

# Scarcity messages and their impact on purchase intention for conspicuous consumption goods



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## 1. Introduction

Most consumers are familiar with scarcity. Whether it is aggressively refreshing the web page to purchase concert tickets or standing outside a store to buy the latest pair of sneakers, scarcity has become an essential factor for consumers when determining which products they want. Lately, the emergence of so-called bots, automatically programmed to check out in seconds, has also become an increasing problem (Tan, 2021). What causes consumers to go out of their way to acquire highly appraised products, and how can firms best use this to their advantage? This paper aims to answer such questions by digging deeper into the scarcity phenomenon. For some consumers, the perception of scarcity and a limited product gives a sense of thrill and excitement (Wu, Lu, Wu, & Fu, 2012). Marketers know this and see this behavior as an important opportunity to behave strategically (Brannon & Brock, 2001). They have for many years been taking advantage of these theories to maximize revenue and brand image. Frequently, we see products associated with phrases like "limited edition" or "only a few left in stock." Prior research provides inconclusive findings on whether products become desirable when accompanied by scarcity. Some restricted promotional offers (scarcity messages) seem beneficial, while others do the opposite. Ku, Kuo, & Kuo (2012) argue that culture impacts proneness to these signals and that consumer behavior differs from utilitarian contra hedonic goods. Therefore, it seems advantageous to identify the optimal conditions under which scarcity should be signaled as an instrument to promote sales. Since the global luxury market, where millennials drive a large portion of the sales, is expected to skyrocket after the pandemic (Statista, 2021), it becomes increasingly relevant to understand the extent to which scarcity can be used as a marketing tool within this segment. Thus, this study's findings would be applicable for firms engaging in the luxury market wishing to optimize their promotional strategies towards a low-context culture.

## 2. Research Objective

The objective of the proposed research is to provide an adequate answer to the following question through an exploratory approach:

*"How do different scarcity messages affect the perception of conspicuous consumption goods?"*

Economic theory generally assumes rationality in consumer choices. Rationally, it makes no sense for consumers to have a greater desire for a product when it is more expensive. Yet, that is sometimes seen in society. Veblen (1899) describes this phenomenon that has since been known as the Veblen effect. He furthermore developed theories on conspicuous consumption (CC), which led to several discoveries. For certain CC goods, a determinant of desirability is rarity. However, by definition, rarity cannot be independent of supply. Thus, indicating that for such goods, supply and demand is

correlated, which goes against the usual microeconomic assumptions (Koford & Tschoegl, 1998). Perhaps supply and demand are not independent, as microeconomic theory suggests. Therefore, the purpose of this study is to go beyond the realm of known theories in an exploratory approach, examining the link between scarcity and purchase intention (PI). The expected results will be of a binary nature since the proposed research follows an eclectic hypothesis-testing approach, where the hypotheses can either be supported or rejected. The study will help determine if firms should reevaluate their use of scarcity signaling in marketing efforts to achieve a competitive advantage.

### 3. Empirical Background

#### 3.1 Understanding the scarcity term

To fully understand the importance of the proposed research and how marketers potentially can use the results to their advantage, it is first and foremost crucial to understand the terms:

*Conspicuous consumption* is a phenomenon first mentioned by Thorstein Veblen in 1899, defined as "the purchase of goods or services for the specific purpose of displaying one's wealth" (Kenton, 2021). Such goods, often high-end, easily recognizable luxury products, are consumed to publicly display social status, especially when these products are too expensive for other members of a person's class.

*Scarcity* refers to the gap between limited resources and theoretically limitless wants. Scarcity triggers reactance and can be signaled with what this paper refers to as *scarcity messages*. It is generally agreed upon by scholars that scarcity can be signaled through two means (Gierl, Plantsch, & Schweidler, 2008; Jang et al., 2015; Wu et al., 2012):

*Limited-time scarcity (LTS)*: Messages where the offer is made available for a predefined period, after which the promotional offer becomes unavailable.

*Limited-quantity scarcity (LQS)*: Messages where the offer is limited to a predefined quantity of the given product (Aggarwal et al., 2011).

Furthermore, LQS messages are commonly further split into two subgroups, where the quantity either can be constrained due to:

*Supply-side reasons*: The seller intentionally limited the output to a certain amount.

*Demand-side reasons*: Only a few goods are left in stock due to unexpected high demand.

#### 3.2 Psychological effects of scarcity

The underlying mechanism of commodity theory is that consumers value a good more when it is hard to obtain (Jang, Ko, Morris, & Chang, 2015). Wu and colleagues (2012) argue that perceived scarcity

influences the product's assumed expensiveness and perceived uniqueness. Furthermore, the price functions as a heuristic cue for consumers, indicating quality and sacrifice. For many buyers, scarcity creates a sense of urgency that increases quantities purchased, shortens searches, and improves satisfaction with the purchased products. One study saw that respondents who were told that there would be a shortage of beef soon purchased twice the amount of meat compared to those who were not given such a message (Aggarwal, Jun, & Huh, 2011). Another study found consumers to perceive cookies as tastier and more valuable with only a few left in the jar compared to when they were in abundant supply (Jang et al., 2015). Both examples illustrate the psychological effects of scarcity.

Because of its psychological properties, many firms use scarcity in their marketing efforts to appeal to consumers (Brannon & Brock, 2001). Howard, Shu, & Kerin (2007) surveyed 13,594 newspaper advertisements across four major U.S. cities. They concluded that scarcity appeal is quite common in ads containing reference price information. Approximately one in five ads used scarcity appeal. They found LTS messages to be the dominant signal used, appearing almost three times as frequently as LQS messages. Lately, consumer immersion has also received increased attention from a marketing standpoint. Technologies such as virtual and augmented reality are seeing increased use due to their ability to create high-quality content for digital marketing and enhance the overall shopping experience (Statista, 2021). This further emphasizes the importance of the topic for marketing purposes.

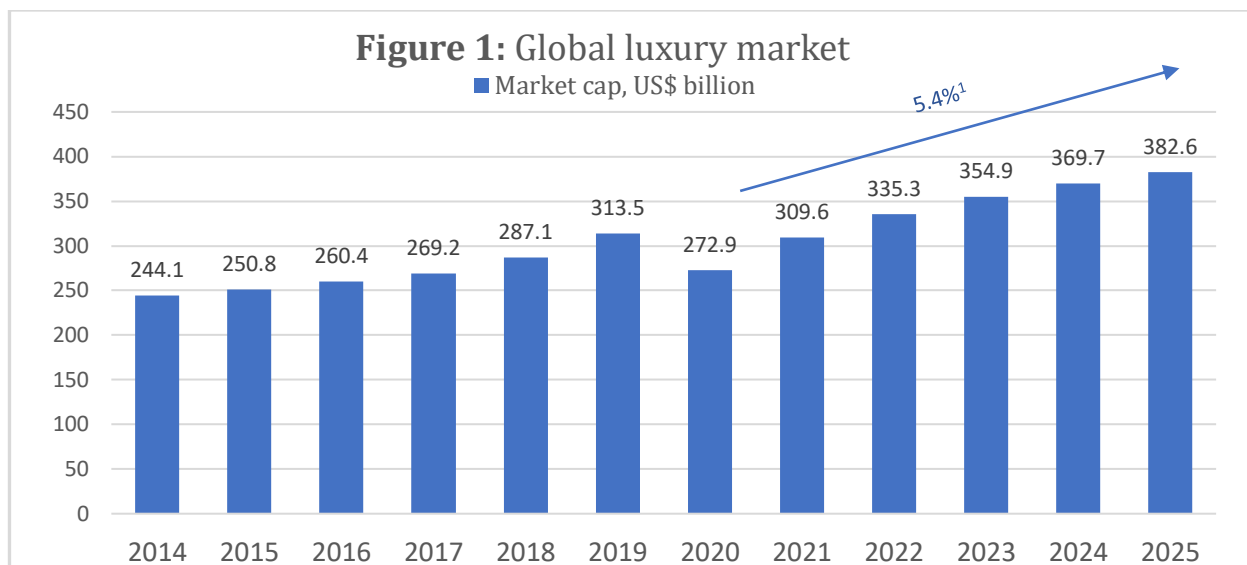
### **3.3 The global luxury market**

Markets associated with CC have seen substantial growth over the past decades and are further expected to grow. The global luxury market is expected to increase from \$309.6B in 2021 to \$382.6B in 2025 at a CAGR of 5.4%<sup>1</sup> (see figure 1). One of the drivers of the global luxury market, seen in figure 1, is the increased spending of millennials, where China's 400 million take the top spot (Statista, 2021). Even though the COVID-19 pandemic led to cutbacks on discretionary spending, it is expected that the resurgence in Chinese expenditures will drive the market back up. Another driver is international tourism, which is also anticipated to recover. Global tourists account for almost half of world luxury goods purchases (Bain & Company, 2015). The projected growth is interesting in the light of what some scholars believe to be a cultural shift away from CC towards minimalist luxury. Wharton professors, Zhang & Yldirim (2021), argue that in recent years, counterfeit goods have become so sophisticated that the authentic has lost some of its appeal for the

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<sup>1</sup> CAGR: *Compound Average Growth Rate*

wealthy. Nevertheless, the growth is still expected to flourish in the post-pandemic world, further highlighting the relevance of examining consumer behavior within the luxury segment.



*Figure 1: Global luxury market projections, US\$ billions (Statista, 2021)*

## 4. Theoretical background

### 4.1 Scarcity and purchase intention

In exploring the relationship between scarcity and purchase intention, scholars point out several moderating variables such as goal orientation, culture, needs, and product type (Gierl & Huettl, 2010; Jung & Kellaris, 2004; Ku et al., 2012). Aggarwal and colleagues (2011) also examined the moderating role of brand concept. Here, symbolic brands (i.e., those associated with hedonic goods) were seen to enhance the effect of scarcity messages, while those related to utilitarian goods were not. They further demonstrated that consumer competition was a significant mediator between scarcity message and PI.

The widely accepted theories by Edward T. Hall suggest that the role of communication differs between cultures. In low-context cultures, messages are explicit and direct, while high-context cultures are characterized by implicit, indirect messages where context is critical (Hall, 1959). Investigating the relationship with scarcity, Jung & Kellaris (2004) found that the effectiveness of scarcity was greater for low-context cultures. Ku, Kuo, Fang, & Yu (2014) further concluded that consumers' goal orientation plays an essential moderating role in consumer perception. Here, two self-regulatory goals regulate the consumer's evaluation process: Prevention focus, where the consumer would aim to avoid or minimize adverse outcomes, and promotion focus, where the main objective of the purchase is to maximize positive results. The study found that consumers' attitude

toward a product was more favorable when product benefits matched their goal. Conspicuous goods saw the highest desirability in conjunction with promotion focus. These findings lay the groundwork for the fictional purchase scenario in the main study.

#### **4.2 Drivers of conspicuous consumption**

To establish a cohesive relationship between scarcity and PI for CC goods, it is relevant to mention Maslow's prominent theories on social needs. One of the driving motivators for CC is the satisfaction the owners get from their social desires (Gierl et al., 2008). Two of these layers, referred to as psychological needs, relate to esteem and belonging (Maslow, 1943). Inspired by Maslow's hierarchy, Gierl & Huettl (2010) created a framework subcategorizing the reasons for conspicuous behavior into three needs:

1. *The need for social status and admiration.* According to Belk (1985), owning and consuming status symbols can create positive feelings of being highly respected. Lamborghinis, Chanel bags, and Rolex watches are examples of such goods, which sometimes even can promote a positive state of being envied (Gierl & Huettl, 2010).
2. *The need for uniqueness.* A way to differentiate oneself from others is by possessing unique products. This gives a perception of respect and admiration by seeking unusual goods admired by friends or colleagues. The need can also be fulfilled by deliberately breaking the rules, risking social disapproval. Later, however, the same people may gain social respect as trendsetters (Ku et al., 2014; Tian, Bearden, & Hunter, 2001).
3. *The need for conformity.* Regardless of which type of group, conformity improves the possibility of being accepted into the respective community. Consumers wishing to engage in these groups choose products highly appreciated in these circles to demonstrate unity (Lascu & Zinkhan, 1999).

For a product to signal status, uniqueness, and conformity, the good needs to be visible. One must be able to signal their wealth to others. Secondly, the products must have a symbolic meaning easily interpreted by others. Third, the product must be scarce. When the above criteria are met, the good is suitable for CC (Gierl & Huettl, 2010).

#### **4.3 The effect of scarcity messages**

Scholars generally agree that the level to which firms can appeal to these needs depends on the scarcity message used. They argue that a superior level of appeal can be signaled through supply-related LQS messages (Aggarwal et al., 2011; Gierl & Huettl, 2010; Ku et al., 2012). If a consumer

desires a *higher social status*, then owning an expensive product that is supply-scarce can signal that only a few people possess the same superior level of social status. On the contrary, if the product is scarce due to very high demand, the consumer will equate himself with many other people (Worchel, 1992). Owning scarce products can also fulfill the need for uniqueness (Amaldoss & Jain, 2005). However, suppose the product is scarce due to high demand. In that case, the same feeling of peculiarity can no longer be achieved, as people stop adopting products when too many similar people already own them (Berger & Heath, 2008). The same goes for conformity. If many people hold the product, the sense of belonging to a "special group" fades away. The consumer will thus have a hard time signaling himself with small groups since he at the same time would equate himself with other groups with whom he does not wish to associate. According to Gierl & Huettl (2010), firms should therefore only use supply-based LQS messaging to promote CC goods. They also argued that LTS promotions would be ineffective for such products. This is, however, in conflict with studies by Aggarwal and colleagues (2011), which indicate the opposite. For this reason, it seems highly relevant to further examine the relationship between types of scarcity messages and CC.

## 5. Proposed research design

### 5.1 Population, sample, and hypotheses

This research proposal opts for a qualitative methodology. Through an exploratory approach, the objective is to identify causality between scarcity signal types and PI, which is the unit of observation. The focus will be on how firms can use scarcity messaging to make their marketing efforts more effective. It would furthermore serve as a contribution to explaining the somewhat irrational behavior of consumers within the segment. The population that this study aims to apply to is millennials from a low-context culture. First-year students across Danish universities have been chosen as the sample, as they are relatively easy to access and fit the population. Using three-stage cluster sampling, the first step is to randomly select universities suitable for the study. The universities are then split into subgroups for each program, where first-year classes of each cluster are chosen at random. The last step randomly assigns the participants to each of the four survey conditions. If the participation rate is too low, an additional university will be chosen. Since prior studies related to CC predominantly have been conducted in high-context countries, the results from this study could give new insights on findings in a low-context setting.

Based on the literature review and past findings, the following hypotheses are suggested:

- **H1:** For CC goods, PI increases as a result of LQS due to supply.
- **H2:** For CC goods, PI decreases as a result of LQS due to demand.

- **H3:** LTS messages do not affect desirability for products suitable for CC.

The methodology has been chosen with the belief that it provides the best tradeoff between strengths and weaknesses given the time constraint. The research design consists of two parts: A pre-test to identify goods suitable for CC and the main study to test the hypotheses.

## 5.2 Pre-test to select products suitable for conspicuous consumption

Following the sampling strategy, an online survey will be sent out by mail to students at a single randomized Danish university with the aim of receiving approximately 25 (*n*) responses. Students will be exposed to photos of a series of product categories with unknown brands, including handbags, cars, and wine, among other product categories. Unknown brands are chosen to control the different levels of brand knowledge and brand strengths. Inspired by Gierl & Huettl's (2010) studies, a scale has been developed to find goods suitable for the study (see table 1). Participants will then be asked to evaluate each product using a Likert scale ranging from 1 = "I totally disagree" to 7 = "I fully agree." These results are analyzed to identify a suitable product for the main study, with high scores indicating conspicuousness.

Signal:	Prompted question	Scale
Status	If I use this product, I can show others that I am rich.	1-7
Uniqueness	If I use this product, I can differentiate myself from the people around me.	1-7
Conformity	Because real experts or lovers of (category) own this product, I can associate myself with these people by also buying it.	1-7
Visibility	This is a visible product	1-7

*Table 1: Scale to measure a good's conspicuousness*

## 5.3 Main study

After a suitable product has been decided, a survey will be sent out to Danish universities using the sampling strategy. When sending out an online survey, it should be expected that a considerable number of recipients will not respond. However, precautions can minimize the number of expected non-respondents or invalid answers. First, the survey should look professional and appear sent from a legitimate source. Furthermore, the survey should be kept short while still retaining enough information to make the recipient understand its relevance. It is the goal of reaching at least 100 (*n*) responses, twenty-five for each group.

There will be a few preliminary questions to ensure participants fit the age group. Students who have never purchased a product for at least one of the abovementioned needs will also be excluded. The participants will then be instructed to assume that they have worked hard this month and thus would



like to reward themselves with a product from the advertised fictional brand (Inopia), which happens to be their favorite brand. These assumptions are made to control for personal preference bias and to prime the participant towards a promotion focus. Each participant will be exposed to a promotional image with two filler products along with the target product. Most previous studies on the topic have used a price discount setting; however, this does not seem ideal, as this study revolves around exclusive CC products, which rarely go on sale. Participants are then instructed to carefully review the shown advertisement and respond to a set of questions. The fictitious brand name is used to prevent any potential confounding effects of using a popular brand name. Apart from scarcity message, all other factors, including wording used, text size, and the product itself, are kept the same across all four conditions to further control for confounding effects. Three-quarters of the participants will, using randomization, be prompted with one of the three scarcity message types. The remaining 25% will be shown no scarcity message and will function as the control group. The exact formulations of the conditions will be finalized after the pre-test. For the two LQS conditions (supply and demand), participants will be told (1) that the production will be fixed to  $x$  number of units; and (2) that there are  $x$  units left in stock. For the LTS condition, they will be told that the product will only be available for  $x$  days. The dependent variable, PI, will then be measured using two items on a seven-point scale ranging from 1 = "not likely at all" to 7 = "very likely."

Item 1: *"the probability that I would consider buying this product is..."*

Item 2: *"the likelihood that I would purchase this product is..."*

#### **5.4 Analyzing the data**

After the surveys have been collected, incomplete or otherwise invalid responses will be excluded. A one-way ANOVA is then fitted to test the hypothesis to determine the PI between the groups. This test will be conducted through statistical software, where scarcity messages will be treated as the explanatory variable. The means of the Likert scales from each group are considered the response variable and will be examined for statistical significance using a 0.05 significance level. If the results show a significant difference between the groups' mean scores, then statistical inference is justified. No statistical significance will on the other hand lead to the rejection of the hypotheses. While correlation does imply causality, statistical significance would still be a good indication of a relationship. It is also relevant to examine each of the four groups' descriptive statistics to detect significant outliers that might affect the results. Further, normality, independence, and equal variance assumptions should be tested. Each group should be taken from a normally distributed population with independent samples, and the variance of these groups should be within a ratio of one-to-two.

## 5.5 Limitations

To conduct the research project within the timeframe, the amount of data to analyze is limited. Therefore, other potentially relevant variables are beyond the scope of this study. Another limitation is the weakness of convenience sampling. Since this study only collects data from bachelor students, it is a lesser representative sample of the population (millennials) and thus provides limited generalizability. Furthermore, since the results of this study come from a single product type, findings might be limited in the scope of all CC goods. Consequently, one should be cautious in generalizing the results beyond the tested object. Furthermore, the study uses fictitious brands to avoid recognition bias, which also has its drawbacks. The lack of brand reputation might reduce the product's ability to signal uniqueness and prestige. As a result, one might expect the results to have a more significant effect due to brand prominence in a real-world scenario (Han, Nunes, & Drèze, 2010). Transforming the categorical Likert scale into numeric values also comes with some uncertainty. While the scale has carefully been chosen for the scope of this study, it cannot be used without assumptions, and these might not be apparent to the reader. It is assumed that potential answers are equidistant, while they most likely are not. Thus, the scale fails to measure the proper attitudes of respondents. Additionally, it is assumed that the responses are representative of the respondents' true PI, which is not certain. The respondents being asked to imagine themselves in a fictional purchase scenario further enhances this risk. While they most likely are close, one cannot expect a perfect representation. Therefore, the numerical values derived from the survey should not be seen as an actual numerical response variable but rather as a discrete approximation. It is also possible that further limitations will be found during the research.

## 5.6 Proposed time schedule

1 <sup>st</sup> month	Revision of hypothesis and literature. Finalize survey design. If time allows, begin pre-test.
2 <sup>nd</sup> month	Reach out to universities and begin collecting survey data.
3 <sup>rd</sup> month	Review of collected data. Begin statistical analysis.
4 <sup>th</sup> month	Statistical analysis is completed. Assess results and note relevant theoretical explanations. Start writing the thesis.
5 <sup>th</sup> month	The thesis is written and completed. Thoroughly review the thesis and revise if appropriate.
6 <sup>th</sup> month	Thesis revision and proofreading. Hand-in and prepare for oral defense.

*Table 2: Proposed time schedule for the research*

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## 7. Appendix

### 7.1 Abbreviations

<i>Abbreviation</i>	<i>Explanation</i>
<b>ANOVA</b>	Analysis of Variance
<b>CAGR</b>	Compound Annual Growth Rate
<b>CC</b>	Conspicuous Consumption
<b>LTS</b>	Limited-Time Scarcity
<b>LQS</b>	Limited-Quantity Scarcity
<b>PI</b>	Purchase Intention