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ABSTRACT

Conspicuous consumption, first defined by Veblen (1899), describes wealthy people spending excessively on goods to signal their superior social status to the public. Today, this behavior is no longer exclusive to the rich. Average people can also acquire branded products with the intention of being *perceived* as being a member of a certain class or having desirable individual qualities. Casual observation suggests that this phenomenon has been extended to children, who can often be seen using status branded products. One notable example is parental spending on conspicuous children's apparel. We ascertained the theoretical arguments found in the literature and used secondary data on children's apparel purchases to validate the motives and predictions implied by the literatures in consumer behavior and economics. Our main contribution is to bridge the gap between consumer behavior and economics where the former relied on classroom experimental data while the latter used cross-sectional expenditure diary data. There are no studies using actual transactional data to investigate the demand for visible good consumptions. Furthermore, we look into the effect of visual intensity on the demand of visible goods. With these findings, we offers guidance for children's clothing companies to adjust their product lines and possible for CSR initiatives.

Key words: Conspicuous consumption, Status consumption, Status Signaling, Visible goods, Visibility intensity

INTRODUCTION

It has been well recognized that for a wide range of consumer goods, consumers look beyond practical value and seek the social recognition that can be associated with these products. This desire for social distinction can, at the extreme, lead consumers to pay a premium beyond the value of product's hedonic attributes. Veblen (1899) referred this as “conspicuous consumption” and called the behavior “invidious comparison” when a high achiever consumes products conspicuously to distinguish him- or herself from people of lower classes in the society. Today, as modern marketing of luxury industry carefully crafting elite images, many people of lesser financial means are also seen to acquire these products to signal their *desired* social identity or aspirant individual quality (Leibenstein 1950, Han, Nunes, and Drèze 2010).¹ Research in social psychology and consumer behavior have confirmed that the desire for status recognition is an important force driving the demand for luxury goods (Dreze & Nunez, 2009; Griskevicius et al., 2007; Haselton, Mortezaie, Pillsworth, Bleske-Rechek & Frederick, 2007; Mandel, Petrova & Cialdini, 2006; Rucker & Galinski, 2008, 2009).

Building on this status signaling perspective, academic research efforts have been aiming to shed light on the different types of social motives and consequences that shape the desire and display of “positioning products” (or “visible goods” named by the economists) – typically referring to products with scarcity or desirability, often communicated through high prices, exquisite quality, aesthetic design, exotic material, cultural heritage, legendary reputation, or endorsement of celebrity, etc. Through carefully designed laboratory experiments and surveys, researchers in social psychology, consumer behavior, and behavioral economics dissect these

¹ According to Bain & Company, the market for personal luxury goods has reached \$280B worldwide by the end of 2018, representing 6% growth. (Luxury Goods Worldwide Market Study, Fall-Winter 2018).

multi-layer motives, validate the hypotheses associated with the demand for status signaling products (for a detailed summary of research on conspicuous consumption, see Gurzki and Woisetschläger 2017) whereas, empirically, economists used the household expenditure data to estimate Engel curves across different consumption categories with various degree of visibility (Charles et al. 2009; Heffetz 2011; Kamakura and Du 2011, Roychowdhury 2017; Chai, Kaus, and Kiedaisch 2019).

Conspicuous consumption may involve very different signs but being visibly recognizable is obviously essential. That is, a commodity is considered visible if people have common knowledge to assess the expenditure involved and the associated social meaning. However, there are difficulties in identifying conspicuous consumption as a clear motivation for consuming visible goods. This is because despite that visibility is a necessary condition for conspicuous consumption, it is only one of many properties tied to any given good that contribute to the demand. To make the point clear, while we may suspect that a person buying a BMW rather than a Hyundai is to signal high social status, a BMW in reality is superior to a Hyundai in many ways. Hence, one cannot rule out the motive that to buy a BMW is simply for high-quality rather than for signaling purpose. In other words, it is difficult to disentangle demand for visibility from demand for other properties. Evidences from laboratory experiments gathered by Clingingsmith and Sheremeta (2018) show that if visibility has no clear link with income through status, then the extra motive to demand for visible goods vis-à-vis that for other non-visible goods would disappear.

Another stream of consumer behavior study argues that consumption for visible goods can be simply motivated by people's intrinsic need to conform and distinct from their peer group (Mason 1992). Thus, to be publicly recognized is not about one's social status. Take apparel,

for example. According to Forbes, there is strong truth about an old saying of “we are what we wear” in regards to one’s clothing choices and what they say about the person.² Chan, Berger and Van Boven (2012) explained that using different dimensions of product attributes, consumers can simultaneously satisfy motives for both identity-signaling and self-promoted uniqueness. Harley-Davison bikers, for instance, all wear leather jackets to conform to their well-established macho or rugged image while using individualistic decorative badges or colorful head bandanas to display their own persona. Visible markings of leather jacket (to outsiders) and personalized bandana (to insiders) serve to ensure observers can recognize and infer from these signals. Demand for visible goods in this context is not necessarily expensive or luxurious. It is for the purpose of assimilation and differentiation.

Furthermore, consumer goods vary in the degree to which the act of consuming them is visible to the public, and thus in their suitability for serving as a marker. Visual density is an essential dimension that defines a visible image. The literature on marketing and consumer behavior has attempted to understand how visual design elements affect our perception and evaluation of the products we used, or how they may affect our behavior (Deng and Kahn 2009; Hagtvedt and Patrick 2008, 2014; Hoegg and Alba 2011; Hoegg et al. 2010; Patrick and Hagtvedt 2011; Adaval, Saluja, and Jiang 2019). Why would people wear clothes with big logo, loud color, shining sequins, bold fabric pattern or any vivid visual combination? From a psychological angle, Su, Wan and Jian (2019) suggested that the need for visual density is a psychological compensation mechanism to fill one’s feeling of ‘social exclusion’. Social psychologists, on the other hand, described another mechanism in which two independent factors

² “What your clothes say about you”. Forbes, 4/3/2012

would affect a wear's psychology -- the symbolic meaning and the physical experience magnified through one's clothes (Adam and Galinsky 2012). All these suggest that while visibility is critical for signaling, the degree or type of visibility adds another complicating yet interesting dimension to the demand of visible goods. To our knowledge there are no studies investigate the demand for differential degrees (types) of visible goods.

With these multi-dimensional motives and complexities related to the demand for visibility goods, in this study we intend to examine them in a holistic matter. The goal of this paper is to go beyond reexamining a set of self-contained perspectives and instead to strive for integrating theories, models and insights to look for substantive findings that shed new light on consumer behavior in visible good consumption. Furthermore, all studies, thus far, either relying on laboratory experiments and surveys or using diary category-level expenditure data to support the predictions, hypotheses or conjectures. We intend to bridge two camps of studies by examining people's actual transactions to look for substantiating evidences and uncover new insights. Specifically, we analyze actual visible good consumption records and strive to achieve the following goals: 1) to discern the differentiating driving forces for demand for visible goods of two subcategories, visible and expensive (driven by conspicuous consumption motive) and visible but inexpensive (driven by differentiation motive), and; 2) to understand the relationship between type of visibility (tangible vs intangible) and the demand for visible goods. With these findings, we intend to shed light on the potential social and marketing implications and how they may lead to opportunities for better managerial or CSR initiatives.

The rest of this paper is organized as follows. First, a brief review of theories on visible good consumption. We then propose a set of testable hypotheses followed by a section on data and operationalization of dependent and controlled variables. Next, we document and discuss

the results of our analyses and related robustness checks. Lastly, we present our conclusions and implications, address limitations, and finally suggest future research directions.

RESEARCH BACKGROUND AND HYPOTHESE

First, we describe a standard status signaling model to illustrate the role of “conspicuous goods” in one’s utility function (see, for example, Charles, Hurst and Roussanov 2009).³ Individuals obtain utility from three components: non-conspicuous goods, conspicuous goods, and income status. The key features of the model, which makes it different from a conventional utility maximization problem are: 1) income status also brings utility to the consumer in addition to both conspicuous and non-conspicuous goods and 2) income cannot be observed but can be inferred via consumption of conspicuous goods.

A notable prediction is that, for a given level of income, the visible spending of a household is negatively correlated with the mean income of its social group (Charles, Hurst, and Roussanov 2009; Kaus 2013). That is, if the average peer group income falls, then conspicuous spending rises at every level of income. The intuition is that people have a desire to distinguish themselves from the “common herd” (poorer households) and so as the average income of the community decreases, persons of every level of income must now spend more to signal to distinguish themselves from those immediately poorer. Charles, Hurst and Roussanov (2009) validated this model prediction based on the Consumer Expenditure Survey (CEX, 1996-2002) obtained from different racial groups in the US while Chai, Kaus, and Kiedaisch (2019) later concurred the same finding with South African data of different ethnic groups.

³ See Mailath (1987), Ireland (1994), and especially Glazer and Konrad (1996) for formal treatments of models of this form.

So, following this literature, the level of children's visible apparel should tie with the relative family income position within the community as suggested by the theory. Hence, we postulate that

- *Hypothesis 1* : As average income of the community decreases, individual spending on conspicuous clothing would increase.

Han, Nunes, and Drèze (2010) label those who do not possess the financial means to readily afford authentic luxury goods as 'poseur' as they are inspired to be viewed as part of the true rich, parvenu. They further argue that failing to acquire the real thing, poseur would then resolve to buying the counterfeits. The behavior is commonly referred as "keeping up with the Joneses" syndrome. van Kempen (2003) shows, for example, that the poor in Bolivia are willing to trade off the consumption of non-positional goods for extra consumption of designer-label goods in an effort to keep up with the richer neighbors.

Departing from the signaling models, Morgan and Christen (2002) models this behavior by adding consumption of "the others" (peer group) into the utility function directly. They showed that a "relatively" poor person (poseur) in a community would increase the consumption of conspicuous goods (and thus, sacrifice the consumption of non-conspicuous goods) to maintain his social status when he cannot keep up with the income increase of "the others" in the community (patrician/parvenu). To corroborate their model conjecture, they showed that the rising personal debt is positively correlated to 'income inequality' (measured by Gini-index) in the society as people borrowed money to spend on conspicuous goods. So, borrowing from this stream of studies, we postulate that

- *Hypothesis 2* : As income inequality increases in the community, individual spending on conspicuous clothing would increase.

Implicitly, both hypotheses are derived given the assumption that consumers are acting out the same way regardless their relative position in the society. Odabayeva and Chandon (2011) from consumer behavior point of view argued that bottom-tier consumers may act just opposite against the prediction prescribed above. That is, the bottom-tier consumers may increase their conspicuous consumptions as income inequality eased in the peer group. The reason for this counter-intuitive behavior is that while increasing income equality indeed narrows the possession gap for these consumers with other social groups, it also increases the percentage of people that can be surpassed and hence the potential position gains that can be obtained through conspicuous consumption. The analogy is similar to the case in which a runner (bottom-tier income group) may run harder to gain his position as he is just slightly behind a thick pack (improved income inequality) of other runners (adjacent income group). Hopkins and Kornienko (2004) established this argument theoretically while Chai, Kaus, and Kiedaisch (2019), taking the same spirit in their model and substantiated that indeed 'local reference group' matters, particularly the pattern of income distribution of local reference group, whereas arguing that Gini-Index is too broad to predict the behavior of the bottom-tier consumers. This is because a lower Gini Index does not discern which end of the income distribution moves closer to the center. Therefore, it cannot help to distinguish between the intensity of competition in the left (poor) and right (rich) tails.

Hence, with this potential moderating behavior for the poor consumers, we postulate that

- *Hypothesis 2a* : As income distribution is more concentrated around the mean in a poorer community, individual spending on conspicuous clothing would increase.

Though to stand out among social peers is an intrinsic need, the behavior seems to tie closer to the younger generation and when in a less familiar social environment (Chan, Berger

and Van Boven 2012). Hence, other things being equal, a few testable implications follow: 1) living in a community where long-standing social networks exist, one's spending on visible goods should diminish; 2) generally speaking, as one grows older, his spending on conspicuous goods would decline. The negative relationship between visible spending and age is consistent with other studies that have found that visible spending tends to be higher among younger unmarried consumers in China who are seeking marriage partners (Grier, Hicks, and Yuan 2015).

Putting these together, we postulate that well-established social network, the need for visible goods diminishes and, as such, we postulate that.

- *Hypothesis 3* : In a matured community, overall spending on conspicuous clothing would decrease.

Moav and Neeman (2012) in their study argue that higher educated individuals will spend relatively less on conspicuous goods. Chai, Kaus, and Kiedaisch (2019) concur with their findings in their studies. Thus,

- *Hypothesis 4*: Education is negatively correlated with visible clothing.

During festivals, the display of expensive clothing and jewelry is more conspicuous than other types of consumption, and hence may provide an effective signal for income or wealth. Sociology has a different way to examine festivals. The social and cultural meanings of festivals are naturally rooted in the locale since they can strengthen the natural bond between people and their communities (Lau and Li 2015). Some argued that people in the communities communicate and compare with each other (Festinger 1954; House 1980). Since people indeed care about other people's evaluations concerning them (Hopkins and Kornienko 2004; Mas and Moretti 2009), festivals are great occasions for them to compare with others.

Thus, we postulate the following:

- *Hypothesis 5* : During festivals, spending more on visible clothing would increase.

Visual effect can be categorically divided into two types: tangible vs. intangible visual effect.

Tangible visible type includes the elements such as exotic material, loud color, accessories that can be quickly noticed by bystanders while intangible visible type include subtle elements such as design and style which require fashion knowledge to know the uniqueness. We postulate that young and less-matured generation would prefer tangible visual type clothing but, overall, the demand for tangible visual type clothing would increase during festival.

- *Hypothesis 6* : Demand for tangible visible type clothing would decrease in a matured community.
- *Hypothesis 6a* : During festivals, spending more on tangible visible type clothing would increase.

In what follows, we describe our data, approach, and validation results of these hypothesis testing.

DATA, VARIABLES, AND ESTIMATION

We obtained data from a Chinese online children's apparel company. The children's apparel industry in China has been growing rapidly. It reached \$21 billion in 2015 with about 25% CAGR annually as many international fashion brands have steadily opened stores in major Chinese cities dedicated to their children's clothing lines. Rapid growth of this industry is a worldwide phenomenon as some fashion experts suggested that it is driven by the growing

segment of status-conscious parents.⁴ Interestingly, dressing up one's children is not new as more than a century ago, Veblen (1899) already noted that wives and children play a decorative and expressive role for the nouveau riche. At then, adorning one's wife and child is another form of advertisement for a man's status. Today, though families are less male-dominated and maybe the motive is no long the same as those of Veblen's day, evidently, to excessively consume through family members has not changed (Belk 1989).

Our data are unique for the following reasons: First, though China has enjoyed rapid economic growth over years, not all regions benefited equally. Statistics show that the average annual income of an urban household is about three times that of the average rural household and the gap appears to be widening.⁵ Uneven economic development is an ideal setting to test status seeking behavior under different economic conditions. Second, it is well documented that migrant workers have literally transformed the economic and social landscape of rural China. Remittances became the most important rural income since 1990s; suggesting that migrant workers with relatively higher income comparing to their local peers may have changed the existing social order in rural communities with the opportunity to gain their social ranking. Indeed, in many gift-giving occasions, migrant workers are observed to send or buy visible clothes, fancy toys and alike to their left-behind children. Hence, rapid changes in income and its distribution within rural communities provides a context in which status races may be triggered more significantly than cities.

Third, it is worth noting that China's family-planning policy, which limits the number of children per married couple, is giving rise to the so-called "Little Emperor or Empress"

⁴ <https://www.scmp.com/magazines/style/fashion-beauty/article/2125186/why-chinese-parents-invest-luxury-childrens-wear>

⁵ <http://data.stats.gov.cn/easyquery.htm?cn=C01&zb=A0A01&sj=2017>

syndrome, a term used to describe the phenomenon of Chinese families spoiling excessively on their children (Wang and Lin 2009). This data allows us to investigate if the indulgence on children transpire to higher demand for status signaling clothing and how they would differ across regions or social conditions. Lastly, regional idiosyncrasies in culture, ethnicity, dialect, and lifestyle vary widely from North to South and East to West in China. These differences are critical for our study because we seek to validate that the behavior, no matter where one lives or what ethnic background one comes from, is driven by social-signaling motives as well as dictated by economic and social conditions and not by personal taste or preference (e.g. Charles et al. 2009; Chai, Kaus, and Kiedaisch 2019).

Data

The data we used is an SKU-level sales dataset from August 2011 to October 2014 obtained from a children's clothing company that sells their products purely online in China. This online sales company is a very typical children's apparel seller, with annual sales of RMB 250 million (near USD 35 million) in 2014, covering almost all geographic markets in China.

This company is one of many sellers in a very low-concentrated children's apparel market where Balabala is the number one children's apparel brand in China but has only a 3.1% market share, compared to the 12% market share of Carters in the US. Additionally, this online company does not have any offline outlets (i.e., branded stores, department stores, or discount stores) or offline advertising channels. It does not differentiate its product assortment, price, or promotion strategies. This "no differentiation" marketing strategy eliminates the potential regional or store-specific confounding factors commonly seen in offline sales settings.

Data contained information such as item price, discount, SKU, category, and shipping addresses. Shipping address is essential because we matched that with district-level statistics

obtained from the National Statistics Bureau. The latter includes socioeconomic information for every administrative district in China. The data structure is elaborated as follows.

First, aberrational, international, and institutional buying (e.g., school) records were removed. After data cleaning, the final dataset contained 2,611,265 transactions from 1,540,473 orders purchased by 1,057,487 customers. Based on the purchase information, we computed and created a series of variables for each customer such as average price paid per order, average quantity per order, average discount percentage per order, number of orders, and average clothing size purchased. Table 1 contains the summary statistics of the purchase data.

 Insert Table 1 about here

We also obtained 2010 Chinese census data from the National Bureau of Statistics which covers all 3,640 counties and districts in the entire country. Based on the address, our sales data matched 2,831 counties and districts, roughly 78% of the country. Census data includes information such as average education level (years), size of the county/district, rural, smaller city, or big metropolitan city, percentage of homeowners, birth rate, and male-female ratio, etc. Table 2 contains the summary statistics used in this study.

 Insert Table 2 about here

Note that children's clothing can also be purchased from offline retail outlets. Though there are no priori reasons to speculate that conspicuous children's clothing purchases would be different when parents shop online versus offline, the concern about the potential effect of shopping formats should be addressed. Unfortunately, we do not have information about the distribution of children's apparel stores across the country. To attenuate this concern, we used the information of

physical store locations obtained from Balabala, the number one children's fashion brand with over 4,000 stores nationwide, to form the proxy as a control variable.

Another issue is the prevalence of e-commerce and competition across different regions. That is, shoppers may be more receptive to e-commerce in some regions than others. To account for this potentially compounding factor, we included the *e-commerce development index* created by Alibaba, the number one online selling platform in China, in which they have gathered both online-shopping and online-retailing information to define the level of e-commerce development for each district in China. Lastly, since clothing purchase is also dependent on local climate and temperature, we collected data on the yearly average temperature of each county.

In summary, control variables are sorted into two categories: customer order-related variables (shown in Table 1) and socio-economic factors (shown in Table 2). The former is to capture the idiosyncrasies of customer buying patterns whereas the latter is to reflect community characteristics and socio-economic conditions.

Variables of Interest

Dependent Variable: Our challenge is to define conspicuous or status children's clothing. Based on Veblen's definition (1899), two conspicuous characteristics are: visibility and expensiveness. Hence, our approach was first to identify whether the purchased item is inherently visible and then secondly if it was more expensive than the average price within its category. We assigned a visibility score (1 being not conspicuous at all, and 5 being extremely conspicuous) to each category of children's clothing. To validate our coding, we asked 11 undergraduate students to assign a visibility score based on each purchase item description following Heffetz (2011). The reliability of these 11 raters is statistically acceptable (Cronback's Alpha = .76). The Pearson correlation between our coding and average rater coding is 0.53 (p-

value < .01). Therefore, the visibility coding was applied across all purchase data. Regarding the second criterion, expensiveness, we found that prices of boy's clothing and girl's clothing are systematically different even within the same category. Hence, we tabulated the average price for the boy's and girl's clothing categories. Then, if the purchase price is above the average price in the category, it is coded 1 as expensive.

To be quantified as a conspicuous purchase in this study, an item must be expensive and have a 5 in visibility score. We identified, among all transactions, roughly 22.5% of the purchases as being conspicuous buys. Given that the unit of analysis is household or customer, we then computed and created the following dependent variable:

- CC Index: the percentage of spending on conspicuous items out of the total spending on children's clothing.

As shown in Table 3. The average spending on conspicuous clothing over total spending is 30.64% across all households.

Variables of Predictions: Next, we defined a set of variables associated with the theoretical implications.

- Average income: Census data does not contain income at the district level. Fortunately, there are records on 19 industries such as finance, information, hotel, and agriculture in each district. We inferred average income using the number of employees in industry and the average salary of the corresponding industry. Hence,

$$\text{Average income}_i = \frac{\sum_{j=1}^{19} (\text{the number of employees of industry}_{ij} * \text{the average salary of industry}_{ij})}{\text{total population size}_i}$$

- Income dispersion: Based on the average salary of each industry, we then classified each industry into one of the following five categories: high income, high-medium income, medium income, medium-low income, and low income. We computed the standard deviation based on the number of employees of each category as the operationalization of income dispersion.
- Stable community: Census data does not have any direct measures to match the notion of “stable environments with long-standing social networks” or “people who are frequent movers”, both mentioned as possible predictors (Frank 1985, p185). The closest proxy is the percentage of homeownership since homeownership conceptually fits well with both descriptions and is highly correlated with another descriptor, “older and married”. Hence, the percentage of homeownership is used as a proxy for the degree of stable community.
- Education: Average years of education is obtained from the district data.
- Festival purchase: Since each purchase record is time-stamped, we computed percentage of purchase orders made prior to festivals.⁷
- Income inequality: Gini coefficients are not available at the district level. So, the operationalization of this variable is as follows: Given the number of employees of an industry and the average salary of the corresponding industry, we are able to construct the income earned by the top 10% of households in district i , as well as the income earned by the bottom 10% of households in district i . Specifically, 10% households of District i =

⁷ For Chinese New Year, all logistic companies shut down their operations a week to 10 days prior to the new year. As such, people would buy their products early accordingly. Hence, we counted all purchases in a 3-week window before the Chinese New Year as festival purchases.

10% * 50,000 (total working employees of District i). We find the industry that offers the highest average salary (IT industry) and if the number of employees in the information industry is equal to or greater than 10% of households, then the income earned by the top 10% of households = 10% * 50,000 * average salary of information industry. If the number of employees in the information industry is smaller than the 10% of households, we find the industry that offers the second highest salary (in this case, finance industry). Then, the income earned by the top 10% of households = the number of employees in the information industry * average salary of the information industry + (10% * 50,000 - the number of employees in the information industry) * average salary of finance industry. With that, income inequality i is computed as the ratio of income earned by the top 10% of households to income earned by the bottom 10% of households in District i .

Table 3 contains the summary statistics of the dependent variable and all variables of interest related to our predications above. The correlation matrix of all variables contained in the analysis is shown in Table 4.

 Insert Table 3 and 4 about here

Estimation and Results

Estimations were carried out with various functional forms. Through standard checks on model residuals, we applied generalized least squares (GLS) regressions in this study. The main results are shown in Table 5.

Based on the model estimates, we found all predictors are statistically significant. Specifically, we found as average income level increases, the conspicuous children's clothing consumption falls ($B = -.062, p < .05$) as implied in Charles, Hurst and Roussanov (2009). Note

that though the direction of “income dispersion” is theoretically ambiguous, the estimate suggests that the utility from conspicuous clothing is concave ($B = .008$; $p < .05$) which is also consistent with Glazer and Konrad (1996). Thus, the higher the income dispersion the more would be spent on conspicuous children’s clothing consumption which supports the intuition – as income dispersion in the reference group gets wider, the need for status/conspicuous goods increases.

A stable community means the social network is relatively more mature and people know each other well. Hence, the need for conspicuous goods diminishes. This implication is also supported ($B = -.085$, $p < .05$). Higher education level also reduces the demand for conspicuous children’s clothing ($B = -.013$, $p < .05$) while during festivals, families would buy more conspicuous children’s clothing ($B = .172$, $p < .05$). Both are consistent with the predictions of signaling theories. Lastly, income inequality ($B = .019$, $p < .05$) is also consistent with the prediction of Morgan and Christen (2002). Higher income inequality would lead to higher demand for conspicuous/status clothing. The syndrome of “keeping up with the Joneses” is supported here.

As to other control variables, we found the estimate of size is statistically significant ($B = .029$, $p < .05$). Since the products in our data are for children ranging from ages 0 to 12, the estimate means parents would buy more conspicuous clothing for older children. This makes intuitive sense since as children grow older, they are more engaged in group activities and social occasions (i.e. private parties and school events), so the opportunities for conspicuous display increases. Anecdotally, older children are also more susceptible to peer pressure and appearance comparison. Note also, the results indicate that customers in small cities/rural areas are spending more on conspicuous children’s clothing compared to the customers in bigger cities ($B = .019$, p

< .05). One plausible explanation is that city folks have more options to signal their status through children (for example, private K-12 schools, private lessons, and summer camps).

In summary, based on our main estimation results, we validated the implications or predictions gleaned from various status-signaling theories as applied to the case of ‘extended conspicuous consumption’ here. Both Veblen effects of “invidious comparison” (showing-off) and “pecuniary emulation” (keeping up with the Joneses), are well supported in this study.

ROBUSTNESS CHECKS

Though the estimated results support the status signaling theories proposed in the literature, we conducted a series of robustness checks to further solidify the notion that conspicuous consumption behavior is driven by the economic or social conditions rather than by intrinsic preference differences.

By Segments

We divided the data into two halves, respectively, in the following ways: 1) by GDP - top 25% vs bottom 25% districts; 2) by city vs. rural; and 3) by North vs. South. We re-estimated the model, respectively, and contrasted the results. As shown in Table 6 and 7, *within* each subsegment, though the magnitudes of the coefficients are different and some effects fade away, the directional patterns are still consistently aligned with the results of the pooled data shown earlier. This is a strong vindication that the behavior of status-signaling via consuming positional goods is universal.

Insert Table 6 and 7 about here

Robustness Check (RC) 1-5

Our study anchored on the ‘extended self’ concept. Then, we need to show that conspicuous children’s clothing is indeed purchased for parents’ status signaling purpose. To do so, we further constructed a variable for conspicuous children’s clothing purchased prior to Fall School Opening day (on Sept 1 in China). School Opening day is a big event for children whereas major festivals such as Moon festival and Chinese New Year are important for parents since during those festivals it is a tradition for the family to visit other families, see people, and move about in public. Thus, we expect that conspicuous children’s clothing purchases, in contrast, are far less before School Opening day. Indeed, as seen in RC1, we not only replicated the results of our main analyses but also found that for School Opening day, parents purchased significantly less conspicuous children’s clothing ($B = -.126, p < .05$) while for traditional Chinese festivals, the effect ($B = .170, p < .05$) is positive and significant.

To further strengthen the results, we also repeated the analysis with alternative operationalization of the dependent variable, different model specifications, and functional forms. RC2: we converted conspicuous purchase into a binary variable, assigning 1 to customers who ever bought a conspicuous clothing, 0 otherwise. We then employed a logit model. RC3: we utilized Poisson regression where the total number of conspicuous products purchased is a dependent variable. RC4: instead of using the customer-level data, we created an order-level data and a binary variable, assigning 1 to orders containing conspicuous products, and 0 otherwise. Again, a logit regression is performed. Overall, the results are largely consistent with the original GLS model as shown in Table 8 and 9.

Insert Table 8 and 9 about here

Furthermore, though we included a pair of proxies, offline store locations and e-commerce development index to control for physical store distribution and pervasiveness of online channels, the results may be skewed by the missing offline purchases that are not observable to us. To alleviate this concern, we conducted RC5 and selected a subsample data to include 61,659 customers who live in small and remote counties in West China (the most undeveloped region in the country) where retailing settings remain very primitive. As shown in Table 9, the pattern remains quite consistent with our main findings. Hence, per our judgment, the potential skewedness from missing offline purchases is a concern but not serious enough to unravel the main findings.

CONCLUSION AND DISCUSSION

In conclusion, the main contribution of this study is as follows. First, though the link between conspicuous or status consumption and exhibitionistic motivation has long been noticed and examined, as far as we know, there are no empirical studies directly linking the theories to actual conspicuous purchases in the previous studies. Moreover, our findings suggest that the conventional status signaling motives still hold true in the context of conspicuous spending shifted from oneself to one's children. Second, this study supports the argument that using conspicuous products is to signal social status and the propensity to allocate more (or less) budget to conspicuous goods is driven by socio-economic conditions, and not because people put different weights (i.e., strong or weak preferences) on the conspicuous goods. Thus, we view our contribution in the tradition of scientific approach, according to which, theories explaining economic behavior should rely on measurable variables rather than on ad hoc assumptions concerning tastes. In this regard, our findings are generalizable, albeit using children's clothing purchase data obtained in China.

Third, above and beyond the contribution to the academic literature, this research provides managers with some insights on why particular cross-sections of customers are more interested in purchasing visible children's clothing than others. We are able to differentiate the demand for visible goods in two categories: visible for social signaling and visible for the sake of self-promoted differentiation. The latter suggests that all brands, cheap or expensive, should recognize that being distinctive is an important driver for their customers. More importantly, different types of visibility design mean differently to their customers. These findings can potentially offer managers useful and actionable suggestions on their distribution, pricing, and product strategies or CSR initiatives (e.g., Tereyağoğlu and Veeraraghavan 2012, Amaldoss and Jain 2005).

There are a few caveats to address. Conspicuous consumption behavior extended to the domain of extended self is new. Discretionary parental actions on behalf of their children are likely motivated by both status-signaling and parental affection as suggested by our field survey. However, as we discovered in the conspicuous children's clothing category supports the status signaling motive, we are silent on validating the motives of parental love or altruism. A central assumption in these signaling theories is that while actions (spending on conspicuous goods) are observable, the information they are based on is not or not credibly inferred. Although the purchase data we examined is at the unit of household, we do not have other household-specific information. Thus, statistically, we cannot validate other motives despite the likelihood is high.

In the race for social status, an inherent conflict emerges between individual and social welfare because negative externalities caused by "positional spending" imply inefficient equilibrium outcomes (Frank 2005, 2008). As pointed out by Moav and Neeman (2012), poorer people may end up allocating too much of their resources on conspicuous consumption (for

example, lavish wedding ceremonies in poor rural India as documented by Bloch, Rao and Desai (2004) instead of investing in human capital accumulation. Consequently, they are stuck in the so-called “poverty trap”. In our study, we do not have data on spending on other goods to check whether spending on conspicuous children’s clothing, as evident in our study, reduces spending on other goods within the household. At the district level, we do not have any aggregate measures to serve as surrogates of possible tradeoffs.

The scope of conspicuous consumption includes other close relatives or friends, pets (Belk 2013). Conspicuous consumption extending to these domains is an interesting consumer behavior and, in our view, should be studied further. As the data and information is becoming available or can be properly inferred in the future, these theoretical predictions hopefully can be validated more comprehensively.

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TABLE 1

Descriptive Statistics for Part One Data

Variable	Mean	Std. Deviation	Minimum	Maximum
Average clothing size	5.36	1.70	1.00	8.00
Promotion intensity	53.55%	30.31%	0.00%	100.00%
Order price	144.80	108.27	0.00	3980.00
Product quantity per order	1.65	1.11	1.00	10.00
Number of orders	1.46	1.67	1.00	608.00

N=1,057,487.

TABLE 2 Descriptive Statistics for Part Two Data

Variables	Mean	Std. Deviation	Minimum	Maximum
Average education (Years)	8.75	1.41	2.42	13.11
Percentage of homeowners	90.47%	10.20%	16.01%	100.00%
Birth rate	10.69%	3.79%	1.70%	27.62%
Male female ratio	1.05	0.06	0.73	1.60
Average temperature	14.57	4.88	4.30	24.30
City levels	Frequency			
Non-rural/small cities	43.31%			
Small cities (rural)	56.69%			
Offline store distribution				
With Balabala store	32.85%			
Without Balabala store	67.15%			
E-commerce development				
Developed counties	27.48%			
Undeveloped counties	72.52%			

N=2,831

TABLE 3**Descriptive Statistics for Dependent Variable and Variables of Predictions**

Variable	Mean	Std. Deviation	Minimum	Maximum
Dependent Variable				
CC Index	30.64%	41.88%	0.00%	100.00%
Variables of Predictions				
Average income	8.18	0.21	7.18	8.68
Income dispersion	3.18	2.56	0.03	11.68
Stable community (Percentage of homeowners)	0.79	0.17	0.15	1.00
Education	9.88	1.43	2.42	13.14
Festival ratio	17.55%	36.14%	0.00%	100.00%
Income inequality	3.23	0.37	1.74	3.65

N=1,057,487.

TABLE 4
Correlation^a Matrix for All Variables Included in Analyses

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Log(CC index) ^b	1																
2. Average income	-.01*	1															
3. Income dispersion	-.01*	.63*	1														
4. Percentage of homeowners	.02*	-.76*	-.65*	1													
5. Average education (Years)	-.02*	.36*	.77**	-.44*	1												
6. Festival Ratio	.02*	-.00	.00	.00	.00	1											
7. Income inequality	.01*	-.25*	-.59*	.43*	-.35*	.00	1										
8. Promotion intensity	-.08*	.02*	.01*	-.01*	.00*	-.03*	-.00	1									
9. Order price	.42*	.02*	.01*	-.01*	.00	.03*	-.01*	-.10*	1								
10. Product quantity per order	.02*	.05*	.05*	-.06*	.04*	.01*	-.03*	-.02*	.64*	1							
11. Number of orders	.10*	.02*	.01*	-.02*	-.00	-.01*	.00	.02*	.03*	.07*	1						
12. Average Temperature	-.02*	.21*	.01*	-.25*	-.12*	.01*	.03*	.02*	-.01*	.02*	.01*	1					
13. Birth rate	.00	-.52*	-.55*	.42*	-.56*	-.00	.20*	-.01*	-.01*	-.03*	-.01*	.19*	1				
14. Male female ratio	-.01*	.19*	.07*	-.43*	-.06*	-.00	-.16*	.00	-.00	.02*	.00	.16*	.09*	1			
15. Offline store distribution	-.01*	.30*	.57*	-.35*	.63*	-.00*	-.15*	-.00*	.00	.03*	.00*	-.06*	-.37*	-.04*	1		
16. E-commerce development	.02*	-.14*	-.44*	.28*	-.52*	-.00	.33*	.00*	.01*	-.02*	.01*	.04*	.24*	-.02*	-.67*	1	
17. Average clothing size	.02*	-.06*	-.04*	.08*	-.01*	.02*	.02*	-.04*	-.01*	.00*	.03*	-.06*	.00*	-.06*	-.01*	.00*	1
18. Small cities	.02*	-.43*	-.49*	.39*	-.54*	.00*	.02*	-.01*	-.00	-.03*	-.01*	.01*	.49*	.03*	-.57*	.38*	-.76*

*. Correlation is significant at the 0.05 level (2-tailed).

a: Pearson correlation. N=1,057,487.

b: We used log (CC index) in the main analysis. The summary statistics of log(CC index): mean = 1.67; SD = 2.11; min = 0.00; max = 4.62.

TABLE 5
GLS Results Predicting Conspicuous Consumption Index

	Variables	Model		Consistent with Predictions?
		B	SE	
Variables of Predictions	Average income	-.062***	.02	Yes
	Income dispersion	.008***	.00	Yes
	Percentage of homeowners	-.084***	.02	Yes
	Average education (Years)	-.013***	.00	Yes
	Festival Ratio	.172***	.01	Yes
	Income inequality	.019**	.01	Yes
Control Variables	Offline shopping	.010	.01	
	Level of e-commerce development	.014*	.01	
	Average clothing size	.029***	.00	
	Small cities	.019**	.01	
	Promotion intensity	-.059***	.00	
	Order price	.014***	.00	
	Product quantity per order	-.819***	.00	
	Number of orders	.140***	.02	
	Average Temperature	-.002**	.00	
	Birth rate	-.003**	.00	
Male female ratio	.038	.04		
	Log Likelihood	-1,881,288		
	AIC	3,762,614		
	BIC	3,762,838		

n=1,057,487.

^a: p-value < .10; *:p-value<.05; **: p=value<.01; ***:p-value<.001.

TABLE 6
GLS Results Predicting Conspicuous Consumption Index by Segments

Variables	By Total GDP						By City Levels						
	TOP 25%		Consistent with Predictions?	Bottom 25%		Consistent with Predictions ?	Small cities/Rural		Consistent with Predictions ?	Non Rural		Consistent with Predictions ?	
	B	SE		B	SE		B	SE		B	SE		
Variables of Interest	Average income	-.071**	.02	Yes	.048	.07	No	-.086*	.04	Yes	-.037*	.02	Yes
	Income dispersion	.007**	.00	Yes	-.017	.01	No	.001	.01	No	.003	.00	No
	Percentage of homeowners	-.063*	.03	Yes	-.245 ^a	.13	Yes	-.327***	.08	Yes	-.068**	.02	Yes
	Average education (Years)	-.005 ^a	.00	Yes	-.043***	.01	Yes	-.036***	.01	Yes	-.007*	.00	Yes
	Festival Ratio	.178***	.01	Yes	.156***	.02	Yes	.188***	.01	Yes	.168***	.01	Yes
	Income inequality	.021*	.01	Yes	-.028	.04	No	.060***	.02	Yes	-.006	.01	No
Control Variables	Offline shopping	.023*	.01		.085*	.04		.049	.06		.015 ^a	.01	
	Level of e-commerce development	.028**	.01		.018	.02		-.019 ^a	.01		.022*	.01	
	Average clothing size	.031***	.00		.033***	.01		.021***	.00		.031***	.00	
	Small cities	.020*	.01		.001	.03		NA	NA		NA	NA	
	Promotion intensity	-.061***	.00		-.064***	.01		-.052***	.01		-.060***	.00	
	Order price	.013***	.00		.014***	.00		.014***	.00		.014***	.00	
	Product quantity per order	-.807***	.00		-.853***	.02		-.852***	.01		-.812***	.00	
	Number of orders	.170***	.02		.159***	.04		.108**	.04		.150***	.03	
	Average Temperature	-.001 ^a	.00		.001	.00		-.001	.00		-.002**	.00	
	Birth rate	-.001	.00		-.005	.00		-.008***	.00		.00	.00	
Male female ratio	.010	.05		.231	.17		.263**	.08		-.033	.04		
Log Likelihood	-1,219,749			-90,847			-382,066			-1,498,902			
AIC	2,439,536			181,737			764,167			2,997,840			
BIC	2,439,751			181,898			764,350			2,998,047			

Top 25% N = 661,315; Bottom 25% N = 52,559; Small cities N = 205,815; Non Rural N = 851,672

^a: p-value < .10; *: p-value < .05; **: p-value < .01; ***: p-value < .001.

TABLE 7
GLS Results Predicting Conspicuous Consumption Index by Segments (cont.)

Variables	By Region						
	South		Consistent with Predictions?	North		Consistent with Predictions?	
	B	SE		B	SE		
Variables of Interest	Average income	.054*	.02	No	-.068*	.03	Yes
	Income dispersion	.004	.00	No	.001	.00	No
	Percentage of homeowners	-.016	.03	No	-.356***	.05	Yes
	Average education (Years)	.006 ^a	.00	Yes	-.015*	.01	Yes
	Festival Ratio	.206***	.01	Yes	.136***	.01	Yes
	Income inequality	.037**	.01	Yes	-.031*	.02	No
Control Variables	Offline shopping	.000	.01		.023	.02	
	Level of e-commerce development	.030**	.01		.018	.01	
	Average clothing size	.031***	.00		.024***	.00	
	Small cities	.016 ^a	.01		-.018	.01	
	Promotion intensity	-.060***	.00		-.038***	.00	
	Order price	.013***	.00		.014***	.00	
	Product quantity per order	-.793***	.01		-.851***	.01	
	Number of orders	.146***	.04		.168***	.03	
	Average Temperature	-.006**	.00		-.004**	.00	
	Birth rate	.003*	.00		-.001	.00	
	Male female ratio	.056	.05		.045	.08	
Log Likelihood	-1,027,429			-461,769			
AIC	2,054,897			923,576			
BIC	2,055,109			923,772			

South N= 260,664; North N = 582,119

^a: p-value < .10; *p-value<.05; **p-value<.01; ***p-value<.001.

TABLE 8
Robustness Checks: GLS Results Predicting Conspicuous Consumption Index

Variables	Robustness Check 1		Consistent with Predictions?	Robustness Check 2		Consistent with Predictions?	Robustness Check 3		Consistent with Predictions?	
	B	SE		B	SE		B	SE		
Variables of Interest	Average income	-.060***	.02	Yes	-.108***	.02	Yes	-.057***	.01	Yes
	Income dispersion	.008***	.00	Yes	.006*	.00	Yes	.031***	.00	Yes
	Percentage of homeowners	-.081***	.02	Yes	-.193***	.03	Yes	-.073***	.02	Yes
	Average education (Years)	-.013***	.00	Yes	-.004	.00	No	-.041***	.00	Yes
	Festival Ratio	.170***	.01	Yes	.258***	.01	Yes	.075***	.00	Yes
	Before school ratio	-.126***	.01	Yes	NA	NA		NA	NA	
	Income inequality	.019*	.01	Yes	.023*	.01	Yes	.070***	.01	Yes
Control Variables	Offline shopping	.010	.01		.005	.01		.003	.01	
	Level of e-commerce development	.014*	.01		.007	.01		.048***	.00	
	Average clothing size	.029***	.00		.044***	.00		.030***	.00	
	Small cities	.019**	.01		.022*	.01		.023***	.00	
	Promotion intensity	-.060***	.00		-.455***	.01		-.097***	.00	
	Order price	.013***	.00		.026***	.00		.003***	.00	
	Product quantity per order	-.817***	.00		-1.443***	.01		-.048***	.00	
	Number of orders	.139***	.02		.701***	.00		.013***	.00	
	Average Temperature	-.002**	.00		-.002 ^a	.00		-.002***	.00	
	Birth rate	-.003***	.00		-.001	.00		-.002**	.00	
Male female ratio	.038	.04		.109*	.06		-.056*	.03		
Log Likelihood	-1,881,211			-410,079			-899,627			
AIC	3,762,463			820,195			1,799,291			
BIC	3,762,698			820,407			1,799,503			

Robustness check 1: Customer-level data (Log(CC index)): N = 1,057,487

Robustness check 2: Customer-level data (ever bought a conspicuous product): N = 1,057,487;

Robustness check 3: Customer-level data (number of conspicuous products bought): N = 1,057,487;

^a: p-value < .10; *p-value<.05; **p-value<.01; ***p-value<.001.

TABLE 9
Robustness Checks: GLS Results Predicting Conspicuous Consumption Index - cont

Variables	Robustness Check 4		Consistent with Predictions? B	Robustness Check 5		Consistent with Predictions?	
	B	SE		B	SE		
Variables of Interest	Average income	-.074***	.02	Yes	.061	.07	No
	Income dispersion	.006**	.00	Yes	.049	.05	No
	Percentage of homeowners	-.203***	.03	Yes	-.323 ^a	.20	Yes
	Average education (Years)	-.007*	.00	Yes	-.029*	.01	Yes
	Festival ratio	.173***	.01	Yes ^b	.161***	.02	Yes
	Income inequality	.030**	.01	Yes	-.056	.04	No
Control Variables	Offline shopping	.021*	.01		.171 ^a	.10	
	Level of e-commerce development	.025**	.01		-.044*	.02	
	Average clothing size	.045***	.00		.026***	.00	
	Small cities	.034***	.01		NA	NA	
	Promotion intensity	-.361***	.01		-.085***	.02	
	Order price	.027***	.00		.014***	.00	
	Product quantity per order	-1.403***	.00		-.881***	.01	
	Number of orders	.542***	.00		.053 ^a	.03	
	Average Temperature	-.001 ^a	.00		.001	.00	
	Birth rate	-.001	.00		-.012***	.00	
	Male female ratio	.109*	.05		-.023	.15	
Log Likelihood	-609,530			-111,359			
AIC	1,219,096			222,754			
BIC	1,219,314			222,914			

Robustness check 4: Order-level data (ever bought a conspicuous product): N = 1,540,473;
 Robustness check 5: Customer-level data from west region small cities/rural area: N = 61,659

^a: p-value < .10; *:p-value<.05; **: p=value<.01; ***:p-value<.001.

^b: Festival ratio is operationalized as a dummy variable which is whether an order was purchased before a festival. This operationalization is determined by the data that is an order-level data

