco et al. (2002), Charles et al (2009)). These studies, with the exception of Charles et al. (2009) hereafter CHR, have assumed a standard utility function that assumes the consumer derives utility directly from the purchasing of the commodity or commodities in question. CHR base their analysis on the “conspicuous consumption” literature that has developed around the “snob” effect introduced by Leibenstein (1950) and expanded by Ireland (1994) and Bagwell and Bernheim (1996) that in turn was based on the notion of emulation (though not explicitly stated by them) introduced by Veblen (1899). CHR show that racial differences in consumption expenditures are for the most part eliminated after accounting for the consumption of visible goods (an example of goods that represent conspicuous consumption). Their study is a clear

¹ “We are Hispanics”, US Census, 1993. US Census people quick facts URL: <http://quickfacts.census.gov/qfd/states/00000.html>, downloaded 10/26/2010. “Overview of Race and Hispanic Origin,” US Census, March 2001, at <http://www.census.gov/prod/2001pubs/c2kbr01-1.pdf>

² Calculations done by the authors using the consumer expenditure survey (CEX) and using the populations weights provided by the survey.

indication that to understand whether or not there are racial or ethnic differences in consumption one must address nonpecuniary effects.

The purpose of the present work is twofold. First, introduce an additional nonpecuniary aspect that could explain whether there is a racial or ethnic difference in consumption. The foundation for this approach is based on the seminal work by Lancaster (1966). Lancaster argued that the household in a sense operates as a firm and the consumption of goods are inputs which the house turns into final goods. The household utility function is then based on these final goods directly and on the consumer goods (the inputs) indirectly. Starting off from this premise, this paper purports to show that consumer purchases made by Hispanics on some products (including the so called visible goods described by CHR) are inputs into a production household process. There is ample evidence that more so than any other group, Hispanics view shopping not as a chore but as a form of socializing and entertainment (Nicholls and Roslow (1995), Nicholls et al., (1996), Crispell (1997), Gardyn and Fetto, (2003)). In fact, there is such a wide understanding that shopping with companions is such an important element of the Hispanic shopping experience that Nicholls et al (1996) suggest that retailers can attract Hispanic consumers by providing “two-fers” (i.e. two for one sales) since they normally shop with at least one companion. Consequently, while the purchases themselves are important, we argue here that the act of purchasing along with others is the product (in the Lancaster sense) that Hispanics are consuming. The impact of the “socialization-of-the-shopping” experience must not be treaded lightly when evaluating consumer expenditures and we will refer to it here as *socializing consumption*. For instance, Nicholls et al. (1995) found Hispanics spend more per shopping trip to the mall than non-Hispanic consumers. Crispell (1997) found that Hispanic window shoppers are more likely to purchase than non-Hispanic shoppers.

The second purpose of this work is to add to the growing literature that is re-evaluating consumer behavior using the precepts establish by Veblen (1899). In this literature the vast majority approaches the Veblen effects based primarily on the concept of conspicuous consumption and the interpretation of the “snob-effect” introduced by Leibenstein (1950). While the notion of conspicuous consumption is central to Veblen’s understanding of consumer behavior, it is not the only one. Veblen indicated that the more primordial aspect of consumer

behavior is *emulation*. There is an understanding of the importance of emulation from the need to work longer hours as income inequality increases (Bowles and Park (2005)), to that of strategic firms using this concept to increase their sales by catering to consumers that are more likely to be emulated by others (Kircher and Postlewaite (2008)),³ to the reason of why many credit card owners over-borrow (Scott (2007)).

The remainder of the paper is structured in the following manner. The next section provides some background on the notions of consumer emulation and socializing consumption. The third section provides the data and the models to be used. The following section provides the results and the final section gives a conclusion.

BACKGROUND

The concept of conspicuous consumption has been associated with the so called “snob-effect” first introduced by Leibenstein (1950). The use of the term conspicuous or “waste” is an unfortunate term that has led many to assume that Veblen spoke of conspicuous consumption as an element of the upper classes (Basmann et al., 1988). Veblen states that

“(i)t is obviously not necessary that a given object of expenditure should be exclusively wasteful in order to come in under the category of conspicuous waste. An article may be useful and wasteful both, and its utility to the consumer may be made up of use and waste in the most varying proportions. It is in fact a pervasive attitude throughout all social-economic classes” (Veblen, 1899, p.79).

Furthermore, the desire to emulate is by far a more important aspect of utility maximization in a Veblen sense.⁴ As he states:

“(w)ith the exception of the instinct of self-preservation, the propensity for emulation is probably the strongest and most alert and persistent of the economic motives proper” (Veblen, 1899, p. 85).

³ An entertaining twist on this concept can be found in the movie *The Jones Family* (2009). In this movie the Jones family is a physically attractive trend setting family living in an upper class neighborhood. But in reality it is a marketing created family used to display consumer goods to be emulated by the other families. In other words, a marketing created family supplanted in a real neighborhood for commercial advertisement based on the notion that consumer’s main consumption motivator is emulation.

⁴ Another interesting approach to Veblen’s emulation concept is that of Ghigliano and Goyal (2010) who make use of a utility function that is dependent of the rate of change of the consumption of one’s neighbors.

For instance, Bowles and Park (2005) have shown that increased income inequality leads to increased work hours by lower income households in an attempt to maintain parity with consumption. Scott (2007) suggests that consumer emulation is central to the over borrowing that has been plaguing the American consumer. This view of emulation as a motivator for consumption implies that placement of the individual in the income distribution will impact the consumption level of the individual. Consequently, an income variable of the individual as well as that of the community of which he/she is part of must be used.

The notion of *socializing consumption* stems from the fact that Hispanics, more so than any other group, have a strong tendency to shop in groups. For instance, there is ample evidence that Hispanic shopping behavior (in particular retail shopping at the Mall for clothing) is different from other racial or ethnic groups. Hispanics shop with companions in larger numbers than other racial or ethnic groups (Nicholls et al. (1995), Nicholls et al., (1996), Crispell (1997), Sanchez (2002), Gardyn and Fetto, (2003)). As pointed out above, this group consumer behavior by Hispanics is not just an issue of whom they shop with but the probability that this group behavior may impact the amount they spend. For instance, they tend to spend more on each shopping trip than any other racial or ethnic group (see Nicholls et al. (1995) and Crispell (1997)). Hence, knowledge of this *socializing consumption* can be useful in a variety of ways. For example, it can be used to implement the marketing tool of “two-fers” by retailers to attract Hispanic consumers (Nicholls et al. (1996)).

There already exists a format under which *socializing consumption* can be studied using utility theory. Lancaster (1950) suggested that the household is operating as a firm where the goods it consumes are the inputs into the production process from which the final goods enter directly into the utility function of the household. If Hispanics are using shopping as a social entertainment activity they will spend more time shopping with at least one other person than do other racial or ethnic groups. Studies done on Hispanic consumers (Nicholls et al. (1995), Nicholls et al., (1996), Crispell (1997), Sanchez (2002), Gardyn and Fetto, (2003)) have shown this socializing behavior. We use the American Time Use Survey (ATUS)⁵ to evaluate whether this national survey results in similar findings to the local surveys conducted by the above

⁵ ATUS is conducted by the Bureau of Labor Statistics (<http://www.bls.gov/tus/>).

researchers. The concept of *socializing consumption* would best be tested if we had representative surveys that account for time spent shopping (alone and with others) and how much these households spend on consumer goods. Unfortunately, the ATUS only provides information on the time usage and does not provide information on consumption expenditures. The CEX⁶ provides that information but not the time usage. Consequently, it is not possible to test the *socializing consumption* directly. We need a two step process to construct the test. First, as mentioned above, Hispanics must spend more time shopping with others. This portion of the test can be performed through the use of the ATUS. If the first step indicates that Hispanics do spend more time shopping in the company of others as compared to other racial or ethnic groups then we proceed to the second step of the test. The second step would be to analyze consumption patterns. This portion of the test is done in two stages. First, we need to evaluate if consumption patterns differ across racial and ethnic groups. Second, we need to evaluate if consumption patterns among different racial and ethnic groups remain after a Veblen effect is included. If the differences exist by the demographic groups but not with a Veblen effect, then the racial and ethnic differences may be attributed to other factors. In the case that the difference is on a consumer category that would be the type of items purchased during a Mall visit, then we could infer that those consumers are making their purchases in the form of a Lancaster product.

DATA AND MODELS

The two data sources used here are the ATUS and the CEX. Both of these surveys are conducted by the Bureau of Labor Statistics. The Minnesota Population Center provides a useful way of utilizing the data of the ATUS through its extract builder web page.⁷ The ATUS is an annual survey that has been conducted since 2003 and addresses the issue of how Americans divide their time among life's activities (Horrigan and Herz, 2004). The time variables are constructed only for the respondent and the information on the other household members is provided only for the purpose of analysis. Consequently, the respondent could be a traditional head of household but he/she could also be a child in a household or an older parent living in the household. Since our interest is on the consumption behavior of individuals that have more control over their time usage than teens living at home or retired individuals who are likely not to

⁶ CEX is also conducted by the Bureau of Labor Statistics (<http://www.bls.gov/cex/>)

⁷ <http://www.atusdata.org/index.shtml>

have work time constraints, we narrow our sample to individuals between the ages of 25 and 65. For the dependent variable we constructed a retail shopping variable which excludes shopping for food, groceries and gas. We did not restrict the time of day when the shopping was done.⁸ We had two retail shopping variables: time spent shopping alone and time spent shopping with someone else.⁹ We then selected a variety of explanatory variables: age of respondent, sex, marital status, number of household members, number of children 18 and under in the household, geographical regions,¹⁰ the family income and educational dummies (less than high school, some college and college and higher; with the excluded educational level being high school). The model we ran using the ATUS data then is:

$$y_i = \beta_0 + \beta_1 Black + \beta_2 Hispanic + \beta X + \varepsilon \quad (1)$$

Where y is the time devoted to shopping and i is either alone or with someone. Black and Hispanic are the race and ethnic variables and have the value of 1 if respondent is of the corresponding group and 0 otherwise. The omitted group is White.¹¹ β is a vector of coefficients and X is a matrix of the controlling variables (listed above). Because there are a large number of zeros associated with each of the two y s, we use a Tobit estimation technique. The results are presented in the next section. Suffice it to say here that it is clear that Hispanics are more likely to shop with others than the other race or ethnic groups.

The second step of our test requires that we determine whether there is difference in expenditure due to race or ethnicity. We use the consumer expenditure survey CEX, same as CHR, which is conducted annually with approximately ten thousand households. The survey is conducted under two different formats: the Diary and the Interview format. This study utilizes the Diary format.¹² CHR point out, accurately, that in estimating expenditure functions one should rely on the Friedman's permanent income hypothesis since expenditures are more likely

⁸ We could have restricted the time of day but that could have caused problems since the causality between income and educational level with time of the day in which shopping is done could be ambiguous.

⁹ For this study we did not select the relationship between the respondent and the individual(s) with whom they shopped. Clearly, that is a distinction that could be fruitful in other studies.

¹⁰ We used the Northeast, the Midwest, and the South. The excluded region was the West.

¹¹ We excluded Asian, American Indian and other groups since they were represented by a very small percentage of households.

¹² Different studies use one or the other and some use both.

to be based on the lifetime earnings than the transitory current income (Friedman, 1957). Following CHR, we use the total expenditure as a proxy for permanent income. As CHR point out, using the expenditure as the proxy for permanent income brings about two issues. First, expenditure components are jointly determined in models of lifecycle consumption, and thus total expenditures are endogenous in an equation for any component of expenditures. Second, there is the concern that measurement error in the components of consumption will be related to measurement error in total expenditures. Similar to CHR, we address these two issues by using the instrumental variable of total expenditure. We instrument total expenditure through income and other variables. In particular, we use the job category of the consumer which we assume could impact the total expenditure but it is not as likely to impact individual components. CHR use Current Population Survey (CPS) data to estimate the income variables since they point out many of the issues associated with the lack of imputation of income in the CEX (CHR, 433).

The drawback of not using the CEX income data is that the relative income position of the household cannot be estimated and thus one must resort to testing the emulation hypothesis (or the conspicuous consumption as CHR refer to it) based on the CPS data for the specific racial or ethnic group average data by state and not the actual income of the household. Passero (2009) shows that the income imputation that the BLS has been constructing starting with the 2004 CEX has resolved many of the differences in the aggregate household income between the CEX and CPS.¹³ The use of the CEX after 2004 allows us, thus, to construct some emulation variable based on the position of the household in the income distribution. We use the CEX between the years of 2004 and 2008.¹⁴ The use of the relative position of the household in the income distribution allows for another interesting aspect of emulation. There is the question as to whether emulation is based on gross or net income. We ran the models under both scenarios and found no significant difference in the results.

¹³ Passero (2009) does show that at the income component level there are still some issues. But since in this study we only use the overall income before taxes and income after taxes, such disparities are not an issue.

¹⁴ We actually have also done the study using the CEX between 1990 and 2008. While there are some differences in the results, the main thrust of our results remains. This lead us to argue that while the lack of income imputation in the previous year's do create some problems, one should question whether these issues are large enough to reject the wealth of information built in to the income in all those years.

The expenditure categories we used are: food, alcohol, owned housing, rented housing, housing repairs, housing furnishing and appliances, housing other, electronic entertainment, and transportation. Two other categories which are important to understanding *socializing consumption* are the clothing and jewelry expenditure component and the entertainment services. Clothing and jewelry is part of what CHR calls visible goods and entertainment services include movies, sports events, and other expenses that could be substitutes for shopping entertainment.

In addition to the Hispanic, Black and White demographic dummy variables,¹⁵ we also include several explanatory variables. We use the age of the reference person. Since we restricted the ATUS data to only individuals between the ages of 25 and 65, we do the same with the CEX data. We also use a dummy for urban setting, family size, the number of kids in the household 18 or younger, the dummy variables for education are similar to those in the ATUS though we separate college and more than college,¹⁶ and the same regions as in ATUS. For the instrumental variables we used the family income before and after taxes as well as the occupation of the reference individual. The dummies for the occupation categories we use are: manager and professional; administrative support, technical, sales; service; operator, assembler, laborer; precision production, craft, repair; farming, forestry, fishing; armed forces; retired; and unemployed. The excluded variable was self-employed in own business, professional practice, or farm.

In order to capture the emulation effect we constructed two sets of variables for after tax income.¹⁷ To construct these sets of variables we begin by constructing our basic emulation variable. First we find the mean income for the White, Hispanic and Black households in each state and in each year. The main difference of this mean to that found by CHR is that we constructed them directly from the CEX data since we are only using the survey after it began imputing income in 2004 (see Passero (2009)).¹⁸ The emulation variable (V) is then constructed by determining whether the household income is below the average income for each of the racial

¹⁵ Just as with the ATUS data, we do not include Asian, American Indian and other groups in our sample.

¹⁶ Consequently, we have less than high school, high school, some college, college and beyond college. The excluded remains High School.

¹⁷ We estimated the models with income before tax but we did not find significant differences. They are available upon request.

¹⁸ Because our intent is to determine whether the consumer is emulating the consumption patterns of those above them we do not use the mean and the coefficient of variation as CHR did.

or ethnic group in a given state in each year. If the household income is below the average it takes the value of 1 with zero otherwise. We then use V to estimate our two sets of models. The first set of models assumes that the emulation effect is the same for all race and ethnic groups and thus we use V directly in the model. Consequently, if V is associated with a positive and significant coefficient it would be an indication that there is an emulation effect. In addition, we interact the emulation effect (V) with the household's income (VI). The interpretation of this variable is as follows. As income increases, or in this case as income approaches the mean income for each year and state of each individual's race or ethnic group, we are determining whether the emulation effect is increasing or decreasing. The next emulation model assumes that the emulation effect differs between the different race and ethnic groups. We construct this variable through the interaction of the emulation effect with the Hispanic variable (1 Hispanic, 0 otherwise) which we label VH and VB (constructed by interacting V with Black also constructed as 1 if the household is Black and 0 otherwise). The interpretation of these variables is as follows. If the coefficient of the Hispanic variable is not significant but the coefficient for VH is positive and significant that would imply that the reason Hispanic consumers spend more on this expenditure category is that they are attempting to emulate the higher income Hispanic households. On the other hand, if the significances were to be reversed and the coefficient for Hispanics was positive that would imply Hispanics spend more on this expenditure category but do it for a reason other than emulation.

We produce several models. First, we take the logarithmic models while first only accounting for the household demographic and race and ethnicity using a yearly fixed effect model.¹⁹ Then we add control variables for region also with in a yearly fixed effect model. Finally, we add separately the two sets of Veblen variables. The introduction of the emulation variables is done by using all of the previous control variables and a yearly fixed effect model. The first Veblen model assumes emulation effect is similar across racial and ethnic groups (V and VI). The model testing for difference in emulation effect by race or ethnicity uses the Hispanic (VH) and the Black (VB) emulation variables. In each of these sets of models we use the log of the total expenditure. For all of the above models we estimate first using the actual

¹⁹ CHR used a state fixed effect model.

total expenditures and in the other we instrument (IV) for it in the manner described above. The model below is used

$$\ln(\text{expenditure component})_i = \beta_0 + \ln(\text{Total Expenditure}) + \beta_1 \text{Black} + \beta_2 \text{Hispanic} + \beta_3 X + \beta_4 (\text{Regional Controls}) + \beta_5 \text{Veblen1} + \beta_6 \text{Veblen2} + \varepsilon \quad (2)$$

where Veblen1 is the emulation variable (V) and Veblen2 is the interaction of V with income (VI) in the case that we are modeling under the assumption that the emulation effect is similar across racial and ethnic groups. In the case that we allow for emulation effects to differ across racial or ethnic group then Veblen1 will be VH and Veblen2 will be VB.

In the next section we present the results for all of the above models using the actual total expenditure and the IV models. For the sake of brevity, we show the two approaches only for the clothing and jewelry, entertainment expenditures, total household expenditures, and housing expenditure for furnishings and appliances. These all are clearly visible expenditures. For the other expenditures we only present the IV models.²⁰

RESULTS

First, we need to review the models that determine if Hispanics are likely to spend more time shopping, and more importantly, if they are more likely to spend more time shopping with at least one companion. Using the model set in equation (1) and using the ATUS data we estimate the equations for shopping alone and shopping with others. The results of this model are presented in Table 1. The table indicates that clearly relative to Whites, Hispanics are more likely to shop with others and much less likely to shop alone. Blacks on the other hand, relative to Whites are more likely to shop alone. Furthermore, the results of the control variables had the expected impact. For instance, married individuals were more likely to shop with a companion. Women were more likely to shop with others. Individuals in the South and Midwest were more likely to shop with others than those in the West but those in the Northeast were more likely to shop alone. The more individuals in the household and the larger the number of kids 18 and younger the more likely the individual was to shop with others.

²⁰ The others are available from the authors upon request.

Table 1 Shopping Habits		
<i>Dependent Variable</i>	<i>Hispanic</i>	<i>Black</i>
Shopping Alone	-6.48**	1.13
Shopping with at least one Companion	8.49**	-22.9***
Shopping whether alone or with others	5.38**	-10.3***
** - Significant at 5% and *** significant at 1%		

The results in Table 1 are a clear indication that Hispanics are indeed more likely to shop in the company of others than do Blacks and Whites. It is also clear that Hispanics spend more time shopping than Blacks or Whites regardless of whether they are shopping alone or with others. Thus, the first step in testing whether consumer expenditure by Hispanics follows the notion of *socializing consumption* is confirmed. The results based on the ATUS confirm the results found by local surveys discussed above.

The second step of the test is based on the consumer expenditure models and we use the CEX data for the estimation. Table 2 presents the logarithmic model in equation 2 for the various controls and for the two sets of Veblen variables. The expenditure categories in this table are those which can be categorized as visible goods. They are clothing and jewelry (CJ), entertainment services (ES), all housing expenditures (AH), and expenditure on housing furnishing and appliances (HF). The models for the CJ expenditures show that both Hispanics and Blacks spend more on this very visible category across all models. The IV model assuming the emulation effect is similar across racial and ethnic groups shows that there is a strong emulation effect (V) and that as the income increases for those below the mean income of each racial and ethnic group, the emulation effect decreases. Evaluating the emulation effect for the model that does not assume that emulation effects are similar across the different racial and ethnic groups shows that while it is significant for Blacks (VB) it is not for Hispanics (VH). This result suggests that, unlike Blacks, Hispanics are not as likely to consume this good to emulate. This result can be analyzed along with the time use model that suggest Hispanics like to spend more time shopping with others than do Whites or Blacks. The two results are an indication that

perhaps Hispanic consumers do see the purchases of CJ as part of a Lancaster production process. Unfortunately, unless we have the information on both time usage and expenditure on the same households this hypothesis cannot be verified. The results presented here provide sufficient evidence that we cannot discard the strong possibility that Hispanic consumers do see the purchasing of clothing and jewelry through the prism of a Lancaster approach.

The remaining results in Table 2 provide some other indication that the emulation approach to consumption is strong among Hispanic and Black consumers for some goods and not for others. For instance, both Hispanics and Blacks have a strong tendency to consume less entertainment services across all models. With respect to the model assuming emulation is constant among groups it is clear that there is a strong tendency to emulate entertainment services with this tendency decreasing as income rises for those below the mean income. It is also evident that emulation is strong among all groups but not exclusive to Black or Hispanics since both the coefficients for VH and VB are not statistically significant. The results for all housing expenses provide some very intriguing findings. The IV models using either emulation effect show that the impact is primarily from the Veblen effects and not whether the consumer is Hispanic or Black. In other words, after accounting for all the control variables (all which have the expected coefficient signs) the difference in the entire package of household expenses can only be explained by the emulation effect. The overall difference in housing expenditures is solely based on the emulation effect regardless of which Veblen models were used. As will be seen in Table 3, this strong emulation effect is only valid when looking at the overall housing expenditure category and is not as clear for individual household expenditure components. This result is interesting in that it provides further evidence that the Lancaster approach can also be used to understand emulation effects. In this instance, the fact that the emulation effect is larger when looking at the overall housing expenditure versus its various components is an indication that the household is consuming a final product called household expenditures with the basket of goods (its components) being the inputs.

The expenditures on housing furnishings and appliances, a clear visible consumer good, show some evidence of differential between racial and ethnic groups and emulation effect though not as evident in the case of the total housing expenditures. First, the IV model assuming

emulation is similar across racial and ethnic groups shows no evidence of difference between Hispanic or Blacks but a difference based only on emulation. This result is similar to that for AH but the significance of the emulation effect (V) is not as strong. The result assuming a difference in the emulation effect across Hispanic and Black groups is once again similar to that of AH and again not as significant. The results of Table 2 show that Hispanic consumers are likely to consume more clothing or jewelry, but not because of the concept of emulation. We concluded that it is likely that Hispanics view the process of purchasing this commodity and its use as both a form of consumption and entertainment. This table also provides strong evidence that the emulation effect is strong for many of these visible goods but that the difference in consumption attributed to race and ethnicity do not always vanish.

Table 3 provides only the IV models for other expenditure categories and provides additional evidence of the importance of the emulation effect. The Food expenditure category shows that Hispanics spend more on this category than Whites and Blacks spend less even as the control variables are increased. The emulation effect assuming it is similar across racial and ethnic groups is significant and decreases as the income increases to the mean income. However, when the emulation effect is assumed to be different among the racial and ethnic groups it is only marginally significant for Blacks. Alcohol consumption is lower for Hispanics and Blacks than for Whites and there appears to be no emulation effect. The result for the Tobacco expenditure category provides some intriguing findings. First, across all models Hispanics and Blacks consume less tobacco than do Whites. Interestingly, when adding the emulation effect variables the results have signs that would indicate a reverse emulation effect. For instance, in the case that the emulation is similar for all racial and ethnic groups the coefficient on the emulation effect (V) is negative and significant and the coefficient on the income interactive variable (VI) is positive and significant. The interpretation being that the emulation is towards the lower income and increases as the household income moves lower from the mean. One can interpret this as indicating that as one's income increases there is a desire to emulate non-smoking. The fact that the emulation effect allowing for differences among racial and ethnic groups is not significant is a clear indication that the non-smoking emulation is strong and that it is racially and ethnically blind.

In terms of transportation the estimates indicate that Hispanics and Blacks have a strong tendency to spend more on transportation costs and there is no emulation effect. The electronics expenditure category also provides strong evidence that Hispanics and Blacks have a strong tendency to spend more on electronics than do Whites. When we evaluate the emulation effect allowing for differences in racial and ethnic groups, we find it to be positive and statistically significant. The interesting result stems from finding that when we evaluate the emulation effect restricting it to be similar for all racial and ethnic groups, it is significant but with signs that are opposite from the anticipated ones. One possible interpretation is that while there is a strong emulation effect on the purchasing of these devices among Hispanic and Blacks it is not as strong for Whites and so an emulation effect that assumes it will be similar for all racial or ethnic groups results in coefficients that are skewed by the larger representing group, in this case Whites.

Finally, in terms of the remaining Housing categories we find that in terms of mortgage payments there is no difference by race, ethnicity or emulation. In terms of rental expenses Hispanics pay more in the models without an emulation effect but the coefficients become non-significant when the emulation effect is introduced. There appears to be an emulation effect but it only occurs in the case where it is restricted to be similar for all groups. Housing repairs and improvements appear to not differ according to race or ethnicity. Again, it appears that the emulation effect only occurs in the case where it is restricted to be similar for all groups. The evidence presented in this section indicates that there is a racial and ethnic difference in consumption in some cases even after accounting for the emulation effect. On the other hand, we do find an emulation effect though we do not find it to be as persistent as Veblen suggested. This clearly does not indicate that Veblen was wrong in stating that emulation is one of the persistent economic motivators. The high aggregate level of our data and the fact that we restrict the emulation to be based on binary groups of individuals (below and above the mean income) may not allow us to find the exact emulation effect. Nonetheless, the results here do indicate that there is a strong emulation effect and that, if not persistent, it is at the very least wide spread.

CONCLUSION

We study the consumer behavior of Blacks and Hispanics for a variety of consumer goods. We find that Hispanic consumers have a strong tendency to shop with companions rather than alone. However, regardless of whether alone or with companions, Hispanics shop more than Blacks or Whites. We found that with respect to clothing the Hispanics purchase more but do not have an emulation effect and as a consequence it is possible that they combine the utility of the purchases with the entertainment of shopping for them. We also find a strong emulation effect on the overall expenditure of housing even though the individual housing expenditure components do not have as strong of an emulation effect. But those items that would be more visible, such as furnishing and appliances and the repair and maintenance expenditure categories, do show some emulation effect. We also find that there is a strong non-smoking emulation effect. The results of our study would seem to dictate that further decomposition of the emulation effect should be done in order to confirm whether the argument by Veblen that it was broad and persistent through out the different income classes is accurate.

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Dependent Variable	Hispanic	Black	V/VH	VI/VB	Controls	Instrumental Variable ^ξ
CJ	0.193***	0.249***			HC	
CJ	0.262***	0.330***			HC	Yes
CJ	0.194***	0.257***			HC, R	
CJ	0.272***	0.342***			HC,R	Yes
CJ	0.212***	0.259***	0.016	-0.289*	HC,R, V & VI	
CJ	0.322***	0.397***	0.530***	-0.89***	HC,R, V & VI	Yes
CJ	0.222***	0.278***	-0.043	0.033	HC,R,VH&VHI, VB&VBI	
CJ	0.244***	0.322**	0.073	0.99*	HC,R,VH,&VB	Yes
ES	-0.20***	-0.145***			HC	
ES	-0.127***	-0.123***			HC	Yes
ES	-0.212***	-0.146***			HC, R	
ES	-0.130***	-0.119**			HC,R	Yes
ES	-0.202***	-0.201***	-0.078	-0.016	HC,R, V & VI	
ES	-0.102*	-0.094*	0.445***	-0.076***	HC,R, V & VI	Yes
ES	-0.144***	-0.134***	-0.114*	-0.021	HC,R,VH,&VB	
ES	-0.124**	-0.119*	-0.031	-0.012	HC,R,VH,&VB	Yes
AH	0.132***	0.122***			HC	
AH	0.09***	0.05*			HC	Yes
AH	0.123***	0.127***			HC, R	
AH	0.11***	0.05			HC,R	Yes
AH	0.137***	.108***	0.309***	-0.046***	HC,R, V & VI	
AH	0.025	-0.360	0.229**	-0.039***	HC,R, V & VI	Yes
AH	0.038	-0.0003	0.129***	0.1888***	HC,R,VH,&VB	
AH	0.042	-0.009	0.123***	0.182***	HC,R,VH,&VB	Yes
HF	-0.088***	-0.188***			HC	
HF	0.006	-0.063**			HC	Yes
HF	-0.092***	-0.183***			HC, R	
HF	0.004	-0.064**			HC,R	Yes
HF	-0.076***	-.181***	-0.307***	0.027***	HC,R, V & VI	
HF	0.025	0.036	0.229*	-0.039***	HC,R, V & VI	Yes
HF	-0.077**	-0.181***	-0.023	-0.003	HC,R,VH,&VB	
HF	-0.011	-0.125***	0.092*	0.128**	HC,R,VH,&VB	Yes

^ξ The instrumental variable estimates are presented for the models not including a Veblen type variable are based on after taxes income (since income is a iv). The before tax estimates are similar and are available upon request.
*** Statistically significant at the 1% level, ** at the 5% level, and * at the 10% level

Table 3

Yearly fixed effect Logarithmic Model (using IVs) for Other Expenditure Categories
Where the controls are Household Controls (HC), Regional (R), Mean and Coefficient of Variation (MCVBT) and VEBLEN (VAT) cross-product terms with Hispanic (HV) and Black (BV)

Dependent Variable	Hispanic	Black	V/HV	VI/VB	Controls
Food	0.04***	-0.08***			HC
Food	0.03*	-0.08***			HC, R
Food	0.05***	-0.05***	0.28***	-0.05***	HC,R, V & VI
Food	0.019	-0.10***	0.02	0.06**	HC,R,VH & VB
Alcohol	-0.10***	-0.15***			HC
Alcohol	-0.11***	-0.14***			HC, R
Alcohol	-0.09**	-0.10**	0.15	-0.02	HC,R, V & VI
Alcohol	-0.08*	0.13***	-0.05	-0.01	HC,R,VH & VB
Tobacco/Smoking	-0.54***	-0.43***			HC
Tobacco/Smoking	-0.52***	-0.43***			HC, R
Tobacco/Smoking	-0.54***	-0.53***	-0.82***	0.13***	HC,R, V & VI
Tobacco/Smoking	-0.49***	-0.42***	-0.08	-0.08	HC,R,VH & VB
Transportation	0.08***	0.07***			HC
Transportation	0.08***	0.07***			HC, R
Transportation	0.07***	0.05**	0.04	-0.1	HC,R, V & VI
Transportation	0.08***	0.09***	-0.04	-0.06*	HC,R,VH & VB
Electronics	2.80***	6.36***			HC
Electronics	2.93***	5.98***			HC, R
Electronics	0.05*	0.19***	-0.19**	0.02*	HC,R, V & VI
Electronics	1.22***	4.18***	0.98**	2.24*	HC,R,VH & VB
Housing (Mortgage)	0.06*	0.02			HC
Housing (Mortgage)	0.05	0.02			HC, R
Housing (Mortgage)	0.05	0.02	0.06	-0.01	HC,R, V & VI
Housing (Mortgage)	0.04	0.06	0.02	-0.03	HC,R,VH & VB
Housing (Rental)	0.09***	-0.01			HC
Housing (Rental)	0.08***	0.03			HC, R
Housing (Rental)	0.07	-0.05	0.27*	-0.04*	HC,R,MCV
Housing (Rental)	0.05	0.07	0.01	-0.09	HC,R,VH & VB
Housing (Repairs, Improvements)	0.04	-0.05			HC
Housing (Repairs, Improvements)	0.03	-0.08			HC, R
Housing (Repairs, Improvements)	0.03	-0.04	0.023*	-0.04**	HC,R,MCV
Housing (Repairs, Improvements)	-0.02	-0.06	-0.1	-0.1	HC,R,VH & VB

The results presented for the models including the Veblen variable are for after tax income. Results for before tax income are similar and available upon request.

*** Statistically significant at the 1% level, ** at the 5% level, and * at the 10% level