Status Goods: Experimental Evidence from Platinum Credit Cards*

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This paper provides field-experimental evidence on status goods. We work with an Indonesian bank that markets platinum credit cards to high-income customers. In a first experiment, we show that demand for the platinum card exceeds demand for a nondescript control product with identical benefits, suggesting demand for the pure status aspect of the card. Transaction data reveal that platinum cards are more likely to be used in social contexts, implying social image motivations. In a second experiment, we provide evidence of positional externalities from the consumption of these status goods. A final experiment provides suggestive evidence that increasing self-esteem causally reduces demand for status goods, indicating that social image might be a substitute for self image. *JEL* Codes: D03, D12, Z13.

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I. Introduction

Social image concerns affect many important behaviors, from donations to student effort to political participation.[1] A fundamental economic behavior –consumption–may also be shaped by social image concerns. Specifically, a desire to signal high income or wealth may cause consumers to purchase *status goods* (Veblen 1899; Duesenberry 1949). In theory, such conspicuous consumption can impose negative positional externalities, and lead to wasteful spending in a consumption rat race (Frank, 1985). Empirically, conspicuous consumption has been implicated in important economic phenomena such as the wealth gap between racial groups in the United States (Charles et al., 2009), personal bankruptcy decisions (Agarwal et al., 2016), and large expenditures on weddings and festivals in developing countries (Rao, 2001; Banerjee and Duflo, 2008).

However, directly testing for status concerns in consumption is challenging. With observational data, it is difficult to fully separate unobserved consumption utility from a desire to signal high income. For example, a person who buys a Ferrari or an Armani suit could simply have a particularly strong taste for nice cars and fashionable clothes. Moreover, such consumption decisions could be driven by self-image and identity motivations, which may be present even when consumption choices are invisible to others (Akerlof and Kranton, 2000). More generally, self-image or identity and the demand for status could be deeply connected, and it remains an open question whether self and social image are substitutes or complements.

In this paper, we (i) provide field-experimental evidence of the existence of status goods; (ii) test for the associated positional externalities; and (iii) shed light on how self-image interacts with social image in explaining the demand for status. We work with a large bank in Indonesia to design three related experiments that market the bank's widely-recognized platinum credit cards.

The sample for our experiments consists of largely urban, upper middle-class bank customers. We consider this a particularly important context in which to study conspicuous consumption: The developing world is experiencing rapid economic growth and urbanization—precisely the conditions under which Veblen originally theorized conspicuous consumption would be most likely to arise. In Indonesia, for instance, an estimated 74 million consumers were classified as middle-class in 2013, and this number is expected to double by 2020.[2] Such individuals are obtaining access to credit cards and a broader set of visible consumption and luxury goods. Already, approximately 130 million of 330 million global luxury good consumers are located in such emerging markets.[3]

Demand for status. Our first experiment is designed to test whether customers have demand for the pure status component of the credit card. The experiment shows that a substantial part of the demand for the platinum card is explained by the desire to own the prestigious card itself,

[1] See, for example, Perez-Truglia and Cruces 2017; DellaVigna et al. 2012, 2017; Bursztyn and Jensen 2015; Enikolopov et al. 2017

[2] See "Indonesia's Rising Middle-Class and Affluent Consumers," *Boston Consulting Group Perspectives*, 2013.

[3] See "Luxury goods worldwide market study," *Bain & Company*, 2015.

beyond the tangible benefits and services it comes with. The innovation of this experiment is to engineer a control product which holds constant all the instrumental benefits of the platinum credit card, while stripping away the associated status component. Specifically, we offer paid credit card upgrades to a sample of bank customers (n=835). In a control group, customers are offered all the financial services and instrumental benefits of the platinum card, made available as a benefits upgrade on a nondescript credit card. In a treatment group, customers are instead offered an upgrade to an actual platinum card. In both groups, customers are truthfully told that they were randomly selected to receive the offer, to avoid providing information about their relative income and status.

We find that demand for the platinum card (21.0% take-up at market price) is substantially higher than demand for the instrumental benefits it comes with (13.7% at the same price). The difference in demand for the two offers (7.3 percentage points) is economically meaningful: take-up of the benefits package increases by only 3.7 percentage points from making a second call-back with a 25% discount offer to those who turned down the original offer. Surveys and interviews of customers assigned to the control group suggest that the benefits package was fully credible. Despite believing that they would receive the exact same benefits and services as platinum card-holders, control group customers were less likely to accept the offer.

Status-signaling in credit card transactions. Next, we analyze individual credit card transactions among a larger (n=2,492) observational sample of customers to understand how the platinum card is used in practice, and whether the observed usage patterns are consistent with social-image motives. Exploiting the bank's assignment rules for credit limits and card types, we show that platinum card holders are more likely to use the card in social situations, such as spending in bars and restaurants, where the card is likely to be visible to others. This likely reflects platinum card holders substituting away from using other cards or cash for such expenditures, since a consumption recall survey reveals that actual restaurant visits do not differ between platinum and standard card holders. The use of the platinum card for social signaling is costly: when using the platinum card at a restaurant, 48% of platinum card customers are choosing to forgo discounts or cash-back rewards offered by other credit cards they hold. Taken together, these findings provide suggestive evidence consistent with the hypothesis that platinum cards are used to build social image.

Positional externalities. Having established that status considerations play a substantial role in the demand for and use of platinum credit cards, we next test for the presence of 'positional externalities' imposed by ownership of the cards – a defining characteristic of status goods (see, for example, Frank 2005). In a control group, current platinum card holders are offered an upgrade to a new, more-expensive but functionally identical, 'diamond card'. In a treatment group, customers receive the same offer, but are additionally truthfully informed that the income criterion for the platinum card they currently hold has been recently reduced, so that some relatively lower-income customers now also qualify for the platinum card. With a final sample of 93 customers, we find that

providing this additional information nearly doubles take-up of the new diamond card from 22% to 41%. Intuitively, as the status good becomes accessible to lower-income consumers, this weakens its income-signaling power and imposes a positional externality on higher-income consumers who, consistent with models of fashion cycles (Pesendorfer, 1995), then demand a more exclusive status good.

Self-image and demand for status. In our final set of experiments, we examine whether self-image plays a role in the demand for status. We provide suggestive evidence that self-esteem—an important aspect of self-image—has a causal effect on customers' demand for status goods. To boost self-esteem, customers in a treatment group are asked to complete a self-affirmation task, in which they describe an event from their personal or professional life which made them feel proud of themselves (Hall et al., 2013). Customers in a control group instead perform a placebo task, in which they are asked to describe their media consumption habits. In an initial experiment, we attempted to study impacts of higher self-esteem on platinum credit card take-up (n=167). While the point estimates suggest economically large reductions in demand for the platinum card, we are unable to estimate the effect precisely due to sample size limitations. We therefore implement a parallel design using the online crowdsourcing platform *mTurk* (n=405). Instead of offering participants a platinum credit card or a placebo product, we elicit preferences between gift certificates for luxury brand apparel—a classic status good—versus lower-end apparel, using an incentivized multiple price list procedure. We find that higher self-esteem results in substantially lower demand for a conspicuous status good. We infer that positive self-image reduces demand for social image; self and social image thus appear to be substitutes, rather than complements.

Our work contributes to the literature on status goods and conspicuous consumption in three ways. First, we provide *direct* evidence on status-signaling in consumption. The best existing empirical evidence on status goods is correlational, and consistent with plausible alternative explanations. The first type of evidence establishes facts about consumption patterns which are consistent with income-signaling models. For example, Charles et al. (2009) show that Blacks and Hispanics in the US spend more on visible goods (primarily cars, clothes, and jewelry) than comparable Whites, and that the share of expenditure on visible goods for each group decreases with the average income of the group. Heffetz (2011) shows that the income elasticity of demand of consumer goods correlates with reported visibility of the goods to one's neighbors. Both empirical results are intriguing, and consistent with signaling models, but also with unobserved heterogeneity in tastes. A second type of evidence in this literature establishes peer effects in consumption (Bertrand and Morse, 2016; Kuhn et al., 2011; Agarwal et al., 2016). These results are again consistent with status-signaling in consumption, but also with supply-driven demand (for example, advertising for cars increases when the rich are doing better), or with social learning or salience explanations.

In contrast, we provide direct evidence that consumers value the social signal provided by a status good. They pay less for a product that offers exactly the same consumption utility as a

status good, but is perceived by others as being owned by less wealthy individuals. Moreover, we show that individuals are more likely to use a status good in situations where it will be visible to others, even at some financial cost.

Second, we provide evidence of the existence of positional externalities from the consumption of a status good. That is, holding consumption utility constant, we show that consumers value a product less when lower-income customers get access to the same product, and the associated income signal is weakened. The existence of positional externalities implies that the welfare implications of theories of status goods should be taken seriously.

Third, we provide suggestive evidence on the role of self-esteem as a potential determinant of conspicuous consumption, and more generally on the relationship between self and social image. This is an under-explored area of inquiry with potentially important implications beyond our setting. We find that higher self-esteem—an important aspect of self-image—causally reduces the demand for status goods, implying that social image could be a substitute for self image. Factors lowering self-esteem, such as poverty, unemployment, or facing negative stereotypes, may magnify the effects of status-seeking behavior and increase susceptibility to social pressure more generally. Our findings might therefore shed light on related social phenomena, such as large wedding and festival expenditures by the poor in developing countries, and low-income minority students conforming to harmful social norms.

II. Setting: The Credit Card

The market for credit cards in Indonesia has several features that make it an especially attractive setting to study status goods. Indonesia is an important emerging market with a large and rapidly growing middle class. Credit cards are widely used, and premium credit cards have a high income-criterion relative to median income, making them a credible and well-recognized signal of status and economic success.

We work with one of Indonesia's leading banks to conduct a series of field experiments. The bank has approximately 200,000 credit card customers, and offers its credit card product in three tiers: classic, gold, and platinum. The three tiers of the credit card are vertically differentiated based on income. The platinum card has the highest income-eligibility criterion, followed by the gold card, and the classic card with the lowest income requirement. At the time of our experiment, a new customer was required to document an annual income of Rp 36 millions (US$2,556) to qualify for a classic card, an annual income above Rp 60 million (US$ 4,260) to qualify for a gold card, and an income above Rp 500 million (US$ 35,500) to be eligible for a platinum card.[4] Customers are charged a fixed annual fee of Rp 120,000 (US$ 9) for a basic card, Rp 240,000 (US$ 17) for a

[4]The eligibility criteria for customers who are already clients of the bank can alternatively depend upon the client's deposit account balance, or on their credit history with the bank, say from consumer or housing loans.

gold card, and Rp 600,000 (US$ 43) for a platinum card, plus a monthly membership fee equal to 2.75% of the customer's credit limit.

Consistent with the eligibility requirements, only 10% of active credit card customers at the bank qualify for a platinum card, 72% of card customers have a gold card, and the remaining 18% qualify only for the classic card. The average (median) customer in the sample of active credit card clients has a reported annual income of Rp 154 million or US$ 10,934 (Rp 60 million or US$ 4,260). The bottom quartile of the customer population is close to the median income of urban Indonesia, while the median credit card customer is in the top 15% of urban incomes in Indonesia. Even the lowest-income platinum card customers rank in the top percentiles of the Indonesian income distribution, so that qualifying for a platinum card plausibly serves as a strong signal of high relative income.

Importantly, the three tiers of the credit card are also differentiated in their appearance, as shown in Figure I. Most notably, the platinum card differs from the two lower-tier cards in both color and design: it is dark purple and has the word *'Platinum'* printed in large cursive letters across the front of the card. All three tiers of the card are well-recognized and marketed throughout Indonesia using print, billboard, and online advertising that includes images of the cards.

To test for public recognition of the platinum card—a necessary condition for status signaling —we conducted two sets of surveys outside malls in the greater Jakarta area. In both surveys, we showed respondents pictures of the gold and platinum cards, and asked which card they thought had a higher income-eligibility criterion. In the first survey (n=113), conducted outside higher-end malls, an overwhelming majority of respondents (93 out of 113) ranked the cards correctly in terms of their income requirements. In the second survey (n=500), conducted in July 2017 outside a broader range of markets, a smaller majority of respondents (59%, significantly different from 50%) recognized the platinum card as having a higher income criterion. Restricting attention to those respondents who themselves either own a credit card or report having seen a platinum credit card before (n=234), this share increases to 71%. In the second survey, respondents were also asked to guess the average monthly income of gold and platinum card holders. The average guess is that the income of a platinum card holder is 62% higher than that of a gold card holder —approximately Rp 60 million (US$ 4,260) more income per year.[5]

The above survey evidence suggests that the platinum card *can* serve as a means to signal higher income, especially to an audience more familiar with credit cards. Of course, this does not imply that potential consumers actually *value* sending such a signal, or that status concerns are an important component of consumer demand for the platinum card, since the cards also differ in credit limit, price and other potentially valuable benefits. For example, the gold card has a credit limit between Rp 10 million (US$ 710) and Rp 30 million (US$ 2,130), while the platinum

[5]Note that this difference in beliefs about income, while large in relative terms and in the correct direction, substantially under-estimates the actual difference in income between platinum and gold card holders.

card has a credit limit starting at Rp 40 million (US$ 2,840), and extending up to Rp 125 million (US$ 8,875) for the very highest-income clients. Platinum card customers also enjoy additional instrumental benefits: they can access premium airport lounges using an add-on card, receive cash-back discounts on international fashion brands, and are eligible for additional special offers and promotions available only to the bank's premium credit card customers.

While several features of the platinum credit card, such as the high income eligibility criteria, and the bold *'Platinum'* labeling, suggest the potential importance of status or income signaling in demand for the card, this is clearly confounded with the differences in credit limit, instrumental benefits and price. In the following section, we report a field experiment designed specifically to eliminate these confounds and test for a demand for status in the context the platinum credit cards.

III. Demand for the Platinum Card versus its Instrumental Benefits

In our first experiment, we test whether part of the demand for the platinum card is unrelated to its instrumental features. To do so, we engineer a control product that has exactly the same instrumental benefits as the platinum card, but lacks the appearance of the platinum card, thus striping away the visible status-signaling aspect. We offer this card as an upgrade to existing bank customers in a randomly-assigned control group, and compare take-up to a treatment group in which customers are instead offered the actual platinum card. We utilize price variation to interpret the magnitude of demand for the visible status component of the card, and examine heterogeneity in the demand for status.

III.A. Experimental Design

III.A.1. Setup and Experimental Protocol

The sample for this experiment consisted of 1,260 customers that had been identified by the bank. The customers in this sample had been randomly drawn from the set of current gold card holders with a credit limit of at least Rp 20 million (US$1,420), who were current on their credit card payments, and were not bank employees. Essentially, these were customers to whom, for the purpose of our relatively small experiment, the bank was willing to offer an upgrade to the platinum card, even though they may not have normally qualified for it. Customers in this sample were assigned to one of the treatment conditions described below. Treatment status was assigned randomly at the individual level, stratifying on income (below Rp 300 million per year, between Rp 300 million and Rp 500 million, or above Rp 500 million) and on customers' current annual card fee (equal to Rp

240,000 or waived).[6] Online Appendix Table A.1 reports sample characteristics for all experiments. In the sample for our first experiment, 24% of participants are female, and the average age is 47 years.

To implement the experiment, the bank made marketing calls to customers in this sample in September 2015. In the calls, all customers were offered an upgrade to the benefits, services and credit limit available to the bank's platinum card holders. Customers in a treatment group were offered an upgrade to an actual platinum card, while customers in a control group were offered an upgrade to all the benefits and services usually reserved to the platinum card, but as an add-on to their current gold card.

In order to minimize any effects that might arise from the offer's impact on participants' beliefs about themselves (their self-image, place in the income distribution, or beliefs about eligibility for other cards), customers were told that they had been randomly selected to receive this offer. In both treatment conditions, customers were informed that the upgrade was available for a price of Rp 360,000 (US$ 26), in addition to the customer's current annual fee.[7]

The experiment was conducted over the course of one week. Each day, four callers made phone calls to a randomly assigned list of credit card customers from the sample.[8] The order of client names on each caller's list was randomized, and callers made phone calls in the order provided on the list. Each client received the offer only once, but up to three call attempts were made if a client could not be reached or was busy at the time of a previous attempt. However, no additional calls were made once any part of the offer had been revealed to a respondent. All calls were recorded and checked to ensure adherence to the script. Of the 1,260 clients identified by the bank in our original sample, the callers were able to reach 835 clients who form our final sample. The scripts for all experiments are available in the Online Appendix.

III.A.2. Experimental Treatments

The treatments in this experiment were designed to hold the instrumental benefits of the offer constant, while varying the status component of the product by randomizing the appearance of the card (gold or platinum) that customers were being offered.

Credit card customers assigned to a treatment group, the *platinum upgrade* treatment condition, were offered an upgrade to the bank's regular platinum card, following the script:

> *You have been randomly chosen to receive an upgrade to our platinum [name of card] card. With this upgrade, you will get the same services, benefits, credit limit, terms and*

[6] The annual fees are often waived for new customers as a result of various promotions and marketing initiatives conducted by the bank.

[7] Customers who already pay an annual fee of Rp 240,000 thus will have to pay a total of Rp 600,000 to obtain these services (the same annual fee as that of a platinum card), while customers who have their annual fee waived will start to pay Rp 360,000 a year if they want the benefits upgrade.

[8] In total nine phone callers worked on this marketing experiment, rotating over different days.

conditions offered to other platinum [name of card] card cardholders. [...] To make all the extra benefits available, we will have to send you a new [name of card] card. The card you will receive is our elegantly designed dark platinum [name of card] card. This is different from the one you own: I'm sure everybody will notice the difference when they see it!

In contrast, customers assigned to a control group, the *benefits upgrade* treatment, were offered the same services as the platinum card, but as an add-on to their current gold card:

You have been randomly chosen to receive an upgrade on your gold [name of card] card. With this upgrade, you will get the same services, benefits, credit limit, terms and conditions offered to platinum [name of card] card cardholders. [...] To make all the extra benefits available, we will have to send you a new gold [name of card] card. It looks just like the one you already own, but includes all the benefits and services of our platinum [name of card] card.

Hence, all customers are offered an upgrade to the same instrumental benefits. They are also informed that only 10% of customers normally qualify for these services, in order to hold equal beliefs about the exclusivity of the benefits. Additionally, all customers who accept the offer are sent a new card in the mail, to hold hassle costs equal across the two arms. The only difference is the physical appearance of the new card the customers receive: one group receives the conspicuously labeled platinum card, while the other does not.

In this experiment, we also made a first attempt at understanding the effect of self-image on the demand for status. We did so by implementing a mild variation of the platinum script, the *platinum upgrade merit* condition, in which customers were informed that they had been selected as a result of being among the bank's top customers. Both statements are true, since customers were randomly selected from a relatively high-income sub-population of the bank's gold card customers. Customers assigned to the *platinum upgrade merit* condition were read the same script as described above, but with one twist: instead of being told they were randomly chosen, they were told that *"As one of our top customers, you have been chosen to receive an upgrade to our platinum [name of card] card."* As discussed below, we found no difference in take-up rates between the *platinum upgrade* and the *platinum upgrade merit* conditions. Our (ex-post) interpretation is that the *merit* treatment was too weak to measure the effect of self image on the demand for status. To better get at this question, we designed additional experiments with stronger self-image interventions, which we describe in Section 6 below.

We also realized, after running the experiment (and thus absent in the pre-registration), that the *platinum upgrade merit* condition can be used to address another potential concern. One might be concerned that telling customers they were randomly chosen to receive the upgrade offer is

unnatural. This is certainly not how the bank usually markets platinum credit cards. The *merit* treatment might thus be perceived as a more natural offer. The 'randomly selected' versus merit variations of the treatment have no differential effect on take-up, so we pool them when presenting our results (as pre-registered).

III.B. Results

III.B.1. Treatment Effects

Main result. We begin by comparing take-up of the control and treatment offers in Figure II. At the same price, the take-up rate for the *benefits upgrade* offer is 13.7%, compared to 21% for the actual platinum card. The 7.3 percentage point difference between the two treatment effects is statistically significant at the 5% level (p-value=0.025).[9] We next compare take-up rates in the *platinum upgrade* and *platinum upgrade merit* treatment conditions in Figure II. Take-up increases only marginally from 21% to 23% in the *platinum upgrade merit* relative to the *platinum upgrade* condition (p-value=0.549). On the one hand, this provides reassuring evidence that informing customers that they had been randomly chosen to receive the platinum offer was not perceived as off-putting or particularly unnatural. We hesitate to conclude, however, that self-image or identity play no role in the demand for status goods. Instead, we consider it likely that the merit script simply failed to move self-image or identity substantially. Since there is no significant difference in take-up rates between these two conditions, we pool these two groups in the following analysis to increase precision. Table I presents OLS regressions. Column (1) includes no covariates, while column (2) includes caller fixed effects and baseline covariates. The results are unchanged across specifications, consistent with successful randomization across treatment conditions. When we pool the two platinum card treatments in Table I, take-up in the *platinum pooled* condition is 22.0% as compared to 13.7% in the *benefits upgrade* condition, and this difference is statistically significant at the 1% level (p-value=0.004).

Price variation. In order to price the status value of the platinum card, we compare the increase in take-up from offering the platinum card (relative to the benefits upgrade) with the effect of a price discount on the benefits upgrade offer. We did not use randomized price variation, so these numbers should be interpreted with caution. Instead, the bank made a second call to customers who had declined the offer when they were first contacted, and offered them the same upgrade at a discount of Rp 90,000 per year (approximately US$6). We use the take-up rate for this selected sample, with assumptions, to estimate the take-up rate for the full sample.[10] This 25%

[9]The p-values for all experimental results are based on permutation tests. This ensures that our inferences are valid in finite samples.

[10]Note that we can divide our full sample in three groups: (i) those who accepted the original offer (13.7% of the sample), (ii) those who declined the offer before hearing the price details (48.7% of the sample), and (iii) those who declined the original offer after hearing the price details (37.6% of the sample). The bank made a second call to customers in group (iii), and offered them the benefits upgrade at a discount. The bank reached 70% of those

discount increased demand for the benefits upgrade by only 3.7 percentage points, less than half the effect of being offered the platinum card.[11] A simple calibration exercise (see Online Appendix C) matching take-up of the platinum, benefits upgrade and discount treatments suggests that the average consumer values the status aspect of the card by Rp 218,000 (US$15.5) per year. Given the number of assumptions used to calculate this amount, we view it as merely suggestive. While interpreting this magnitude, it is also important to note that the platinum card provides limited natural opportunities to signal status: one must be making a purchase in a social context, at an establishment which accepts credit cards, with others present for the card to be noticed.

Heterogeneity. We also investigate whether the treatment effect differs by income, gender, or age. Given the small sample size, the differences are not statistically significant, but there is suggestive evidence that the demand for status might be larger for younger and comparatively lower income respondents. For details, see Online Appendix Table A.3.

III.B.2. Alternative Channels and Interpretations

In this subsection, we consider a number of confounding factors that could explain our results and discuss which of these alternative channels can be ruled out.

First, customers might not have believed that the benefits and services – such as the credit limit, discounts, and customer service – in the *benefits upgrade* condition would in fact be identical to those of the actual platinum card, despite the fact that the bank explicitly stated this in the offer. Second, customers might have been offended that they were offered an upgrade to the benefits of the platinum card without receiving an actual platinum card.

To test for these concerns, we conducted a follow-up survey with customers in the *benefits upgrade* condition who had turned down the offer. The interviewer first asked customers an open-ended question about why they declined the offer. Next, respondents were prompted with a list of potential reasons, including (1) beliefs about the benefits and services relative to the platinum card, (2) the usefulness of the benefits, (3) the annual fee, and (4) reactions to being offered a benefits upgrade instead of being offered the platinum card itself. Only 1% of the respondents stated that

consumers, and 9.9% of those re-contacted accepted the new offer. We make some assumptions to extrapolate take-up for the full sample at the discounted price as follows. First, we assume that customers in group (i) would also have accepted the offer at a lower price. Second, we assume that group (ii), which declined the offer without hearing the price, would also have declined the lower-price offer. Crucially, we assume no selection in answering the phone in group (iii) for the discount offer. That is, we extrapolate the 9.9% take-up rate to the 30% of group (iii) whom the bank did not successfully re-contact. Under these assumptions, the predicted take-up in the full sample at the discounted price is 13.7%+(37.6%*9.9%)=17.4%.

[11] The p-value of a two-sided bootstrapped test that the effect of platinum is the same as the effect of a 25% discount is 0.12. However, a major caveat is that our non-randomized approach could plausibly understate or overstate the effect of a price discount. On the one hand, being asked a second time might induce some consumers to accept the offer even in the absence of a price cut. Or it could be that those who did not answer the phone for the second offer are negatively selected on their interest in the card. In these cases, we will have over-estimated the responsiveness to price. On the other hand, some customers might not want to appear price sensitive to the caller, such that they declined the second offer, but would have accepted it originally.

they had doubts that the quality of the benefits and services would be identical to the platinum card. None of the respondents reported being offended about not being offered the actual platinum card. Among the stated reasons for not accepting the offer, 67% of respondents answered that the annual fee was too high, and 68% said that they did not use their existing card enough to justify paying for an upgrade. None of the respondents reported being concerned that the benefits package would differ from the platinum card benefits in the future. Taken together, these results suggest that the benefits upgrade offer was found to be believable, and that the striking difference in take-up between the instrumental benefits and the platinum card is not explained by customer suspicion, confusion, or customers being offended as a result of not being offered the actual platinum card.

Finally, one may be concerned that our results could simply capture strong preferences for a specific credit card color or design. Although we have no reason to believe that customers would systematically exhibit a much stronger demand for the design of the platinum card, as opposed to that of the gold card, our first experiment cannot fully rule out this possibility. Our next experiment addresses this potential issue by holding fixed the look and design of the card being offered to customers, and manipulating only the perceived income signal.

IV. Status Signaling in Credit Card Transaction Data

The results of our first experiment show that customers exhibit substantial demand for the platinum credit card, beyond any instrumental benefits that the card additionally provides. We suspect that individuals use the card to signal their high income in order to build social status. In this section, we use detailed historical transaction data for a larger sample of credit card customers to examine whether the usage of platinum cards in everyday life is consistent with social signaling motivations. To do so, we proceed in two steps. We first identify certain transactions, such as spending in restaurants and bars, as 'visible transactions', in which the credit card is likely to be visible to one's peers. We then examine whether platinum card holders are more likely than gold card holders to use their card in such social contexts.

IV.A. Data and Empirical Strategy

We analyze credit card transaction data for customers with active credit cards who opened their accounts between January 2014 and August 2015, and who have credit limits of between Rp 20 million (US$1,420) and Rp 50 million (US$ 3,550). The credit limit for each customer is assigned based on a combination of the customer's income and credit history, and there are multiple credit limits within each tier of the card. With very few exceptions, Rp 20 million and Rp 30 million are the highest credit limits of gold card customers, while Rp 40 million and Rp 50 million are the lowest credit limits of platinum card customers. This leaves us with a sample of 2,492 customers.

For the customers in our sample, we observe all transactions between January 2014 and August

2015, along with detailed information on the transaction amount, transaction type, and location. Using this information, we categorize transactions as either visible, online, or retail. We define visible transactions as those made in restaurants, cafes, and bars (89%), in membership clubs (2%), movie theaters (2%), and other amusement and recreational services (7%). The idea is to identify uses in which the credit card is likely to be observed by one's peers, such as friends, family or business associates, to whom one might wish to signal high income. The opposite type of transaction would be an online purchase, where no one other than the cardholder observes the card being used. We identify online transactions by looking for internet-related terms, such as "www", ".com", or "e-store", in the text description that comes with each transaction.[12] The third category we consider consists of retail transactions where the card may be visible to a salesperson, but that do not occur in an explicitly social setting. These transactions comprise purchases in supermarkets, grocery and convenience stores (30%), department stores (10%), service stations (7%), clothing stores (6%), and at other merchants, such as pharmacies, etc. (47%).

Note that there is no experimental variation in platinum card ownership in this sample, so that we must address the likely omitted variable bias introduced by simply comparing gold and platinum card holders.[13] Our approach is to compare transaction patterns not just of platinum and gold card holders, but also of higher and lower income customers within each group. We use variation in credit limits as a proxy for income and creditworthiness. Specifically, we compare the lowest-income platinum card holders (Rp 40 million credit limit) with the highest-income gold card holders (Rp 30 million credit limit). To separate the effect of having a different card type (platinum versus gold) from the effect of a higher credit limit, we additionally compare within the platinum card group (Rp 40 million versus Rp 50 milllion credit limit) and within the gold card group (Rp 20 million versus Rp 30 million credit limit). Intuitively, we can therefore identify differences in transaction patterns due to a different type of card (platinum versus gold) from changes in transaction patterns due to a different credit limit. Still, since there is no random assignment in the dataset of credit card transactions, the findings from this exercise must be interpreted with caution.

IV.B. Results

IV.B.1. Main Result: Visible Transactions

Figure III displays the raw shares of visible transactions for customers with different credit limits. Column (1) of Table II presents these results in regression format. The highest credit gold card customers (Rp 30 million credit limit) have 11.4% of their transactions in the visible category. This share increases by 6.1 percentage points for the lowest-credit platinum customers (Rp 40 million

[12] We exclude all purchases from airlines, since the bank offers special travel promotions to platinum cardholders.

[13] We were not able to acquire the transactions data for the experimental sample from the partner bank. In addition, given the moderate take-up of the cards, it is unlikely that this sample would provide sufficient statistical power to allow us to detect changes in transaction patterns.

credit limit). There is no significant change in the share of online transactions (Table II, column 3), and a significant decrease in the proportion of retail transactions (Table II, column 5).

In contrast, there is no significant difference in the shares of visible, online, and retail transactions between customers with Rp 30 versus Rp 20 million credit limits (both gold card holders) and between customers with Rp 50 versus Rp 40 million credit limit (both platinum card holders). These results suggest that the difference in consumption patterns between customers with Rp 40 million and Rp 30 million credit limit is not simply related to a credit limit increase.[14] The same pattern remains once we control for customers' observable characteristics, such as income, age, gender, and religion (Table II, columns (2), (4), and (6)).[15]

Our interpretation is that platinum cardholders use their card to signal income to their peers in social settings. However, it is possible that cardholders also use their cards to build status with the restaurant staff (most likely not for that interaction, since payments are made at the end of the meal, but perhaps in the expectation of better treatment in the future).

IV.B.2. Interpretation: A Costly Signal

Changes in consumption versus changes in modes of payment. Do these changes reflect actual differences in consumption, or customers opting to use the platinum card instead of cash or other credit cards? Note that both possibilities are consistent with status-seeking behavior. To shed light on this question, we conducted a retrospective consumption survey with 362 customers randomly drawn from the credit card transaction data sample, and find only a small (and statistically insignificant) increase in the number of restaurant meals in the last month. Owning a platinum card thus does not make customers more likely to go to restaurants, nor do platinum card holders appear to be differentially selected on their interest in restaurant visits. However, they use different modes of payment for these restaurant expenditures. Is this costly signaling behavior, or are there other reasons to use platinum cards rather than other modes of payment in restaurants?

Opportunity cost of card usage. The platinum card we study offers discounts on some luxury clothing brands, but does not offer cash back or discounts in restaurants. The increase in the share of visible transactions is thus not explained by simple price effects. In fact, a survey with customers in the sample reveals that 48% of platinum card customers own other credit cards that *do* offer

[14]The p-value of a test that the difference in the share of visible transactions for customers with credit limits of Rp 40 million and Rp 30 million is the same as that between customers with Rp 30 million and Rp 20 million is less than 0.01. The p-value of a test that the difference in the share of visible transactions between customers with Rp 40 million and 30 million credit limit is the same as that for customers with Rp 50 million and Rp 40 million is 0.09.

[15]We also consider an alternative regression model in which we instrument platinum card with a dummy equals to one if credit limit is greater or equal to Rp 40 million and control for credit limit linearly. This model estimates the effect of holding a platinum card on consumption patterns controlling for the effect of credit limit, taking into account that a few customers with credit limit lower than Rp 40 million hold a platinum card. The coefficient for the dummy equal to one if credit limit is greater or equal to Rp 40 million in the first-stage regression is equal to 0.98. Results using this alternative model are also consistent with a change in consumption patterns for platinum card holders, as presented in Online Appendix Table A.4.

cash back rewards.Platinum card holders therefore appear willing to pay a cost to show off their card, forgoing cash back from other credit cards.

Note that this evidence does not identify the causal effect of owning a platinum card. Our results are equally consistent with differential selection into premium credit cards: those with a higher demand for social status (although not, apparently, restaurants) might have been more likely to accept the platinum card offer. In either case, the results are consistent with customers using the platinum card to signal status.

V. Positional Externalities

Intuitively, the signaling value of a status good depends on the type of customers who are expected to have access to it. To earn social status, one wants to display goods that are known to be owned by 'high types', and inaccessible to 'low types'.[16]This implies that when individuals with comparatively lower social status gain access to a status good, this diminishes its signaling value and imposes a negative 'positional externality' on the current owners of the status good. This, in turn, should induce the earliest adopters to demand a more exclusive status good—a dynamic captured in models of fashion cycles (Pesendorfer 1995).

In this section, we describe an experiment with credit card customers that tests for positional externalities in the consumption of a status good. The design of our experiment takes advantage of a recent change in the credit card's income eligibility requirements. A few months prior to this experiment, the bank had reduced the income threshold necessary to qualify for a platinum credit card from Rp 500 million (US$ 35,500) to Rp 300 million (US$ 21,300). Our research design uses a sample of *existing* platinum card customers, who joined under the old income criterion, and were unaware of the recent change. At the same time, the bank was considering the introduction of a new credit card tier above platinum, the 'diamond card', reserved for its highest-income customers.

As part of the bank's market research surrounding the new product, we conducted a take-up experiment in which we offered the diamond card to a sample of existing platinum card customers. The experimental treatments varied whether these customers were additionally informed that the income threshold for the platinum card they currently held had been recently reduced. The results show that demand for the more exclusive status good, the diamond card, is causally higher when customers are informed about the changed income threshold for the platinum card. We interpret this as evidence of a positional externality, imposed by lower-income customers gaining access to the platinum card, which weakens the income signal provided by the card.

[16]In our setting, 'type' is synonymous with income. However, there are of course also status goods that are not allocated based on income, such as membership in prestigious clubs or professional organizations, or recognition at work.

V.A. Setup and Experimental Protocol

The experiment was conducted with a sample of 180 platinum card customers with an annual income of at least Rp 500 million (US$ 35,500), who had been identified by the bank as being eligible for an upgrade to the diamond card, once the new card would become available. To implement the experiment, the bank made a series of marketing calls in March 2016, following a procedure similar to our previous experiment. Of the 180 clients in the original sample, the callers were able to reach 93 clients for our final sample.

V.B. Experimental Treatments

We implement two treatment conditions. In both treatments, customers were first informed that the bank is considering the introduction of a new credit card, reserved for its top customers. The caller explained that the diamond card would have *the exact same* services, benefits, credit limit, and additional services as the platinum card, but would differ in color and design. This was explained using the following script:

> *I am calling from [name of bank] and would like to ask you a question related to your [name of card] credit card. [...] We'd like to hear the opinion of our customers before deciding whether to launch a new credit card. The new card we are considering will be called the diamond [name of card] card. The diamond card will have exactly the same credit limit, benefits, services, and terms as the platinum [name of card] card, which you presently own. The only difference is that the diamond card will come in a new and different design and color from the platinum card you currently have.*

Customers assigned to the *positional externality control* group received *only* this product description, while customers assigned to the *positional externality treatment* group were additionally informed that the bank had recently relaxed the eligibility criteria for the platinum card, so that more customers with lower average incomes are now eligible for the platinum card:

> *Everyone knows that nowadays banks have started giving platinum cards to nearly anyone. Even at [name of bank], we have recently reduced the income eligibility criteria for the Platinum card to 300 Million Rp, so now many customers with a lower income than yours will get the platinum card. However, these lower income customers can not apply for a diamond card.*

All customers were then asked whether they would upgrade to the new diamond card at an annual fee of Rs 650,000 (US$ 46) – Rs 50,000 more than the fee associated with the platinum card. To add real (albeit modest) stakes to the sign-up decision, customers were also asked whether they were willing to be charged Rp 10,000 (approximately US$ 1) to receive a formal offer once the card

was launched. In practice, all customers who indicated that they would sign up for the card agreed to pay this fee, suggesting the stated preference was not simply cheap talk.

V.C. Positional Externalities: Results

We begin by comparing raw take-up rates of the control and treatment groups in the positional externalities experiment in Figure IV. Demand for the diamond card increases by almost 19 percentage points, from 21.6% to 40.5% (p-value=0.068), when customers are informed that the platinum card is now available to a wider group of customers. Table III, column (1) reports the corresponding OLS regression results. Table III, column (2) shows that the results are nearly unchanged when we include baseline covariates. Exactly as predicted by models of fashion cycles in consumption, we show that the (relative) demand for a status good depends upon who else has access to it: as lower-status consumers begin adopting the status good, they cause higher-status consumers to flee the product in favor of more exclusive products.

It is worth noting that we find demand for the upgrade to the new status good despite the fact that customers were explicitly informed that the instrumental benefits of the platinum and diamond cards are *identical*. Bagwell and Bernheim (1996) suggest that, in many settings, the instrumental benefits that are generally bundled with the status good might provide an important 'functional alibi' for purchasing it. Our results suggest that such a functional alibi may not always be necessary, at least when it comes to justifying the purchase to the marketer and to oneself. Another surprising result is the relatively high baseline take-up (21.6%) of the diamond card in the *no-info* condition. This could be explained by the higher price of the diamond card implying higher status, even with the same income criterion. In addition, some customers might have already been aware of the recently lowered criterion for the platinum card.

Beyond providing evidence of positional externalities in the consumption of status goods, this exercise also serves as a robustness check that reinforces the conclusions of our first experiment. Note that customers in the positional externality treatment and control groups received the exact same offer, and calls differed only by whether customers were additionally informed about recent changes in the minimum income requirement for the platinum card. Moreover, the scripts used in the positional externalities experiment explicitly state that the only difference between the platinum and diamond cards (aside from the income qualification cutoff) is their design. Unlike in the first experiment, we thus avoid the possibility of offending participants in by denying them access to the status good, and still find significant demand for the pure status component of the card.

VI. Self-Image and Status Goods

Thus far, we have provided evidence that social image motives play an important role in the demand for status goods. However, contrasting theories in psychology and economics suggest that self-

image or identity might also play an important role. For instance, high-income individuals might demand status goods because they derive utility from making consumption choices consistent with their (high) self-image (see, for example, Akerlof and Kranton, 2000 and Benjamin et al., 2010), irrespective of the social visibility of their consumption. Additionally, it is possible that self and social image are complements: having higher self-image could increase the demand for social image, and of visible status goods which result in a higher social image. In contrast, a literature in consumer psychology going back to James (1890) argues that status goods may serve as a self-signaling device, providing a boost to one's self-image (Rucker and Galinsky, 2008, Sivanathan and Pettit, 2010). In such models, social and self- are substitutes: those with low self-image will seek out a higher social image, potentially through engaging in conspicuous consumption.

To better understand the relationship between self-image and the demand for status goods, we implemented two experiments, in which we experimentally increase *self-esteem*, an important component of self-image, and test whether high self-esteem affects the demand for status goods.

VI.A. Self-Esteem Intervention

To (temporarily) boost self-esteem, we use a self-affirmation exercise adapted from the psychology literature (Steele 1988, Cohen et al. 2009, Hall et al. 2013). The exercise involves asking the respondent to describe a recent experience from their personal or professional life that made them feel particularly proud. We show below that this treatment delivers a boost to one's self-esteem, as measured using a standard instruments from psychology (Rosenberg, 1965).[17]

Our goal is to test how this boost in self-esteem affects the demand for status goods. Our first, suggestive, piece of evidence comes from a sample of credit card customers (n=167) called in June-July 2016. These customers were first randomly assigned to either a phone version of the self-affirmation exercise or a placebo exercise. They were then randomly offered either a benefits upgrade or an upgrade to the actual platinum card (exactly as in the first experiment). The point estimates from this experiment suggest that a boost in self-esteem substantially reduces demand for the platinum card, while leaving demand for the benefits upgrade unaffected. While this provides a first indication that self and social image might be *substitutes* in this setting, we do not have sufficient statistical power to estimate effects precisely (as the bank reduced the sample size after the experiment was launched).[18] The experiment is discussed in detail in Online Appendix D.

To provide more convincing evidence on the interaction between self-image and the demand for

[17] More broadly, self-affirmation has been theorized to help maintain a global sense of personal adequacy, provide a buffer against threats to the self, and reduce defensiveness (see Cohen and Sherman (2014) for a recent review). While the typical self-affirmation intervention involves affirming one's core personal *values*, we instead utilize a newer intervention developed by Hall et al. (2013), which focuses not on values but directly on a sense of success and self-esteem.

[18] This experiment also serves as a replication exercise for our first experiment: pooling across self-affirmation conditions, we observe a significantly higher take-up rate for the platinum card relative to benefits upgrade offer (p-value=0.024).

status goods, we implemented a similar experimental design, using online platform *mTurk*, which allows for a larger sample size and cleaner implementation in a different setting.

VI.B. mTurk Experiment

VI.B.1. Setup and Experimental Protocol

The sample for the online experiment consists of 405 individuals who signed up for an incentivized task on the online platform *mTurk* in August 2016. In the first part of the experiment, participants were randomly assigned to one of two tasks: a written self-affirmation exercise, as described below, or a placebo condition. In the second part of the experiment, all participants were then asked to make incentivized choices between gift certificates of different amounts, one for a classic status good (luxury apparel), and the other for a control product (non-luxury apparel). We utilize a standard incentivized multiple price list procedure to elicit a truthful measure of the differential willingness to pay for a luxury brand gift card, compared to a non-luxury brand gift card.

The willingness to pay for the luxury gift card is our main outcome of interest in this experiment. If self image and social image are complements, the self-esteem intervention should increase the willingness to pay for the luxury brand gift card. If, however, self and social image motives are substitutes, one would expect that the self-affirmation intervention should reduce demand for the luxury gift card.

VI.B.2. Experimental Treatments

Participants assigned to the *self-esteem treatment* group were asked to write a paragraph about a recent experience or achievement that made them proud, using the following instructions:

> *Can you please describe an event that made you feel successful or proud of yourself? It could be from any aspect of your life, whether personal, social or family related, educational, or professional. Please be as specific as possible, and include as many details as possible. You should use all of the blank space below.*

Participants in the *self-esteem control* group were asked to complete a placebo task, analogous to that in the previous self-affirmation experiment:

> *Can you please tell the title and summarize the story of the last movie you have seen? Please be as specific as possible, and include as many details as possible. You should use all of the blank space below.*

After completing one of these tasks, we measured participants' self-esteem, using the standard Rosenberg (1965) scale.[19] This allows us to verify that the treatment increases self-esteem as

[19]The survey instrument used is available in the Online Appendix

intended. The questionnaire consisted of a series of statements, such as *"On the whole, I am satisfied with myself"*, and asks respondents whether they strongly agree, agree, disagree, or strongly disagree with the statement. As reported below, we detect a meaningful increase in self-esteem as a result of the treatment.

Participants were then informed that they qualify to participate in a lottery in which they can win either a US$500 gift certificate for non-luxury apparel (*Old Navy*) or a US$400 ($450, $500, $550, $600) gift certificate for luxury apparel (*Armani*). Participants were asked to make incentivized binary choices between the two types of gift certificates at different monetary values. The elicited willingness to pay for the different types of gift cards is the main outcome of interest, which we use to test the complementarity of self and social image motivations in the demand for status goods.

Finally, participants were asked to rank the values they consider important in life (Steele and Liu, 1983), to test whether the self-affirmation treatment causes participants to reevaluate the importance of different aspects of their life, such as family, religion, work or financial success. We detected no such effects, suggesting that any impacts of self-affirmation on consumption were not driven by changes in values.[20]

VI.B.3. Results

We present the results of the *mTurk* experiment in Table IV. In Table IV, column (1), we first report the effect of the self-esteem treatment on subjects' self-esteem, as measured using the Rosenberg (1965) scale. On average, participants in the self-image treatment group scored 1.22 points (s.e.=0.7), or 0.17 standard deviations, higher on the self-esteem measure than participants in the control group (statistically significant at the 10% level).

In Table IV, columns (2) to (6), we report the effects of the self-esteem treatment on demand for the luxury brand gift certificate. We find that the self-esteem treatment has a negative impact on the proportion of subjects who prefer the luxury brand for all values. In order to take into account that we have multiple outcomes, we evaluate whether these effects are statistically significant following the recommendations in Kling et al. (2007). When we calculate a summary index based on these five outcomes, the effect of the self-esteem treatment is negative and has a p-value of 0.033.[21]

[20] We asked subjects to rank eight aspects (family, friends, leisure time, financial success, health, politics, work, and religion) from most important to less important. We test for the null hypothesis of no effect of the self-affirmation treatment for each of these aspects. Since the outcome variable is ordinal (a rank from 1 to 8), we use a permutation test based on Volfovsky et al. (2015). The p-value of a joint test of no effect of the self-affirmation treatment for all aspects is 0.62. Nor does any individual aspect show significant effects.

[21] Another alternative suggested in Kling et al. (2007) is to calculate the mean effect size. Under this approach, we find similar results, with a negative mean effect size and a p-value of 0.028. We also implement a joint permutation test, following the approach suggested in Young (2017). In this case, the p-value of a joint permutation test that the effect of the self-esteem treatment is zero for all values is equal to 0.068. Note that the approach suggested in Young (2017) does not take into account that the point estimates in all regressions point out to a negative effect of the self-esteem treatment on the demand for the luxury brand. Therefore, this approach would have lower power than

Figure V presents the cumulative distribution for the willingness to pay for the *Armani* gift card relative to the *Old Navy* gift card for both groups, which confirms our result that the self-affirmation treatment has a negative effect on the willingness to pay for the *Armani* gift card. Adding baseline covariates again yields very similar results (Table IV, panel ii).

VI.B.4. Discussion and Interpretation

This section has provided suggestive evidence that higher self-esteem causally reduces the demand for status goods. Our interpretation of this result is that higher *self*-image reduces individuals' desire for *social* image, and thus their demand for status goods. That is, self and social image are substitutes. To our knowledge, this is the first evidence on the relationship between self and social image. It implies that social signaling behavior may be particularly strong among those with low self-esteem, and that such individuals may thus be more likely to conform to social norms. When these norms are judged to be 'negative', such as social stigma from studying hard in low-income minority schools (Bursztyn and Jensen, 2015), policies to build self-esteem or a sense of self-worth might be effective in weakening the power of the social norm, as in Cohen et al. (2009). Conversely, higher self-esteem might reduce compliance with 'positive' social norms, such as those encouraging charitable donations (DellaVigna et al., 2012) or voting (DellaVigna et al., 2017).[22]

We do not find direct support for identity-based theories of status-good consumption. Under such theories, high-status individuals will purchase status goods because it is consistent with their self-image. Instead, we observe a *reduction* in demand for status goods from boosting self-esteem, suggesting that any such effect in our experiment is overpowered by the potentially strong substitutability of self- and social image.

One important caveat is that we cannot rule out that the self-affirmation treatment affected participants through channels other than self-esteem, such as cognitive function (as in Hall et al., 2013) or self-control (as in Schmeichel and Vohs, 2009).[23] Indeed, in contrast with the experimental results, self-esteem does *not* predict demand for the luxury good within the control group, although of course this might be due to omitted variables.[24] For example, people who are more likely to regularly go to nightclubs, or on romantic dates, might have higher self-esteem and also exhibit stronger demand for status goods. A second caveat is that, unlike in the first experiment, here

the approaches suggested in Kling et al. (2007).

[22] An alternative interpretation is that status goods provide both social-image and self-image utility, and the two are relatively independent. Increasing an individual's self-image exogeneously through the self-affirmation treatment might have diminished the marginal utility of a further boost in self-image from owning a status good, thus reducing demand.

[23] Although note that Hall et al. (2013) only find such effects among the poor, and the type of self-affirmation intervention used in Schmeichel and Vohs (2009) is conceptually quite different: it affirms *values*, not self-esteem.

[24] A one standard deviation increase in the self-esteem scale is associated with -1.3 to 3.0 percentage points variation in the demand for the Armani gift certificate, depending on the value of the certificate. The p-value of a joint test that the correlation between self-esteem and demand for the Armani gift certificate for all values of the gift certificate is equal to 0.518.

the control and status goods also differ in quality and instrumental utility. It could be that higher self-esteem causes individuals to prefer lower-quality goods, although we consider this to be both less plausible and less theoretically founded than our preferred explanation: that self and social image are substitutes.

VII. Conclusion

This paper provides field experimental evidence on status goods. In particular, we show that the status aspect of a premium credit card—due to its potential to signal income—is an important driver of demand for the product, over and above its instrumental benefits. Our experiments also identify a positional externality associated with the consumption of these status goods, thus confirming a key aspect of theories of status goods. We also provide suggestive evidence that higher self-esteem causally reduces demand for status goods, implying that self and social image are substitutes.

We believe this work can be usefully extended in several directions. First, more work on the overall economic importance and welfare consequences of status goods would be valuable. Second, understanding reference groups is a promising avenue: whom do individuals compare themselves to, and whom do they want to impress? Third, while we provide evidence that self and social image are substitutes in our context, it will be important to understand whether this is true in other settings and along other dimensions of self or social image. Finally, we believe that understanding the effect of self-esteem on economic choices is a promising avenue for future work, especially in settings where self-esteem may be particularly low, such as in populations facing poverty, low social status, or negative stereotypes.

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Tables

TABLE I

Demand for Status (Experiment 1)

	(1)	(2)
Platinum (pooled)	0.083***	0.083***
	[0.027]	[0.027]
	(0.004)	(0.006)
Mean (benefits upgrade)	0.137	0.137
	[0.021]	[0.021]
Include controls?	No	Yes
Sample size	835	835
R2	0.010	0.073

Notes: Column 1 presents the results of a regression of a dummy variable equal to one if the client accepted the offer on a dummy for platinum treatments. The regression presented in column 2 includes strata dummies, credit limit, female, muslim, Jakarta, age, and caller fixed effects as covariates. Robust standard errors in brackets. Permutation test p-values in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

TABLE II

Effects of Platinum Card on Credit Card Usage (Transaction Data)

	Share of visible transactions		Share of online transactions		Share of retail transactions	
	(1)	(2)	(3)	(4)	(5)	(6)
Gold (30M CL) - Gold (20M CL) (a)	0.009	0.008	-0.010	-0.009	0.011	0.012
	[0.011]	[0.011]	[0.009]	[0.009]	[0.018]	[0.018]
Platinum (40M CL) - Gold (30M CL) (b)	0.061***	0.053***	-0.005	0.000	-0.090***	-0.095***
	[0.011]	[0.012]	[0.007]	[0.008]	[0.017]	[0.018]
Platinum (50M CL) - Platinum (40M CL) (c)	0.011	0.015	0.009	0.007	-0.023	-0.017
	[0.024]	[0.025]	[0.013]	[0.013]	[0.033]	[0.032]
Mean (Gold (CL 20M))	0.105		0.054		0.673	
	[0.007]		[0.006]		[0.012]	
Controls	No	Yes	No	Yes	No	Yes
Number of clients:						
Gold (20M CL)	737	737	737	737	737	737
Gold (30M CL)	552	552	552	552	552	552
Platinum (40M CL)	1094	1094	1094	1094	1094	1094
Platinum (50M CL)	109	109	109	109	109	109
p-value (a)=(b)	0.008	0.020	0.708	0.549	0.002	0.001
p-value (a)=(c)	0.946	0.779	0.223	0.321	0.363	0.440
p-value (b)=(c)	0.085	0.195	0.391	0.665	0.094	0.049

Notes: Column 1 reports raw comparisons of share of visible transactions for clients with different credit limits/type of card. Column 2 reports comparisons controlling for income, female dummy, muslim dummy, Jakarta dummy, and age. Columns 3 and 4 report results for online transactions, while columns 5 and 6 report results for share of retail transactions. For each column, we report the p-values of tests that the change in shares of transactions is the same for different thresholds. Robust standard errors in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

TABLE III

POSITIONAL EXTERNALITIES (EXPERIMENT 2)

	(1)	(2)
Information treatment	0.189**	0.206**
	[0.096]	[0.097]
	(0.068)	(0.032)
Mean (no information)	0.216	0.216
	[0.058]	[0.058]
Controls	No	Yes
Sample size	93	93
R2	0.042	0.143

Notes: Column 1 presents the results of a regression of a dummy variable equal to one if the client accepted to get on the invite list for the diamond card on a dummy for information treatment. The regression presented in column 2 includes income, credit limit, female, muslim, age, and Jakarta as covariates. Robust standard errors in brackets. Permutation test p-values in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

TABLE IV

Self and Social Image - Armani Gift Cards (mTurk Experiment)

		Prefer $\$\_\_\_\_$ *Armani* to \$500 *Old Navy*				
	Rosemberg Self-Esteem Score	400	450	500	550	600
	(1)	(2)	(3)	(4)	(5)	(6)
		Panel i: without controls				
Self-Affirmation	1.2214*	-0.0823***	-0.0719*	-0.0801*	-0.0336	-0.0718
	[0.7023]	[0.0310]	[0.0349]	[0.0434]	[0.0488]	[0.0497]
	(0.085)	(0.010)	(0.053)	(0.052)	(0.534)	(0.133)
Mean (neutral)	19.8333	0.1520	0.1814	0.2990	0.4167	0.5196
	[0.5076]	[0.0252]	[0.0270]	[0.0321]	[0.0346]	[0.0351]
Sample size	405	405	405	405	405	405
		Panel ii: with controls				
Self-Affirmation	1.2318*	-0.0829***	-0.0728**	-0.0805*	-0.0319	-0.0680
	[0.6890]	[0.0309]	[0.0349]	[0.0430]	[0.0469]	[0.0489]
	(0.094)	(0.006)	(0.042)	(0.067)	(0.496)	(0.169)
Mean (neutral)	19.8333	0.1520	0.1814	0.2990	0.4167	0.5196
	[0.5076]	[0.0252]	[0.0270]	[0.0321]	[0.0346]	[0.0351]
Sample size	405	405	405	405	405	405

Notes: Column 1 presents results of a regression of Rosenberg self-esteem Score on a dummy for self-affirmation treatment. Columns 2 to 6 present results of a regression of a dummy equal to one if the subject chose the *Armani* rather than the *Old Navy* gift card on a dummy for self-affirmation treatment for the corresponding offer. Panel i presents regressions without additional controls, while Panel ii presents results including race, gender, age, marital status, education and income as covariates.Robust standard errors in brackets. Permutation test p-values in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

Figures

Figure I
The Credit Cards

Notes: The figure shows the design of the *platinum*, *gold* and *basic* credit cards used in the experiments (from left to right).

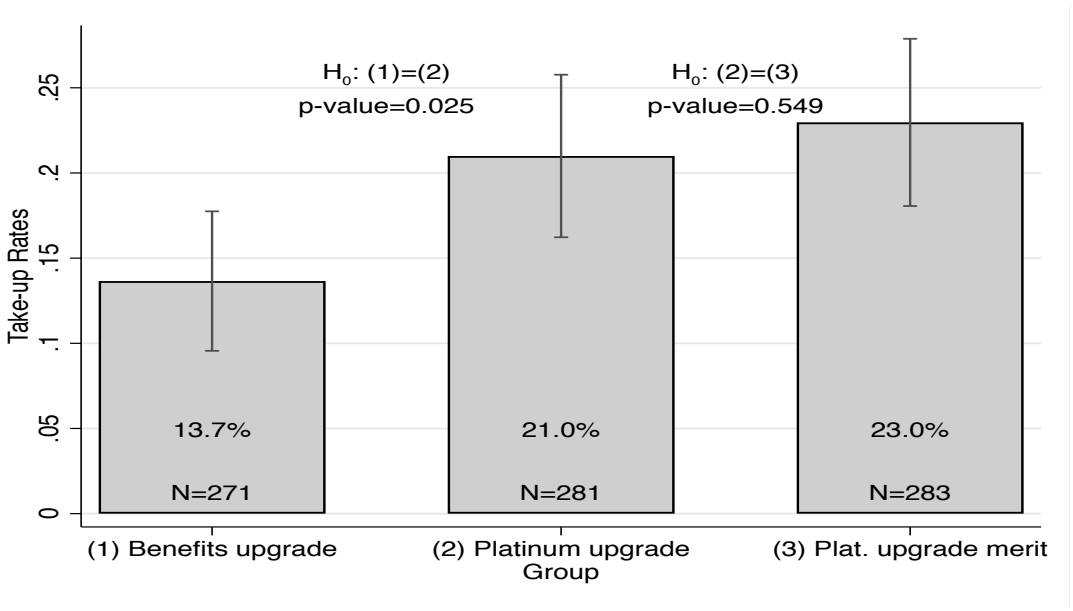

FIGURE II
Demand for Status (Experiment 1)

Notes: This figure presents the mean (and 95% confidence interval) of take-up rates for the *benefits upgrade*, *platinum upgrade*, and *platinum upgrade merit* groups in experiment 1. We present p-values for a test that take-up rates for the *benefits upgrade* and for the *platinum upgrade* groups are the same, and for a test that take-up rates for the *platinum upgrade* and for the *platinum upgrade merit* groups are the same. The p-values are based on permutation tests.

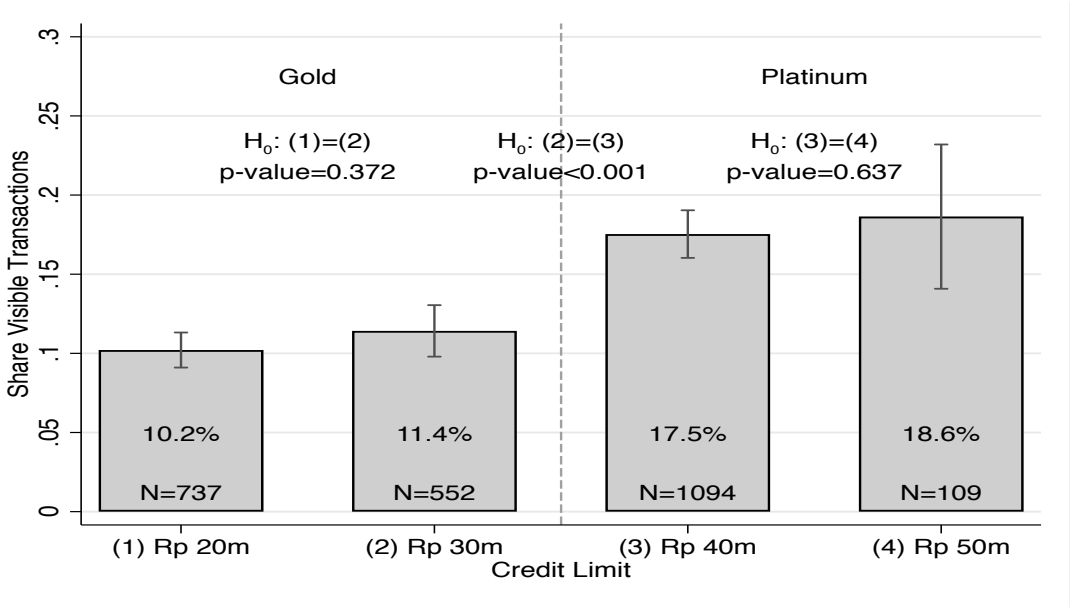

FIGURE III
Share of Visible Transactions (Transaction Data)

Notes: This figure presents the share of visible transactions (and 95% confidence intervals) for customers with different credit card limits. We present p-values for tests that the share of visible transactions is the same (i) for the Rp 20m and Rp 30m groups, (ii) for the Rp 30m and Rp 40m groups, and (iii) for the Rp 40m and Rp 50m groups.

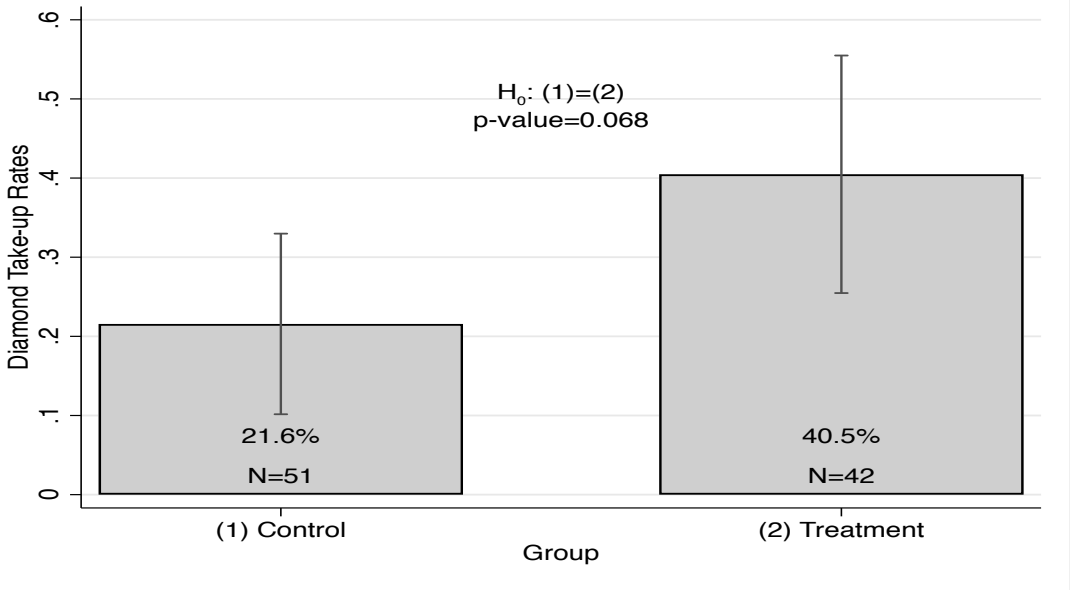

FIGURE IV
Positional Externalities (Experiment 2)

Notes: This figure presents the mean (and 95% confidence interval) of take-up rates for the control and treatment groups in experiment 2. The p-value for the test that take-up rates for the control and treatment groups is the same is based on a permutation test.

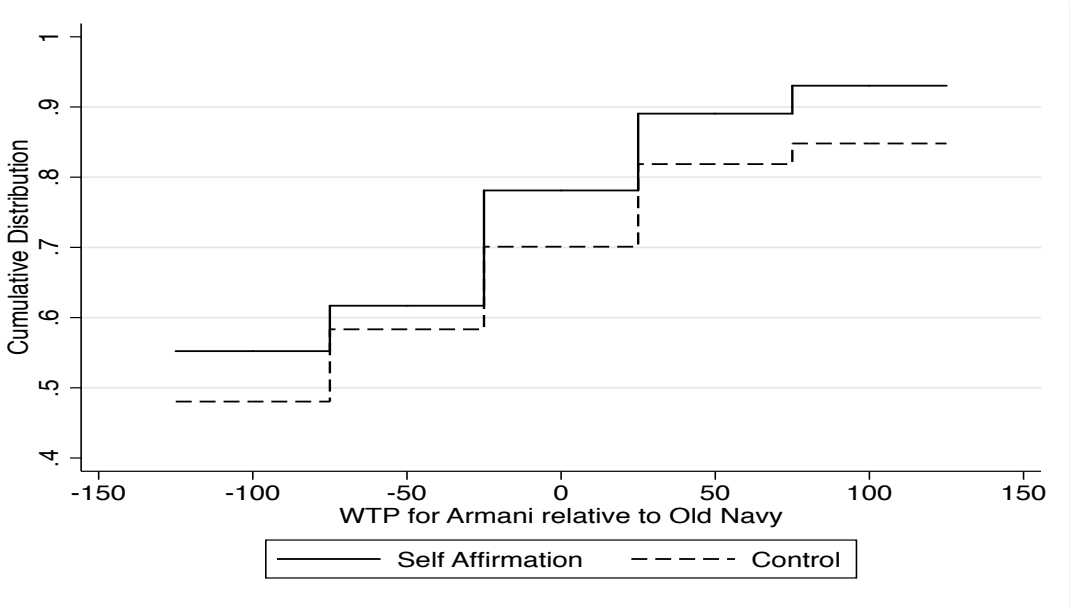

FIGURE V
Self and Social Image (mTurk Experiment)

Notes: This figure presents the cumulative distribution of the willingness to pay to receive a luxury brand (*Armani*) gift card instead of a standard brand (*Old Navy*) gift card for the control and the self-affirmation groups in the *mTurk* experiment.