# Limited-Editions –
# State of research, willingness to pay and price-based consumer behaviour

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About to run a marathon? Be sure not only to have people taking your time and caring about unobstructed and fair competition. But that is only for match day: You need training and support to reach your goals. Somebody is needed to care about the little things in life, you cannot care about whilst you are in training. You need somebody, who believes you can do it, who takes you back to training, whenever training results indicated to better give up. And you sometimes simply need a kick in your backside.

Sincere thanks to the members of the committee for securing tournament. For training and support I thank my colleagues and my doctoral supervisor for all the interesting discussions we had. Special thanks go to my girlfriend, who not only took care about all the little things in life while I was in training. She also took me back to race track for training and believed in me all the time like my parents and my closest friends did whom I also like to thank.

*And thanks, off course for all these little kicks in my backside, received from many of them from time to time.*

**To my parents.**

# Abstract

***English***

Commodity theory by Brock (1968) postulates changes in both individuals' attitudes and their valuations towards goods as a reaction to scarcity. Attitude changes have been well discussed in research in the last 50 years. They include increases in desirability, attractiveness and the attitude towards a product or brand, especially if conspicuous goods are made scarce (cp Worchel, Lee & Adewole, 1975; Lynn, 1989; Gierl & Huettl, 2010). Implications on value change remained meagre, although, changes in consumers' valuations translate into an increased willingness to pay (WTP) and thus increases in revenues and profits. Whether scarcity messages translate into commercial success is researched in the following.

In part II, the state of research on scarcity messages is reviewed. This section provides propositions for examination in part III and IV as well as for future research. WTP for scarce goods in comparison to non-scarce goods is researched in part III. Insights from consumer behaviour about scarcity messages since the postulation of commodity theory are inquired under a commercial framing in part IV. Results show that Limited-Editions can increase WTP for all goods except pure commodities. Especially for conspicuous goods, additional WTP can be raised for individual serial numbers and further restrictions of unit count (III). Consumer behaviour for conspicuous goods remains as predicted by former studies even under a framing, that increases monetary sacrifice (IV). However, some results question the current definition of status.

***Deutsch***

Die 1968 von Timothy C. Brock aufgestellte Commodity Theory beschreibt Veränderungen der Einstellungen und der Wertschätzung potenzieller Käufer als Reaktion auf künstliche Güterverknappung. Erstere wurden in den vergangenen 50 Jahren ausführlich diskutiert. Darunter sind positive Veränderungen in der empfundenen Attraktivität, dem Verlangen sowie der generellen Einstellung gegenüber den angebotenen Gütern sowie der sie anbietenden Marken (cp Worchel, Lee & Adewole, 1975; Lynn, 1989; Gierl & Huettl, 2010). Wenngleich Veränderungen in der Wertschätzung häufig die Zahlungsbereitschaft und somit auch Umsätze und Gewinne erhöhen, sind Ergebnisse zu diesem Teil der Commodity Theory eher dürftig. Ob Knappheitsbotschaften in wirtschaftlichen Erfolg übertragbar sind, ist Gegenstand der vorliegenden Arbeit.

Im zweiten Teil (II) wird der Stand der Diskussion seit Veröffentlichung der Theorie betrachtet. Bei offenen Forschungsfragen werden Theoreme aufgestellt, die einerseits in den Teilen III und IV beantwortet werden. Andererseits sollen diese auch als Anhaltspunkte für künftige Forschung dienen. Die Zahlungsbereitschaft für verknappte Güter wird mit jener von ansonsten identischen Gütern in Teil III verglichen. Die bisher gewonnen Erkenntnisse aus der Kaufverhaltensforschung werden in Teil IV unter einem kommerziellen Aspekt betrachtet. Ergebnisse zeigen, dass eine zusätzliche Zahlungsbereitschaft für alle Güter, außer für Grunderzeugnisse (sogenannte Pure Commodities) vorhanden ist. Darüber hinaus besteht Zahlungsbereitschaft für individualisierte Seriennummern und weitere Mengenbeschränkungen für Güter des Geltungskonsums (III). Bisherige Erkenntnisse aus der Kaufverhaltensforschung bleiben auch dann weitgehend beständig, wenn Verbesserungen beim Produkt mit zusätzlichen Ausgaben für die Probanden verbunden sind. Dennoch legen einige Studienergebnisse eine Neudefinition des Statusbegriffs nahe.

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# List of abbreviations

| Abbreviation | Explanation/meaning |
|---|---|
| & | and |
| ∑% | Cumulative proportion |
| $ | Dollar |
| ^ | estimated value |
| € | Euro |
| “ | Inch/Inches |
| *** | Indicator of significance ≤ 0,1% |
| ** | Indicator of significance 0,1% < ** ≤ 1% |
| * | Indicator of significance 1% < * ≤ 5% |
| . | Indicator of significance 5% < . ≤ 10% |
| Δ | Margin |
| μ | Mean |
| % | per cent/percentage |
| %σ | Proportion of variance |
| σ | Standard deviation |
| ∑ | Sum (of) |
| $\sigma^2$ | Variance |
| 7W | 7 weeks willingness to pay questionnaire |
| AF | Group |
| AIDA | Attention Interest Desire Action |
| Aldi | Albrecht Lebensmittel Discount (Süd) |
| Alt | Alternative variable setting (singularities) |
| AN | Many buy heuristic |
| AO | First (A) or last (O) serial |
| AP | Tablet Personal Computer |
| AS | Association |
| ATSCI | Attention to social comparison information |
| BAS | Time/Base product (main effect) |
| bio | Billion |
| BMW | Bayerische Motoren Werke Aktien Gesellschaft |
| BR | Well-known brands |
| BSRI | Bem' sex role inventory |
| cat | Category (of product) |
| CH | Individual choice stored from stage(s) before |
| CL | Limited-Edition (dummy) |
| CM | Compliment |
| cm | Centimetre |
| coef | Coefficient |
| conf.level | confidence level |
| cp | compare |

| Abbreviation | Explanation/meaning |
|---|---|
| DAB | Digital Audio Broadcasting |
| DC | Decision compliment |
| dem | demand in units |
| DF | Difference |
| df | Degrees of freedom |
| DI | Differentiation |
| DM | Deutsche Mark |
| DS | Dissociation |
| E-commerce | Electronic commerce |
| E-Mail | Electronic mail |
| e.g. | exempli gratia |
| EDU | Education |
| et al | et alii; et aliae |
| exp | exponential |
| F | Value of F-statistic |
| fav | favourite serial number |
| FEA | Feature (main effect) |
| FEAT | Feature improvement |
| FR | Tribes or parishioners sample |
| FS | Cell phone wallet |
| FT | Messenger bag |
| FX | Red wine |
| FY | Buying Frenzy |
| GB | Gigabyte |
| GDP | Gross domestic product |
| gr | Gramm |
| GSC | Grammar school certificate |
| GT(O) | Gran Tourismo (Omologato) |
| H | Hypothesis |
| H&M | Hennes and Mauritz Aktiebolag |
| i | Individual denominator |
| ibid | ibidem |
| ID | Personalisation (main effect) |
| Impr | Physical product improvement |
| Incl. | Including/ Included |
| Ind | Individually stored choice |
| IV | InVisible |
| j | Product denominator |
| JHIC | Junior high school certificate |
| JL | Medium sizes enterprise work force sample |
| k | Item denominator |
| KMO | Kaiser Meier Olkin (criterion/value) |

| Abbreviation | Explanation/meaning |
|---|---|
| LC | Competition (dummy) |
| LE | Limited-Edition/ Limited-Edition main effect |
| LEFEA | Combination of Limited-Edition and feature (dummy) |
| LF | Personalisation first unit (dummy) |
| LG | PC Mouse |
| LI | Personalisation lucky number (dummy) |
| LIM | Limitation of work |
| LL | Personalisation last unit (dummy) |
| LN | Demand quality inference |
| LQ | Base level Limited-Edition |
| LQS | Limited quantity scarcity |
| LT | Chocolate bar |
| LTS | Limited time scarcity |
| LY | Lifestyle |
| m | Metres |
| max | Maximum |
| min | Minimum |
| mio | Million |
| MSE | Medium sized enterprise |
| MTurk | Mechanical Turk |
| N | Sample size |
| n | variable of enumeration |
| nat | Natural demand (in units) |
| n.d. | no date |
| NFU | Need for uniqueness |
| No | Number |
| NONE | Non-improved product |
| n.s. | not significant |
| N(max) | Maximum sample |
| N(min) | Minimum sample |
| N/A | Not available |
| OL | Others like |
| OS | Opinion seeking |
| P/p | Price |
| p-Value | Probability value |
| P*/p* | equilibrium price |
| pB/pb | Base price |
| PC | Personal computer |
| PCA | Primary component analysis |
| pd | Decision price |
| PL | Wake-up light |

| Abbreviation | Explanation/meaning |
|---|---|
| PN | Price quality inference |
| pp | page |
| ppp | Purchasing power parity |
| Pr/pr | Probability |
| pra | Price ratio absolute |
| prr | Price ratio relative |
| Q1-7 | Round of questionnaire |
| QL | Availability quality |
| QS | Limitation of available quantity (see also LQS) |
| RG | Missed opportunity |
| S | Stage |
| s.t. | so that |
| SC | Scale |
| SD | Socio demographics questionnaire (in general) |
| SD (stud) | Socio demographics students questionnaire |
| SD (work) | Socio demographics workers questionnaire |
| se | Standard error |
| SES | Socioeconomic status |
| SEX | Sex/Gender |
| SF | Empty shelf |
| Sig/Signif. | Significance |
| SIM | Subscriber Identity Module |
| SMS | Sociometric status |
| SMSC | Secondary modern school certificate |
| SN | Snobbish |
| ST | Students sample |
| sup | supply in units |
| SWB | Subjective well-being |
| SX | Self-expression |
| SZ | Sugar |
| s.t. | so that |
| t | Value of t-statistic |
| T-Test/-Value | Student's t-test/ Test statistic of student t-test |
| TL | Lifestyle traits opinionnaire |
| tm | Time |
| TQ | Quantity Scarcity opinionnaire |
| TR | Product traits opinionnaire |
| TV | Television |
| TY | Utility |
| U-Test | Mann-Whitney-Wilcoxon-U-Test |
| UD | Shower curtain |
| UN | Pre-test sample |

| Abbreviation | Explanation/meaning |
|---|---|
| US(A) | United States (of America) |
| UT | Utilitarian product improvement |
| V | V configuration of car engine cylinders |
| v | valuation of customers (index: L=low; H=high) |
| Var | Variable |
| VHF | Very high frequency |
| VS | Visibility |
| vs. | versus |
| W | Value of W-statistic |
| WiFi | Wireless Fidelity |
| WTP | Willingness to pay |
| X | X-value of Bartlett test |
| z | Value of z-statistic |

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# List of hypotheses

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Part I

# I. Introduction

An auction in 2014 made a Ferrari 250 GTO probably the most expensive used and accident involved car ever sold yielding US-$38mio (Wildermann, 2015). This result equals an inflation-adjusted return of approximately 26.318%, based on the 1963 list price of US-$18.834,59[1], which can mostly be attributed to the fact, that only 28 units of this Gran Tourismo had been built in the classic chassis-V12 engine combination (Pander, 2014). Albeit, an extreme example, it shows, that scarcity has an effect on the value of products as posited by Brock (1968, pp. 246), formulating commodity theory. As auction bids are binding, it also supports Porter's (1985, pp. 131) notion, that increases in valuation often entail increases in willingness to pay.

Commodity theory deals with consumers' changes in attitudes and valuations, subject to goods labelled as scarce. Since its postulation, research has shown, that scarcity messages increase a good's attractiveness, popularity or desirability (Lynn, 1989, pp. 263; Verhallen, 1982, pp. 47). Lately, especially supply side and limited quantity scarcity messages have proven to be beneficial to consumers' attitudes towards products and their brands or their purchase intentions (Gierl & Huettl, 2010, pp. 227- 229; Aggrawal, Jun & Huh, 2011, pp. 21-24). Although, some studies have also shown positive value effects of scarcity messages (Szybillo, 1973, pp. 37; Worchel, Lee & Adewole, 1975, pp. 909; Jang, Ko, Morris & Chang, 2015, pp. 994), insights on attitude change, representing the other half of Brock's (1968, pp. 243) theory, exceed those for value change by far. 50 years after the postulation of commodity theory, there is a wealth of knowledge on consumer behaviour and product specifications. However, there is vague conjecture, that scarcity messages may positively affect customers' perceived value and no answer to the question, whether value perceptions translate into increases in consumers' willingness to pay (WTP). Consequently, answers about the stability of attitude changes, if scarcity messages get price tagged are also meagre. However, to turn scarcity messages into commercial success in terms of higher revenues and profits, answers to these questions are needed. This work aims to partially fill this remarkable academic void, by examining the WTP for scarcity messages.

[1] 1963 list price = 78.750 Deutsche Mark (Pander, 2014) is US-$18.834,59 based on an annual average 1963-exchange rate of 3,99 Deutsche Mark per US-Dollar (Statista, 2018). US-$18.834,59 in 1963 equals US-$144.387,58 inflation-adjusted in 2014 (DollarTimes, 2018).

It is structured in five parts, of which the second (II) reviews the state of research on goods labelled as scarce. Conclusions from research results of different insights are drawn and propositions are developed for part III and IV as well as for future research. Although, the entire work will later almost exclusively focus on Limited-Editions as a scarcity message, the scope especially in its beginning remains as wide as possible. This includes all kinds of scarcity messages, but also a deeper elaboration on the definition of status, as status games are vital to the understanding of reference group effects between snobs and conformists. Reference group effects in turn are essential to understand consumer behaviour, because conformists' utility judgements and thus product valuations increase with the number of co-owners, while for snobs this relationship is diametrically opposed (Leibenstein, 1950, pp. 189). Limiting supply of a product, exposed to strong reference group effects, may, thus, change product valuations of both snobs and conformists (Amaldoss & Jain, 2008a, pp. 938). Hence, status games are contemplated across prevalent segmentation variables in order to gain insights for market research in the context of conspicuous consumption in general and scarce goods in particular. Scarcity itself will be reviewed in the context of optimal amounts of scarcity and combinations of Limited-Editions and regular products vs. Limited-Edition mavericks. As the degree of scarcity has consequences on the cost situation of Limited-Edition offers, costs and pricing will be highlighted as well as differentiation of scarce products by changes in the physical product. Results are structured along the marketing mix variables product, price and promotion. Due to a comparatively lower importance of the variable place and a wealth of results gained from the status and reference group effects section, it will be replaced with the variable people. Future research proposals originate from propositions developed throughout the review part.

Part III is targeted at the willingness to pay for Limited-Editions. Limited-Editions are defined as a binding statement on a finite unit count made by a supplier, underlined by a serial number statement for each product. A stated preference choice game was designed to compare several non-scarce products to several specifications of the same product as a Limited-Edition. These specifications include personalisation of serial number and further limitation of total supply. To inquire on the costly features assumption made by Amaldoss and Jain (2008, pp. 937), offers also included minor changes in the physical product. As the scarcity messages are assumed to include a considerable time component, the study was conducted over a minimum period of seven weeks to compare price mark-downs of scarce and/or featured products to those of non-scarce non-featured products. The WTP-part aims at finding answers about willingness to pay for Limited-Editions in general and for Limited-Edition improvements and combinations with changes in the physical product. Part III is also targeted

at scarcity effects in presence of price information and price effects of Limited-Editions along the product life cycle.

Commercially framed consumer behaviour in the context of scarcity messages is the focus of Part IV. Therefore, WTP-study design from the previous part has been embedded in a framework retrieving consumers' attitudes towards several prominent aspects of Limited-Edition goods purchase. Among them are quality inferences drawn by consumers, as hypothesised by Stock and Balachander (2005, pp. 1190-1191) and buying frenzies, as proposed by DeGraba (1995, pp. 338-339), building the first part of the framework. As individual income is invisible to others, consumption has always been used as a proxy to document social status (Veblen, 1912, pp. 76-77; Belk, 1988, pp. 160). Additionally, a considerable proportion of individuals are assumed to steadily strive for higher status (Escalas & Bettman, 2003, pp. 341) and, thus, align the overt proportion of their consumption to patterns of their aspiration group in order to assimilate. The framework's second part is dedicated to these status games of steady alteration of conformism and snobbism. Especially goods of conspicuous consumption are known to aid individuals in reaching their status goals. They may express individual lifestyle in general and assimilation or differentiation in particular (Han, Nunes & Drèze, 2010, pp. 27). The fit between individual status goals and products' capabilities to fulfil them are tackled in the final part of the framework.

The final part (V) of the entire work is a summary deconstructing the central question on WTP for scarcity messages into sub-questions which in turn lead to hypotheses posed and researched in parts II – IV. A final discussion will then reconstruct partial results into a coherent answer to the central question.

Part II

# II. A guide to Limited-Editions – Using scarcity signals for product creation and new research opportunities for social status and segmentation

## II. Abstract

Scarcity messages are known to increase consumers' perceived attractiveness, desirability and purchase intention and thus suppliers' sales. If product valuations are also increased, consumers' may also be willing to pay more than for a non-scarce good. However, there are different types of scarcity messages and there was plenty of research conducted since the last review by Lynn in 1991. This work takes up the basics compiled by Lynn and extends them with recently published work on scarcity messages, of which Limited-Editions are the strongest commitment to scarcity. As reference group effects are pivotal for the creation of successful Limited-Editions, special attention is placed on snobbism and conformism. A new conformity-based definition of status is proposed and new market research opportunities in the field of customer segmentation are discussed. Taking regular non-scarce products as a benchmark, costs for Limited-Editions were assessed and opportunities for pricing, quantity setting and further differentiation were found. The pricing window for Limited-Editions was found to justify price premiums above reference prices of low valuation customers. Quantity settings retrieved were mostly found in favour of luxury goods' producers. However, also promising opportunities for mass and premium suppliers were found. Future research should concentrate on the basics. The most important of them are quantity thresholds, pricing decisions and the adjustment of status definition, which was found not to have significantly evolved since the days of Veblen.

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# II.-1 Introduction

The effectiveness of a message increases, the fewer people know about it, the more sufficient effort is made to encode it and if the non-informed know that there is a message, but if only a very small group of people is willing to spread it and the if spreaders underlie restrictions on further spread. In short if the message is made scarce. Consequently, the non-informed will increase their pressure upon the informed to disclose (Brock, 1968, pp. 248-250). This is a shortcut of Brock's commodity theory and it may explain why the world's most expensive camera recently yielded €2,4mio in an auction in Vienna. Originally produced in a series of 25 cameras by Ernst Leitz in 1923, rumour prior to this auction was that the total availability has shrunk to just three examples of unknown condition (Westlicht-Auction, 2018). Despite all of them being pre-production samples of limited usage value, it is supposed to go down in history as "[…] the ultimate Poser's camera […]" (Dailymail, 2018). Pressure to pocket the scarce commodity rose as available quantity shrunk.

This example does not only show the relationship of quantity and price. It also shows that usage value is at least sometimes secondary when the utility of a good gets determined by interested buyers. Expensive goods rely on reference group effects the more conspicuous and exclusive they are. Snobs try to differentiate from the masses, by focussing purchase intentions on exclusive goods, whereas conformists try to mimic snobs' conduct for status signalling purposes (Leibenstein, 1950, pp. 189; Veblen, 1912, pp. 74-76). Amaldoss and Jain (2010, pp. 637) showed selling a Limited-Edition of a luxury product increases supplier's profit, while in absence of Limited-Edition profits shrunk. These examples illustrate, that research on scarcity messages and especially Limited-Editions has significantly advanced since Lynn's last review in 1991. In this multidisciplinary analysis publications from psychology, consumer research, sociology, marketing, economics, cognition sciences and operations research have been compiled and traced back to results level to get deeper insights. The aim was to get to the essentials of the mechanisms behind scarcity messages. Reference group effects – especially conspicuous consumption, snobbism and conformism – have been remodelled based on individuals' striving for status. The relationship between quantity and price has been reassessed in the light of these reference group effects.

The remainder of this research is organised as follows: in chapter II.-2 types of scarcity messages are introduced. Time based scarcity effects are not examined in detail in order to concentrate on reference group effects, which are specific to quantity-based scarcity. The basics of reference group effects are briefly explained at the end of this chapter so that managers may skip chapter II.-3 and proceed to chapter II.-4. Chapter II.-3 explains reference group

effects in detail and is thus dedicated to the scientific community and market researchers. Motivations behind status striving are reviewed here, a conformity-based status definition is introduced. Autonomy as a possible mediator of status development is assessed. Age, sex, social class and ethnicity are reviewed against the background of status redefinition. The most important decisions concerning the introduction and maintenance of Limited-Editions are discussed in chapter II.-4. Major aspects of costs will be compared with non-scarce products as benchmark value. Lower and upper bound values for pricing will be proposed and possible variability in price will be discussed. Quantity decisions are assessed likewise. In chapter II.-5 implications get pre-processed. Managerial implications are basically structured along the 4-p scheme. However, one exception was made as the variable place was replaced by the variable people. Implications for future research are to follow.

# II.-2 Scarcity messages: effects, types and usage

## II.-2.1 Impact of scarcity in the market context and types of messages

Price translates into quantity and vice versa. If demand is above supply – a good is scarce – the price will increase. This relationship is shown in the demand function (Hicks, 1986, pp. 10-11). For this reason, simple scarcity messages, such as *'As long as stock lasts'* or *'Only a few units left'* are commonplace in many commodity markets. Scarcity messages help to increase suppliers' bottom line on both the income and distribution side. Compared with a good absent scarcity message, a good marked as scarce is perceived as more attractive, desirable and popular (Worchel, Lee & Adewole, 1975, pp. 909; Lynn, 1989, pp. 263; Verhallen, 1982, pp. 47). As a final step adding a scarcity message also may increase the purchase intention for a good (Aggrawal, Jun & Huh, 2011, pp. 22). As a consequence, a scarcity message may help to increase the good's sold quantity on the distribution side. Supplier's income balance may display performance increases by value effects of scarcity messages (Szybillo, 1973, pp. 36; Jang, Ko, Morris & Chang, 2015, pp. 994). Remarkably, value or perceived utility – as customer's exchange value for money – does not necessarily need to be influenced by the scarcity message, as a scarce good is already perceived to be more expensive in many cases only as a consequence of scarcity (Worchel, Lee & Adewole, 1975, pp. 910). All these effects have one important precondition: the customer needs to be at least interested or attracted by the good (Verhallen, 1982, pp. 321), as scarcity messages are known to increase given attitudes towards products. Scarcity messages are unable to evoke desirability or value perceptions.

There are three different basic types of scarcity messages: market related, time related and quantity related scarcity messages. Supply side scarcity messages include punchlines like *'As long a stock lasts'* or the supplier commits to a Limited-Edition. *'Only X units left'* is the most popular demand side scarcity signal and is broadly used in online shopping. These messages are used universally, regardless if durables (e.g. clothes or home electronics) or services (e.g. hotel rooms or flight tickets) are being offered. Quantity and time are distribution variables susceptible to scarcity manipulation. The most popular Limited Quantity Scarcity (LQS) signal is the Limited-Edition: the supplier usually commits to a finite quantity of the good. Customers are insured about this commitment by knowing the quantity limit. Often the serial number of the individual good the customer owns is mentioned as an additional signal of commitment. Examples include Limited-Edition cars, wrist watches or spirits, to name only a few (Porsche, 2017, pp. 37; Hublot, 2017, pp. 65; Compass Box, 2018, pp. 1). Limited Time Scarcity (LTS) signals are similar with the exception of a given time frame in which the good is put up for sale. The supplier may underline his commitment by publishing a terminal date of offer. This strategy is used for fashion goods. Collections offered in a limited time frame often include a unique combination of mass brands and haute couture designers. Among the examples are collaborations of Swedish mass fashion brand H&M with Karl Lagerfeld (Süddeutsche Zeitung, 2010) and Balmain (Lorenzo, 2015).

## II.-2.2 Reasons for scarcity messages to come into effect – the importance of reference group effects

Among the earliest in research discussed reasons to use scarcity messages to trigger effects such as increased desirability, better product valuations or higher purchase intentions was Brehm's (1966) theory of *reactance*. Experiments have shown that reactance performs well to explain why people rate a choice alternative more attractive after elimination. This is even true, if the same choice alternative has proven high ratings of unattractiveness before (West, 1975, pp. 658). As an explanation for reactions towards scarcity, reactance performed rather poor, even for situations of physical scarcity (Verhallen, 1982, pp. 319). Nonetheless, reactance has become an important variable to control for in scarcity research: respondents' mistakenly perceived equalisation of scarcity messages with elimination would constitute severe biases otherwise (Eisend, 2008, pp. 35).

Setting limits on supply increases *competition among consumers*. LQS messages' higher effect on purchase intentions, compared to LTS messages, is even mediated by consumer competition (Aggrawal, Jun & Huh, 2011, pp. 23-25). LQS messages were also found to foster forward buying and attract consumers' seeking for shopping enjoyment in addition to economic

benefits from purchase. Strengthening these shoppers' self-perceptions as smart shoppers, LQS messages are found to have comparable effects to couponing (ibid, pp. 26; Garretson & Burton, 2003, pp. 169-171). In sum, LQS messages seem to perform better compared to LTS messages, whenever social effects explain at least a part of the consumers' perceived utility. Positive effects on brand attitude and perceived value can only be exploited by capitalising on the combination of social effects and LQS messages (Jang, Ko, Morris & Chang, 2015, pp. 994-995). LTS messages on the other hand yield higher purchase intentions only if the goods' utility is congruent with its usage value. LTS messages share this invariance to social effects with demand side scarcity signals (Gierl & Huettl, 2010, pp. 230).

Time is also among the crucial factors of buying frenzies as a consequence of *informational disparities* among consumers. Quantity limited by the supplier during introductory phase puts time pressure on uninformed buyers. Unsure about the quality of a good these buyers seek to wait until informed buyers have made their decision (DeGraba, 1995, pp. 335). Different from consumer competition, social effects in this case only serve to maximise utility by usage value observations of informed customers. Utility is not maximised by self-image enhancing. The comparatively high relevance of time combined with the low relevance of social effects is akin the findings about LTS messages and demand side scarcity signals. Remember that demand side scarcity signals such as *'Due to high demand, only X units left'* scientifically highlight that there is a limited quantity running out. The essential message for theses buyers is, that as time passes by the probability increases that availability may run out *before* they had the chance to pocket the good. As a bottom line consolidating the work by Jang, Ko, Morris and Chang (2015), Aggrawal, Jun and Huh (2011) and Gierl and Huettl (2010) on scarcity restrictions absent utility driving social effects, it can be proposed:

> ***That for adding effective scarcity messages on consumption which is not or to only a very little proportion driven by social effects as a part of a good's perceived utility, time is perceived as the main driver for fast and unconscious purchases.***

**Proposition 1: Importance of time for scarcity under low social effects**

*Reference group effects* are not only among the most frequently discussed reasons for the effectiveness of scarcity messages. Reference group effects are also a conglomerate of several social effects. These relevant social effects in the context of LQS are namely conspicuous consumption, snobbism and conformism. Contrary to the goods discussed above, where usage value explains vast parts of utility, *conspicuous consumption* is the key to explain almost anything except a good's usage value (Heffetz, 2011, pp.1116; Hopkins & Kornieko, 2004, pp.

1099). Hence, a good suitable for conspicuous consumption[2] has a total utility which exceeds its usage value. The margin equals its signalling value (Bagwell & Bernheim, 1996, pp. 350; Lynn, 1992, pp. 70) and the content to be signalled can be summarised by exclusivity (Bourne, 1957, pp. 218). To target signalling to relevant others the good's visibility is another necessary condition (Jang, Ko, Morris & Chang, 2015, pp. 993; Gierl & Huettl, 2010, pp. 228; Bearden & Etzel, 1982, pp. 190-191). Expressed and visible exclusivity of a good is a social agreement between the owner and those individuals he or she considers his or her relevant reference group and is deeply status driven as to be discussed in depth in chapter II.-3.1. Comparing different goods of the same category, signalling value is observed to increase at higher rates than usage value, if price increases (Hopkins & Kornienko, 2004, pp. 1099). As higher priced goods are usually targeted at higher income individuals, there is not only a positive direct relationship of signalling value and income. It also makes signalling value the basic explanation for Veblen effects where demand increases with price (Veblen, 1912, pp. 74). Conspicuous consumption heavily rests upon this inferred relationship of high priced goods and high income. It also explains status mimicking which will be discussed in detail in the following chapter (II.-3.1). Most obvious examples for almost pure conspicuous consumption goods are visibly consumed luxury products, like those listed by Bearden and Etzel's (1982, pp. 185) including golf club membership or ownership of sailboats. More promising in the context of scarcity signals are products from the '*Public Necessity*' category of Bearden and Etzel (ibid). Products from this category are deemed a necessity, yet the specific product choice in general and the brand choice in particular make them either more or less conspicuous. The usage value of a wrist watch or a car is bluntly obvious and is fulfilled by even the most basic products of their categories. Products may even share the same technological derivation, like the Seat Leon and Audi's A3 (Heise, 2012; Gibbs, 2013). Yet, the Audi is seen more prestigious by most drivers and hence price difference between both stems mostly from the Audi's relatively higher signalling value.

As already mentioned above, high-priced goods are usually targeted at high income individuals. These individuals will buy high-priced products if their valuation for exclusivity is sufficiently high. If they overtly consume visible high-priced goods they consume conspicuously. The same is true for lower income individuals who seek to mimic conduct of the former type (Veblen, 1912, pp. 74-76). Yet, both do it for different motivations: the latter seek to show that they can live up to the standards of the former, while the former seek to differentiate

[2] Conspicuous consumption goods not to be confused with diamond goods. For conspicuous consumption goods consuming higher quantities, always equals higher utility. This is not true for diamond goods (Ng, 1987, pp. 190). Conspicuous consumption goods are per definition dedicated to loud signalling, whereas Diamond goods can also be used for subtle signalling (Chaudhuri & Majumdar, 2006, pp. 5).

from the latter. Overt consumption for the purpose of differentiation is called *snobbism*. Consequently, for snobs or leaders a good's perceived utility declines with more people owning the same good. As opposed to followers, who seek to consume conspicuously for the purpose of *conforming* with a particular reference group. Hence, perceived utility and number of co-owners are positively related (Leibenstein, 1950, pp. 189). Thus, conspicuous consumption is a necessity for both snobbism or conformism to be become effective in the context of status games.

In the case of low social interaction between snobs and conformist, low levels of conspicuous consumption, snobbism and conformism are observed: snobs will prefer to buy exclusive and expensive goods, while conformists will buy in-expensive goods focussing on usage value. With social interaction effects becoming stronger Amaldoss and Jain (2005b, pp. 40) have shown that snobs increasingly opt for the lower priced goods in order to differentiate from the mimicking conduct of conformists. This outcome is not desirable to suppliers as higher priced goods become less exclusive and less desirable. Limited-Editions are an option to overcome prestige drain of goods. Credible messages of scarcity signal to snobs that the available quantity is finite and thus sales to snobs increase (Amaldoss & Jain, 2010, pp. 628). Limited-Editions provide a cap on total sales (see chapter II.-2.1) and may thus serve to effectively differentiate snobs from conformists by signalling bounds for effective assimilation. Both snobbism and conformism serve to express status either via differentiation or assimilation, which are from now on defined to be the respective motivations of either type. Furthermore, assimilation without overt display of exclusiveness is pointless. As the leader role for snobbism can be seriously questioned without individuals to be led by giving them a temporary role model, against which snobs can differentiate after adaption beyond their allowance of critical mass of mimicking. Their relationships are complex, but for LQS scarcity, to become fully exploited, a deeper knowledge on these relationships is essential, especially for Limited-Editions. The following chapter (II.-3) aims to drill down into these relationships.

# II.-3 Reference group effects, conspicuousness and social status

## II.-3.1 A different approach to defining status

### *II.-3.1.1 The role of social status for conspicuous consumption – paving the way to a clearer status definition*

An individual's income and an individual's social status are deeply connected. Knowledge of other people's income, means to have a meaningful proxy of their social status and vice versa. In many cases other people's income is unobservable and thus consumption is used as a proxy (Veblen, 1912, pp. 76-77; Belk, 1988, pp. 160). For the sake of signalling their own status, individuals make use of this relationship, by displaying through patterns of consumption, that *"[…] doing well is not enough, individuals also want everybody else to know (or to mistakenly think) that they are doing well […]"* as Heffetz (2011, pp. 1103) specifies and as it has been defined as status mimicking by conformists in the previous chapter (II.-2.2). Visibility as a necessity for effective conspicuous consumption has also been mentioned in the same chapter. In terms of status, visibility means sociocultural visibility, which shares some traits with physical visibility, though intersection with the signalling value of a good is more salient (Bagwell & Bernheim, 1996, pp.355). A good's signalling function is a social agreement and thus depends on the social group an individual belongs to or intends to belong to (Escalas & Bettman, 2003, pp. 343-345). Clingingsmith and Sheremeta (2015, pp. 12) did not only show that sociocultural visibility increases demand, but also depends on intra-group conventions of status. As a consequence, consumption behaviour significantly changed between visible or public consumption and invisible or private consumption during their series of experiments. Consumption behaviour changes in dependency of income, that were also addressed in these experiments, will be taken up in chapter II.-3.2.3.

Once a positive statement on the visibility and signalling function of a good is drawn, status becomes the next variable to differentiate a conspicuous from a normal good. A prestige-based definition of status assumes, that other individuals primarily focus on an individual's instrumental social value, when awarding status to a particular individual. This is basically the underlying idea of recognising a person as a leader within a group. Instrumental social value thus is an important variable of a follower's perceived potential of a possible leader to help him or her to achieve own status goals. Probability of status goal aid and instrumental social value are positively related. As a consequence, higher status means more admiration, respect and voluntary deference from peers (Anderson, Hildreth & Howland, 2015, pp. 575). Although, it represents a more precise definition of status by amplifying the social role of

status relying on the endorsement of significant others (Weber, 1946, pp. 159-160; Dawson & Cavell, 1987, pp. 487), this remains a vague definition. This is especially true, if it is viewed in the light of the consequences of individuals' social and consumption behaviour.

Desideratum begins as early as the definition of status. Two status definitions seem reasonable, namely: socioeconomic status (SES) and sociometric status (SMS). *Socioeconomic status* is mostly driven by income. Following the ideas of Veblen (1912) and Heffetz (2011) would imply that status striving individuals visibly consume in order to receive an improved status recognition mostly from unrelated others. This idea is supported by Solnick and Hemenway (1998, pp. 381): a majority of their respondents were willing to forego half of their purchasing power if all others in a not further amplified society still had less income. Seeing status as a give and take among peers, does on the other hand not rule out income and consumption as important variables. Though, it may at least question to whom status is signalled. Awarding status to a particular individual by its peers thus largely relies on signalling and feedback, which becomes especially apparent in social network situations (Bareket-Bojmel, Moran & Shahar, 2016, pp. 791). Social networks extend an individual's reach, formerly limited to neighbourhood, workplace or community (Rauscher, 1992, pp. 289-290). Yet, even with increased reach, feedback from and benchmarking with its immediate surroundings are still crucial in status seeking and status awarding. Luttmer (2005, pp. 976) showed that several social outcomes on an individual base reflect likewise changes in a community's income. Individuals also make inferences on their own social situation, the more accurate their estimates on their community's upper and lower bound income and their income rank position are (Hagerty, 2000, pp. 767).

*Sociometric status (SMS)* is more focussed on people's immediate surroundings. It focusses on an individual's position and acceptance in peer groups such as workplace colleagues, teammates and friends during leisure activities and family relationships. One important difference between sociometric status and socioeconomic status is the higher emphasis on practical interaction in the former case. For example, seeing an unknown person during a brief one-time contact in a supermarket wearing a Hugo Boss-suit may make status striving observers think about this brand's suits. The probability of eying a Hugo Boss-suit as a purchase decision for the sake of status improvement increases if this status striving observer has seen a close friend upgrading from say Esprit to Hugo Boss-suits recently. Both individuals socially interact on a regular base. The status striving individual may attribute high instrumental social value to his Hugo Boss-wearing counterpart. The interplay of interaction and status attribution is assumed to have a much higher influence on status striving than brief contacts. While

sociometric status considers these social interactions as variables, socioeconomic status does not. In comparison to an increase socioeconomic status, higher sociometric status also has a positive influence on subjective well-being (SWB). This effect is mediated by increases in an individual's sense of power and perceptions of social acceptance (Anderson, Kraus, Galinski & Keltner, 2012, pp. 767). The authors (ibid, pp. 765) subsume this relationship as the local ladder effect, proposing an interesting approach to individuals' behaviour in social and consumption contexts. They emphasise that, compared to socioeconomic status, status differences become more salient when focusing on SMS. They also observe that, SMS-effects, that may include SES-variables such as income, persist when controlled for them (ibid, pp. 767-768). Hence, sociometric-based status definitions are more holistic and flexible. At the same time sociometric status measures are capable of displaying a person's leader or follower position within a group.

***It can thus be proposed, that, compared to socioeconomic status, sociometric status is the more precise and better suited concept for explaining most of individuals' social and consumption behaviour in status contexts.***

**Proposition 2: Social status equals sociometric status**

### *II.-3.1.2 The interplay of needs for belongingness and status*

Anderson, Hildreth and Howland (2015, pp. 591) recently drew the conclusion that individuals' status seeking may be a motivation that ends in itself. If so, individuals' need for status would be strictly separated from their need to belong. Even though, this may be true for individuals close to personal status climax, it is not true for the vast majority as shown in chapter II.-3.1.3. Furthermore, as shown already in chapter II.-3.1.1, respect – even in the definition by Anderson and colleagues (ibid, pp. 575) – is an integral part of status. Respect itself can be explained by two distinct paths, namely need for status and need to belong. At first glance this may suggest that belongingness is not part of the status definition. On the other hand, perceived status and perceived liking, as an approximation of belongingness, show the highest overall correlation estimate in the dual pathway model of respect by Huo, Binning & Molina (2010, pp. 206). There is also ample influence of perceived status on *personal well-being*, representing the outcome of the belongingness path in the same model. Personal or subjective well-being in turn is susceptible to comparisons of individual or household income, one of the most frequently used proxies of status. Hagerty (2000, pp. 767) showed that individuals' estimates on their personal income rank value in a community as well as upper and lower bound community incomes influence subjective well-being. The major pillars of subjective well-being are an individual's evaluations of life, positive and negative feelings (Lucas, Diener & Suh,

1996, pp. 616-617). Besides an apparent relevance of needs fulfilment for social acceptance and respect on the latter two model components, especially declines in life evaluations and negative feelings by deprivations of basic and autonomy needs respectively show the connection between status and subjective well-being (Tay & Diener, 2011, pp. 358-359). Interestingly the same research also shows, that low need fulfilment has a negative impact on life evaluations, whereas high need fulfilment has no impact on life evaluation and thus SWB. This argument explains individuals' fierce reactions, if they perceive threats to their own status, that are getting even more severe with higher individual evaluations of current status (Anderson, Hildreth & Howland, 2015, pp. 590).

Lucas and colleagues (1996, pp. 626) also found at least partial overlap of self-esteem and SWB. In conjunction with the aforementioned relations between status and belongingness paths in the model of Huo and colleagues (2010, pp. 206), an at least indirect empirical support for Fournier's (2009, pp. 1167-1168) model of self-esteem can be assumed. Fournier's model in turn is an extension of the sociometer hypothesis of self-esteem. The sociometer hypothesis posits that self-esteem is a mere function of an individual's expectations on rejection. These expectations are based on accumulated perceptions of former interpersonal relationships, especially in small groups (Leary & Baumeister, 2000, pp. 9-10; Leary, Terdal, Tambor & Downs, 1995, pp. 527; see also former chapter II.-3.1.1). In Fournier's (2009, pp. 1167-1168) model the purely belongingness-based definition of the sociometer hypothesis gets extended by status concerns. The need to belong thus forms the basis of self-esteem and triggers the desire to access peer groups, whereas status striving triggers being respected in groups.

In a context of individuals being part of an ever-revolving process of being a member of a current group and an aspirant for future membership in another group in an attempt to self-improve (Escalas & Bettman, 2003, pp. 341), status becomes a steady change of conformism and snobbism: if an individual of a current group strives to become a member of another group, he or she conforms to the traits of the aspiration group, what in turn is perceived as snobbish in the current group. This steady interplay of the need to belong and the need for status makes belongingness an integral part of status seeking behaviour and thereby lends support to Baumeister and Leary (1995, pp. 521) who hypothesised that the need for status explains snobbism (or uniqueness) and the need to belong explains conformism (or assimilation).

*Proposition 3 see next page*

***In sum it can be proposed that, the need to belong and the need for status are motives of status seeking and improving behaviour. The steady interplay of both governs individuals' uplift between reference groups in a steady interplay of conformism (becoming a group member) and snobbism (becoming a group authority and aspirant for the next group). Thereby making assimilation and uniqueness subordinate aspects of status.***

**Proposition 3: Social ladder hypothesis**

### *II.-3.1.3 Status striving as a function of the necessity to conform*

According to Gierl and Huettl (2010, pp. 226) the three components of conspicuous consumption are unique, unrelated and fixed. This implies that individuals may have an intrinsic disposition to either conform to a group's conduct or to distance themselves from the group's conduct by differentiation. However, roles of snobs and conformists are supposed to change on a situational base (Moccia, 2013, pp. 161). Phillips and Zuckerman (2001, pp. 7) propose a relationship of status as a function of conformity. An individual's conformity is thus highest during mid-status periods and lowest with both very high low and very high values of status. This results in an inverted u-shape relationship. Being a mid-status entity, gaining higher status is achieved through acting according to group conduct. This results in a validation of group membership. In the high-status tier the validation aspect becomes gradually replaced by the current status. Thus, status increasingly becomes a function of itself (Phillips & Zuckerman, 2001, pp. 44), as proposed by Anderson and colleagues (2015, pp. 591; see chapter II.-3.1.2). This is assumed to pose an incentive for high status individuals to differentiate. The low conformity in the low status tier on the other hand, is explained by Belk, Mayer and Bahn (1982, pp. 527): they found low status individuals to be tending to see status symbols as an expression of luck. For comparison, high status individuals see status symbols, regardless of their conformity, as a matter of self-motivation (ibid). From lower to mid-tier (non-conformism to peak of conformism), this is supported by the notion of Bourdieu (1987, pp. 57), who claims that a minimum amount of cultural capital is required to enable a person to conform. This is also supported in the model of Han, Nunes & Drèze (2010, pp. 26) as Proletarians representing the least privileged class in their model do not engage in status seeking at all. Interestingly their model again lends at least anecdotal support to the importance of a sociometric status definition (see chapter II.-3.1.1), by finding no significant income difference between status striving Poseurs and non-striving Proletarians. In the mid to upper tier individuals increasingly turn away from conformism in their process of identity formation (Bourdieu, 1987, pp. 739; Pizzorno, 1991, pp. 227), if feedback on status from peers has reached a sufficient level. From this turning point on they increasingly concentrate on personal differentiation within

that group. This process of differentiation can be seen as a preparation for what will be left of them in terms of heritage (Belk, 1988, pp. 159). The full relationship explained in Proposition 4 is also shown in figure II-1.

***It can thus be proposed, that conformity can be interpreted as a tool to achieve and maintain status. The relationship can be described by the probability of denial/necessity to conform being a decreasing function of status/repeated validation.***

**Proposition 4: Status as a function of conformity**

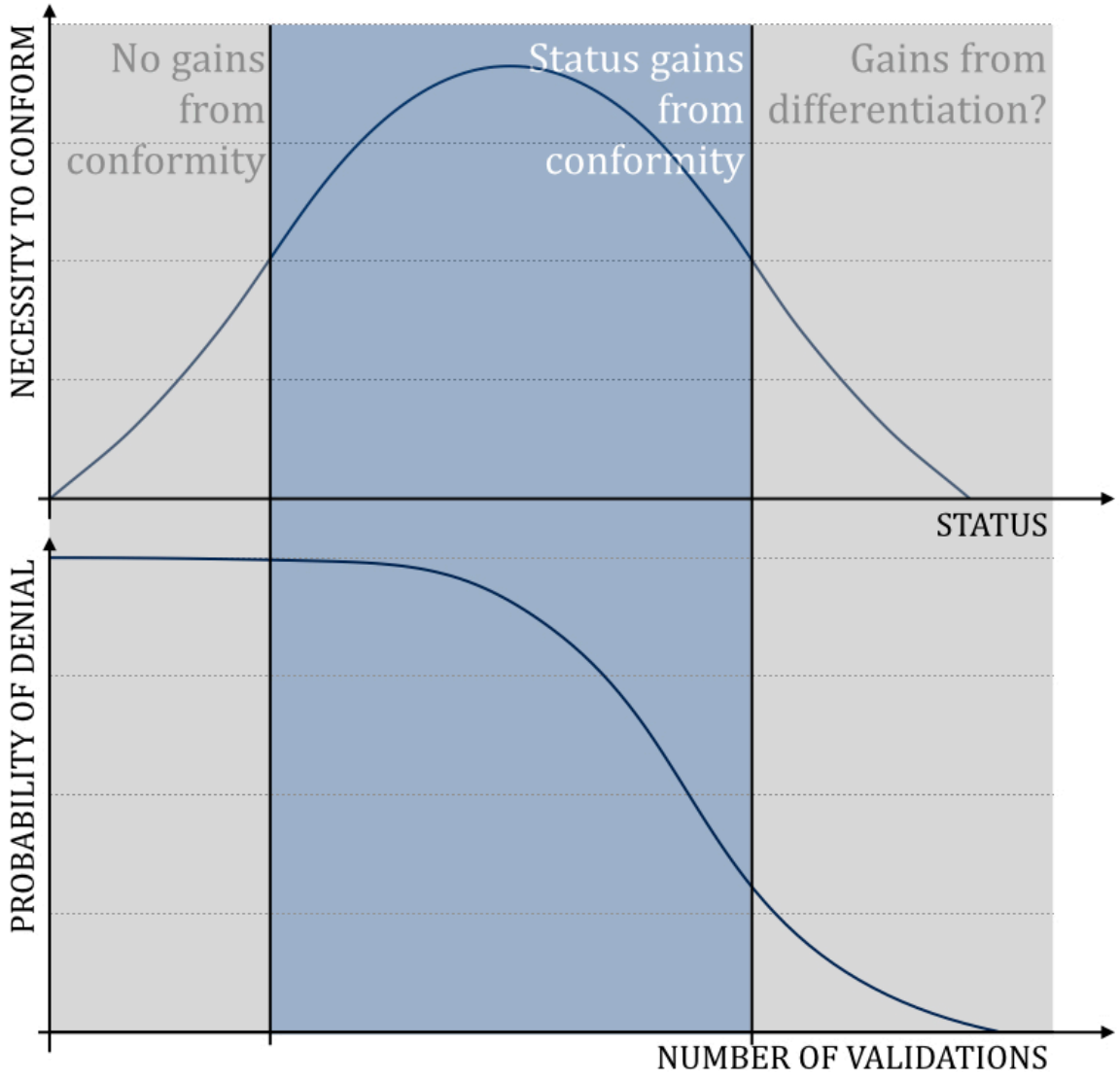


**Figure II-1: Cross relationship between status and conformity with number of validations by conforming behaviour (Adapted from Phillips & Zuckerman, 2001, pp. 7/ pp. 44)**

## II.-3.2 Relatedness of conformity and basic variables of segmentation

### *II.-3.2.1 Relationship of conformity and age*

Conformity has two aspects: followership and context. *Followership* denotes a group of people going the same way. It is determined by head counting these people, resulting in higher scores with an increasing number of people, regardless of their motives. Ideas or directions are a matter of the *contextual dimension* of conformity, where scores increase, the more these ideas follow stereotypes. Younger subjects seem to score higher than older ones in both dimensions of conformity (Belk, Mayer & Bahn, 1982, pp. 525). This is more recently shown in a conformity study by Bellazza, Gino and Keinan (2014, pp. 43 / pp. 46). Within an average age difference spanning 12 years between a student sample and an MTurk-sample, the difference in conformity expectations between the former and the latter group was found to halve. This does not imply, that younger adults have no desire for uniqueness at all. Apparent correlations amongst the factors of counter conformity can also be found in student age. Yet, these inter-correlations are significantly higher in the so called mid-ages (μ-Age=45; Tepper-Tian, Bearden & Hunter, 2001, pp. 54). Yet, getting older alone seems to be an insufficient explanation for increasing deviation from group norms. Bellazza and colleagues (2014, pp. 49) showed that the main driver behind higher status inferences from non-conforming behaviour is increasing autonomy. Positive relationships between status and autonomy are also reported in work contexts (Campos-Castillo& Ewoodzie, 2014, pp. 70). Autonomy is defined as an individual's *"[…] capacity to make decisions for oneself, to resist acting on one's own desires and on the instructions of others […]"* (Starmans & Friedman, 2015, pp. 151). Autonomy is domain specific and is – under normal development – expected to reach its apex in mid-life, between the age of 45 and 60. At maximum autonomy an individual is interdependent, denoting a balance of give and take in social relationships (ibid; Wahl, 2001, pp. 151-152; Wahl, 2015, pp. 181).

Although there is a considerable overlap between age and conformity, there are some factors that decouple both. Among these are supportive social relationships, goal achievement and accumulation of skills. *Supportive social relationships* are known to foster earlier autonomy development (Ruzek, Hafen, Allen, Gregory, Mikami & Pianta, 2016, pp. 102). Anomalies in autonomy development are attributed to social anxiety (Peleg-Popko, 2002, pp. 364) and the fear of negative evaluation by others (Watson & Friend, 1969, pp. 455). This is also reflected by younger individuals' high ATSCI-scores and a higher correlation of their ATSCI-scores with the normative branch of interpersonal influence (Bearden, Netemeyer & Teel, 1989, pp. 478,). ATSCI (Attention to Social Comparison Information) is a construct explaining

group orientation based on social anxiety and the fear of negative evaluation (Lennox & Wolfe, 1984, pp. 1358; Bearden & Rose, 1990, pp. 461-462). The comparatively higher scores of younger people denote, that younger people may see the group as the starting point for self-definition. Under mid-age interdependence state conditions, individuals increasingly see themselves as the base for self-definition, which again implicates increasing autonomy (Shukla, 2008, pp. 30-31). This means the propensity to conform is a declining function of autonomy. In shopping contexts this decoupling of age and autonomy can be seen in school classes where despite high fashion group pressure, some students opt for different fashion alternatives and show resistance to latest fashion trends. Students still seen as group authorities by others, despite deviation, are observed to sport consistent outside group subcultures they identify with (Brake, 2013, pp. 1935-1936).

*Successful goal achievement* is another important premise of an individual's autonomy development. Forming of future goals including status, autonomy and integration into groups begins at the age of 11 and is expected to be fully-fledged by the age of 16 (Lee, McInerney, Liem & Ortiga, 2010; McInerney, 2004, pp. 142). Adolescents motivation for distant future goals is a main predictor of their current tasks motivation (DeVolder & Lens, 1982, pp. 570). From adolescence on future goals are subdivided into milestones, which in turn strengthen motivation and commitment for bigger more distant goals, when gradually 'worked-off' (Miller & Brickman, 2004, pp. 15; Marcus & Ruvolo, 1989). Focussing on status, autonomy and admiration from peers is so intrinsically dispositional from adolescent age on, that older peers are recommended to artificially strengthen adolescents' concentration on the importance of current milestones' contexts (Simons, Vansteenkiste, Lens & Lacante, 2004, pp. 135). Goals in the context of shopping can have two meanings – the shopping target as a goal (Bagozzi & Dholakia, 1999. pp. 20) or shopping as a compensation for missed goal achievement. Both have different implications for example in terms of promotion and product creation. Recalling Heffetz (2011, pp. 1103) missed goal achievement for example can be assumed to foster the acquisition of more conspicuous goods in order to send the message of *'I do perform well'* to the peers.

*Accumulation of skills*, education and competence does not end in itself. It is tied to reaching more distant future goals from the beginning on. Thus, it can be seen as just a step on the self-supporting helix of ability, action and autonomy (Campos-Castillo & Ewoodzie, 2014, pp. 65-66). Ability allows individuals' autonomous action. Successful action provides more autonomy in future actions and so on.

*Proposition 5a see next page*

***It can thus be proposed that the necessity to conform decreases, if the number of achieved intermediate and life goals increases.***

**Proposition 5a: Relationship of life goals achievement and conformity**

This idea, on the one hand, builds on the perspective of Belk (1988, pp. 157-159). At first people need the group to define themselves, so they conform to that group's conduct. Having gained status within that group, they start to deviate from that norm in a sense of leaving one's mark on that group's face. Deviation is maximised, when they strive to extend their lives beyond death and care about their inheritance. Supplementing Belk's idea (ibid) with an underlying construct, such as autonomy, on the other hand, may allow for further operationalisation. Combining the assumption of conformity as a function of status on a foundation of autonomy with the idea of member and aspiration groups from chapter II.-3.1.1:

***It can thus be proposed that the necessity to conform decreases, . . .***
***. . . if the number of possible aspiration groups decreases.***
***. . . if the number of current and past member groups increases.***
***. . . if own status and member group status increase.***

**Proposition 5b: Relationship between social ladder effects and conformity**

Autonomy is a significant enabler especially for earlier status development. Earlier achieved higher autonomy allows for lower necessity to conform, as the self increasingly becomes the base of self-definition. As the development of earlier autonomy can be fostered by socially supportive relationships in adolescence, autonomy is developed with life experience and thus independent from status. Yet, there is no equation of high status and high autonomy. This is shown by the results of Park & Lessig (1977), where conformity in the students' sample was constantly and significantly higher, when compared to housewives. This main effect was constant across a variety of product categories and regardless if students were surveyed under notice of their peers or privately (ibid, pp. 107). More recently this relationship gets reflected in different shopping motivations for luxury brands of late adolescents and young adults by Schade, Hegner, Horstmann and Brinkmann (2016, pp. 319-320). Social adjustment is the major reason for the former, whereas self-expression and value-expression were among the major reasons for the latter.

***Necessity to conform decreases, . . .***
***. . . with increasing life experience.***
***. . . with increasing certainty about one's own position in life.***
***. . . with increasing social integration.***

**Proposition 5c: Relationship between experience and social integration and conformity**

### *II.-3.2.2 Relationship of conformity and gender*

Whereas in the past, there was a strict differentiation between the terms gender and sex, recent discussion on that topic concentrates rather on the holistic notion of both terms: seeing sex as the purely physical traits of a person and gender as the stereotype assigned to this individual by the society as seen by West and Zimmerman (1987, pp. 125/pp. 147) becomes increasingly obsolete. Newer perspectives, advocating the former view whilst enriching the latter provide useful insights for segmentation. Gender roles are thus increasingly seen as the physical traits of a person, combined with the shaping effects of the person's environment (Eagly & Wood, 1999, pp. 421). Gender roles, as shown in table II-1, are relatively persistent over time. Antipodes like interdependence and affiliation orientation of females and independence combined with the competitiveness of males are the most striking characteristics in the context of conformity and non-conformity respectively.

Bem's Sex Role Inventory (BSRI; Bem, 1974, pp. 155) was the first attempt to create a scale to classify individuals independent of their physical sex. Twenty traits are used to describe the continuum between the respective feminine and masculine. Traits are reviewed for descriptive validity of their gender labelling on a regular base using Bem's (1974, pp. 157) criterion of significance[3]. Although there is recently some convergence in gender traits, the construct still proves stability across age brackets and cultures (Carver, Vafaei, Guerra, Freire & Phillips, 2013, pp. 5) and over time. Yet the differentiation of gender roles seems to take place at an earlier stage of lifetime, if compared to older assessments (Adler, Kless & Adler, 1992, pp. 183; Bujzen, van Reijmersdal & Valkenburg, 2011, pp. 3). For successful segmentation, especially rank values of self-reports on the desirability of sex-role traits on their consexuals and about themselves are interesting. Stability, in line with the picture drawn in table II-1**,** is still salient for the understanding and compassionate female, who is still sensitive to the needs of others as well as for the independent and individualistic male, who defends his own beliefs (Auster & Ohm, 2000, pp. 516-522; Appendix II-4; Appendix II-5).

[3] Bem (1974,pp. 157):"A personality characteristic qualified as masculine if it was independently judged by both males and females in both samples to be significantly more desirable for a man than for a woman ($pr < ,05$). Similarly, a personality characteristic qualified as feminine if it was independently judged by both males and females in both samples to be significantly more desirable for a woman than for a man ($pr < ,05$). Of those characteristics that satisfied these criteria, twenty were selected for the Masculinity scale and twenty were selected for the Femininity scale."

| Field | Male | Female | Source |
|---|---|---|---|
| General Orientation[4] | Achievement orientation | Affiliation orientation | • Fried-Buchalter, 1997, pp. 855<br>• Hill, 1987, pp.1012<br>• Prentice & Carranza, 2002, pp. 73-74 |
| Improvement (Mastery evaluation) | Competition with others | Self-referenced | • Prakash, 1992, pp. 48-49<br>• Prentice & Carranza, 2002, pp. 73-74 |
| Preferred group size | Large | Large and small | • Prakash, 1992, pp. 48-49 |
| Decision making | Independent | Interdependent | • Meyers-Levy, 1988, pp. 524-525; ibid, pp. 527-528<br>• Cross & Madson, 1997, pp. 8<br>• Prentice & Carranza, 2002, pp. 73-74 |
| Susceptibility to other's judgements | Low | High | ➢ Meyers-Levy, 1988, pp. 527-528 |
| Effect of sex role priming | Intensifying | Antithetic | ➢ Meyers-Levy, 1988, pp. 524-525 |
| Primary focus in mate selection | Women's attractiveness | Men's wealth and status | ➢ Powers, 1971, pp. 212<br>➢ Kenrick & Keefe, 1992, pp. 83 |
| Relative susceptibility to consume conspicuously | High | Low | ➢ O'Cass & Ewen, 2004, pp. 32 |
| Signalling content under mating condition | Resources | Prosocial Competence | ➢ Griskevicius, Tybur, Sundie, Cialdini, Miller & Kenrick, 2007, pp. 89; ibid, pp. 91 |
| Signal intended by philanthropy | Wealth | Helpfulness | ➢ Griskevicius, Tybur, Sundie, Cialdini, Miller & Kenrick, 2007, pp. 95 |
| Motivation for luxury consumption | Elitism, Exclusivity | Refinement | ➢ Roux, Tafani & Vigneron, 2017, pp. 108 |

**Table II-1: Differences in gender roles in research**

Convergence of sex roles with consequences for segmentation is especially noticeable when individuals report desirable traits for themselves. On the one hand, these desires are likely to be transformed into immediate public behaviour (Schlenker, 1975, pp. 1034-1035), which will be promoted by possessions (Belk, 1988, pp. 150). Conspicuous consumption of luxury products is one example (O'Cass & Ewen, 2004, pp. 34; Wong, 1997). On the other hand, these self-expressed desires are also likely to be predictors of future sex-roles in the sense of life projects or tasks under construction (Tian & Belk, 2005, pp. 305-306). Thus, the growing desire of females to gain independence and act more individually, while maintaining interpersonal traits is a prediction about the future female role that can be inferred from these

[4] These are relative measures of related constructs – Achievement orientation: Women score higher on Fear of Success, which is originated in gender-role stereotyping, which enforces lower achievement orientation for women (Fried-Buchalter, 1997, pp. 848); Affiliation orientation: Measured using Interpersonal Orientation Scale consists of four dimensions, of which women score higher in emotional support and positive stimulation. Men and women score equal in attention and social comparison. Hence in sum women score higher (Hill, 1987, pp. 1012; Horner, 1968, pp. 407).

self-reports. Independent and individualistic males, increasingly caring more about others' needs and becoming more compassionate, are their counterpart. Convergence of gender roles over time find support in Prentice and Carranza (2002, pp. 279-280). They state that convergence is societal accepted, as long as neither of two violates the foundation of their respective gender role. Social punishments will be the result of violations. Hence, despite the recent convergence, being independent and individualistic remains vital to males, making them comparatively more interesting in terms of autonomy and non-conformism in shopping contexts (Thompson, 1996, pp. 401).

| Higher susceptibility to status/ prestige cues | Mode of research<br>Products in research | Source |
|---|---|---|
| Males[5] | Multiple choice of 2 items<br>Handbag (Female) and Wallets (Male) . . .<br>. . . by occasions of discovery<br>. . . by things found inside | Belk, 1978, tb. 6, tb. 7 |
| Males | Individual's description on based on 12 given attributes<br>Houses and Cars | Belk, Mayer & Bahn, 1982, pp. 526 |
| Males[6] | Item battery survey on involvement with subject<br>Clothing | Solomon & Schopler, 1982, pp. 513 |
| Males[7] | Self-reporting survey on the Kilsheimer Status Consumption Scale | Eastman, Fredenberger, Campbell & Calvert, 1997, pp. 59 |
| Females and Males[8] | Self-reporting test on status and conspicuousness of clothes and sunglasses | O'Cass & Ewen, 2004, pp. 32 |
| Males | Studies on willingness to spend money on conspicuous consumption, spend time on benevolence in visible, prestigious or heroic framings | Griskevicius, Tybur, Sundie, Cialdini, Miller & Kenrick, 2007, pp. 89; 91 & 96 |

**Table II-2: Status inferences from consumption behaviour by gender[9]**

Table II-2 also shows that men are traditionally known for higher proneness to status cues. Research in this area shows that status proneness is independent, regardless if the status of another person is rated or the own status is assessed or enhanced. Status still remains an important driver of social and customer behaviour, regardless which extremum a man

[5] According to Belk (1978) women are more consistent in overall statements, but men report more status related than women. Result is based on counting status related statements (money, occupation, education, success, income) by gender. See also Appendix II-1

[6] Men scored highly significant in Public Self-Consciousness vs. Self-Presentation and Occasion & Public Self-Consciousness vs. Clothing Interest; females were insignificant in both cases.

[7] Study on different relationships of status and materialism in the China, Mexico and the US. Only Chinese men showed a significant correlation of gender and status (Eastman, Fredenberger, Campbell & Calvert, 1997, pp. 56 & 59).

[8] Test on consumption behavior: Status and conspicuousness were researched separately. Women and men scored equally high on status (consumption of status providing products), men scored higher on conspicuousness (overt consumption to communicate status through possessions) (O'Cass & Ewen, 2004, pp. 34-35).

[9] Please note that all these studies had undergraduate samples, possibly raising issues of autonomy biases (see Chapter II.-3.2.1).

behaves closer to. Analogous to Bem's (1974) model of gender roles, several researchers proposed models to classify male attitudes and behaviour in terms of stereotypical lifestyles. Holt and Thompson (2004) propose a continuum with the breadwinner type on the one and the rebel type on the opposite end as shown in figure II-2. Breadwinners are described as the devoted fathers and serious workers, whose success is reflected in gaining status within a given hierarchy (ibid, pp. 427-428). Rebels challenge hierarchies with their immature and rather antisocial behaviour. Self-devotion, especially when not rewarded, is not only an explanation for a general male tendency towards being a rebel (ibid, pp. 436). It is also a major reason for compensatory consumption of the breadwinners, who also equalise status gains and material success (ibid, pp. 427-428). Almost all other classifications of male conduct fit into the model of Holt and Thompson (2004) and are compatible to the two-dimensional model of status and conformism.

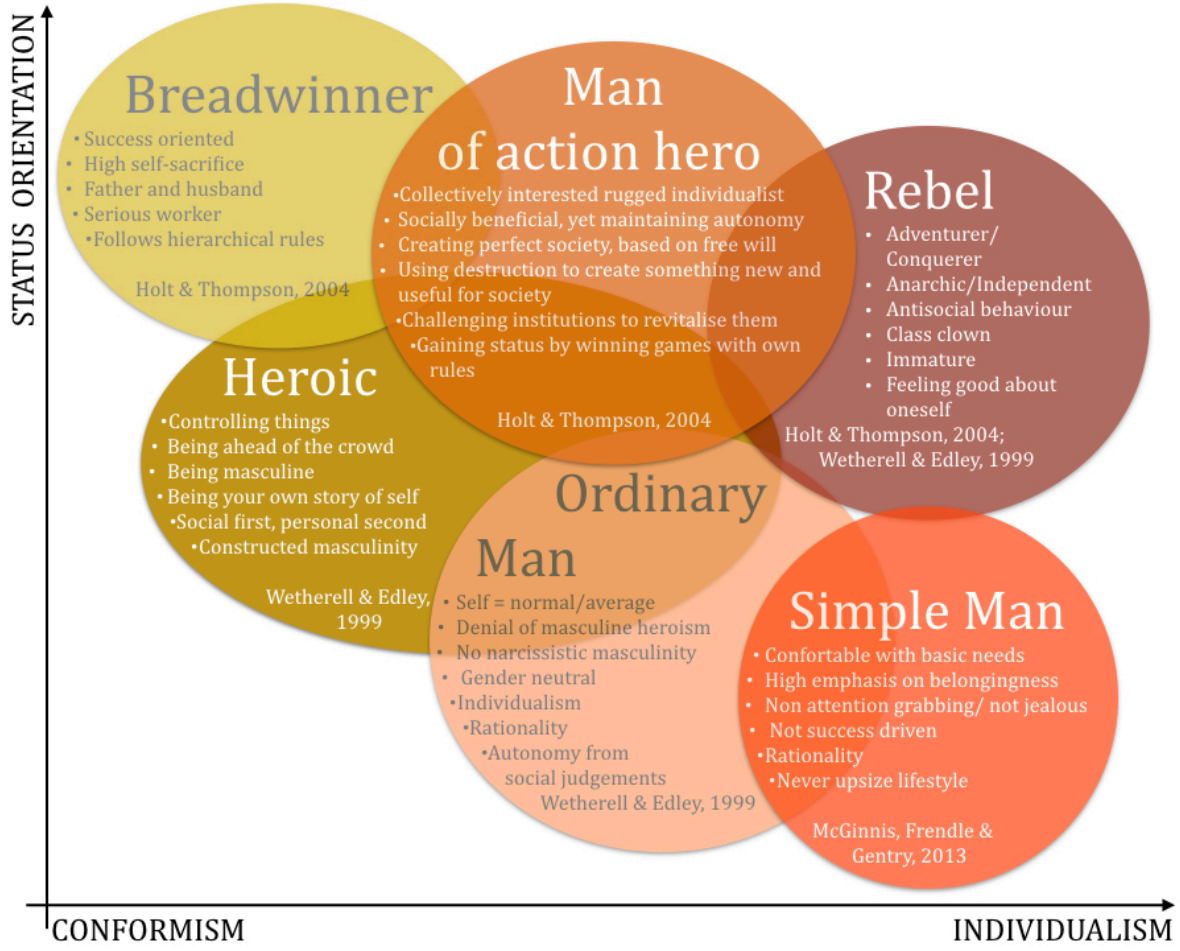


**Figure II-2: Bi-dimensional model of male stereotypes (Adapted from Wetherell & Edley, 1999; Holt & Thompson, 2004; McGinnis, Frendle & Gentry, 2013)**

Wetherell and Edley (1999) draw an almost congruent picture of the rebel (ibid, pp. 347-350), yet their heroic man seems closer to Holt and Thompson's (2004, pp. 436-437) 'Man of action hero' which was constructed as an ideal trade-off of the structural attitude of the

breadwinner and the creative one of the rebel. Examples of male lifestyles not prone to status cues at all are Wetherell and Edley's (1999, pp. 343-347) 'ordinary man' and, more recently the 'simple man', characterised by Mc Ginis, Frendle and Gentry (2013, pp. 73-74). Both place rationality at the forefront of shopping behaviour. While the former's individualism is propelled by autonomy from social judgements, the latter's sociometric position is based on enjoyment of interconnectedness and thus sharing quality time with peers. 'Simple men' would even neglect to upsize lifestyle, when income increases would support ascent (ibid).

As far as females are concerned, gaining a complete picture is much more difficult. Research results lack generalisability due to geographic restrictions, different age classes of respondents or different eras of research. Extracted from this patchy body of research, being an identity of their own (Starr, 2004, pp. 296), is the primary concern of females. Having a place of their own, especially unstressed by male dominance, is thus a desire being voiced from adolescence on (Walseth, Aartun & Engelrud, 2015, pp. 14). Developing and maintaining an individual sense for femininity is an integral part of female identity formation. These self-created identities are a synopsis of a woman's history, her present and an outlook on the desired self she wants to become (Jantzen, Østergaard & Sucena Vieira, 2006, pp. 200). Unlike male identity formation, which consists of a closely woven net of stereotypical identities (see Figure II-2), female identity formation seems much more driven by implicit codes and negative role models. The Freudian (1910) Madonna-whore antipole includes two of these negative role models. Adolescent girls in high school drama play for example describe the majority of likewise oriented female roles on offer as far too stereotypical und constructed. As a consequence, they refuse playing these roles, and express their desire for more multifaceted and maturing roles, which share more similarities with (their) real lives (Lambert, Wright, Currie & Pascoe, 2017, pp. 8). Jantzen and colleagues (2006) underline this desire to set oneself apart from each of these two role models. Their study explores the construction of an explicitly female identity in northern European women aged 21 to 41. The stereotype of housewife was classified as boring, matronly and less sexually active by them. Feeling cheap and dependent were their main motives to avoid association with vamp or whore like appearances (Jantzen, Østergaard & Vieira, 2006, pp. 184-185). Interestingly being dependent on somebody else – namely men – is only explicitly mentioned in the latter case, although Freud (1910, pp. 188; pp. 191) classifies both identities as non-autonomous.

Based on the findings of Jantzen, Østergaard & Vieira (2006), the working woman seems to be the only positively connoted female role model. This role model dates back to the ideas of Friedan (1963, pp. 346) and has evolved since. Alternatively, women are living up to the

ideals of Friedan since the 1970s and women magazines are taking up real life examples for the sake of proposals for further development. The working woman summarises the idea of women as a major pillar of working society. Workplace success, income and job tasks equal to those of men, competition orientation and optional motherhood characterise a female identity of maximum autonomy (Starr, 2004, pp. 296-298). Its idealistic combination of a myriad of best practice solutions, as characterised by Starr (ibid), let it appear in close proximity to the 'Man of action hero' characterised by Holt and Thompson (2004). Akin to the working woman [and mother] the 'Man of action hero' is also the only ideal in case of male role models, while the other male role models are examples of stereotype thinking. Hence, women seem comparatively less restricted in the construction of an individual identity. Within a triangle of two non-autonomous undesirable role models and one autonomous ideal they are free to create their own identity as shown in figure II-3. Figure II-3 also shows that the less stereotype-driven role models are, the less it is possible to assess them in terms of status, as autonomy is the only variable to be carried over from the bi-dimensional model of male stereotypes.

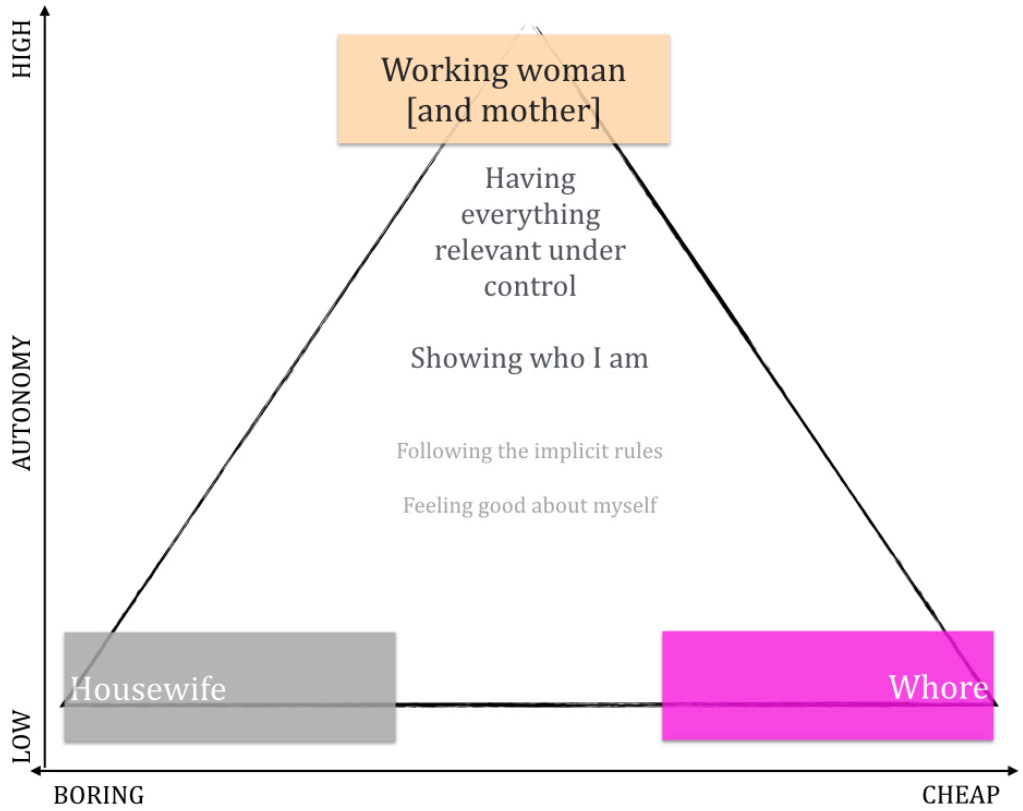


**Figure II-3: Female role model triangle (Adapted from Freud, 1910; Starr, 2004; Jantzen, Østergaard & Vieira, 2006)**

A female's target function is thus, to have everything relevant under control and display her own identity (Jantzen, Østergaard & Vieira, 2006, pp. 193; pp. 197). Feeling good with this idea of self (ibid, pp. 194) and some implicit codes providing easier avoidance of the undesirable appearance (ibid, pp. 193) are the only constrains, which may also individually be

relaxed. The desire to display their lifestyle in general and the desire to display success and status provide interesting perspectives in the light of conspicuous consumption and autonomy. However, their higher degree of individualism and hence the myriad of ways to live up to these ideas make them more difficult to target compared to men according to studies. Notwithstanding, in sum, it must be claimed, that research till date allows only for incomplete pictures, regardless if male or female role models are discussed. What can be said for sure, is that gender research has been a battlefield of ideologic discussions for too long, rather than what scientific research should be: a valid and generalisable description of reality. Hence, it does not allow for valid propositions, but calls for a request to continue research as shown by the more recent works mentioned above.

### *II.-3.2.3 Relationship of conformity, social class, income, lifestyles and ethnicity*

Putting social class at level with status is unquestionably appealing. Mostly because it promises a parsimoniously simple view, especially when levelling middle class people with mediocre status and average income. Veblen's (1912) view of classes below leisure class – especially the middle class – imitating the consumption patterns of the leisure class (ibid, pp. 82) for the sake of reputation and status – seems to perfectly complement this line of argument. Numerous growth forecasts of luxury goods' suppliers have been built on predictions about middle class people raring to go for socioeconomic status ascent. The middle class has been identified as attractive for conspicuous consumption not only for attributively being steadily committed to ostentatious class ascent. The two substrata of middle class – working class and middle class (Coleman, Rainwater & McClelland, 1978, pp. 61) – still account for the largest customer base in developed Western societies (Gilbert, 2008, pp. 13; DeAlmeida, Machado & Firmino da Costa, 2006, pp. 101-102; Hodges & Brown, 2015). It also covers a wide range of incomes and occupations from manual and service to technical and managerial workers (Kravetz & Sandikci, 2014, pp. 126; Walkowitz, 2012, p. 122-123). This wide income range and all other factors seriously question the general idea of social class being equal to income class. Another reason is a considerable number of individuals who have an income of either below class standard (under-privileged) or above their class standard (over-privileged). Figure II-4[10] shows the income ranges of over-privileged society members below abscissa and their classes' average income above. Standard of comparison in both cases is per capita GDP ppp (=1,0). Comparing the average of over-privilege to class average the magnitude of "[…] money left over […]" (Coleman, 1983, pp. 274) is constantly at 1,56-1,57 for lower class and middle-class Americans. In the upper stratum it ranges from 1,67 to 2,25 of the classes

[10] Note that the study by Coleman (1983) describes the society of the United States.

average income. These deviations led Coleman to the conclusion, that *"[...] the classes we are talking about have mostly to do with social networks and peer judgements of 'people quality' and have little to do with income levels [...]"* (Coleman, 1983, pp. 273). This is also supported by non-existent income but obvious taste differences between Proletarians and Poseurs in Han, Nunes and Drèze (2010, pp. 26; see chapter II.-3.1.3).

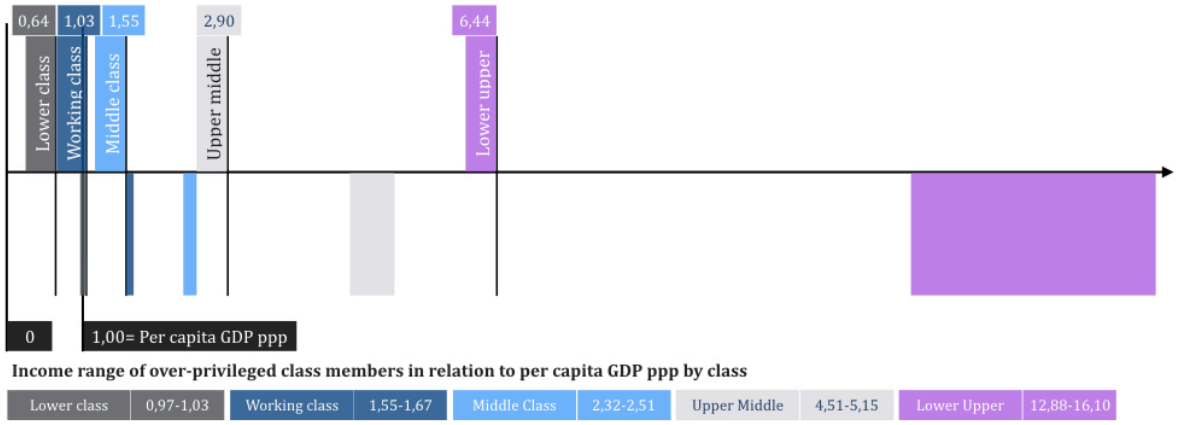


**Figure II-4: Social classes and income (Based on Coleman, 1983, pp. 274; International Monetary Fund, 2017)**

Additionally, experimental results by Clingingsmith and Sheremeta (2015, pp. 32) show a declining tendency for conspicuous consumption in the middle class: individuals received an amount of money in secrecy and were instructed to purchase either private or public consumption objects. Purchase decisions were the only representations of conduct visible to other subjects (ibid, pp. 7-10). The results for the difference between public consumption (continuous line) and private consumption (dashed line) can be seen in figure II-5. The interpretation of results depends on the interpretation of the range of capitalisation. If it represents the entire income range, it shows a declining tendency of the middle class for conspicuous consumption. If the range of capitalisation only represents a portion, it at least calls for a differentiation of middle class incomes.

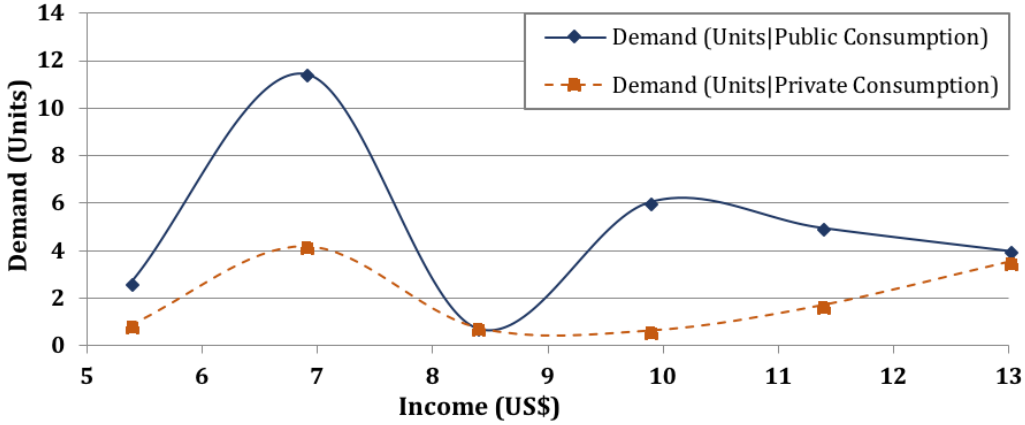


**Figure II-5: Experimental results of Clingingsmith and Sheremeta (2015, pp. 32): Public vs. Private consumption depending on income**

Besides sufficient economic capital, status gains beyond one's own class borders are also questioned due to a lack in cultural capital (Bourdieu, 1987, pp. 65). Cultural capital is heavily taste driven. Patrimonial taste and connoisseurship enable higher-class individuals to seal off their status against Arrivistes (ibid, pp. 101). Recently this upper-class hegemony has been empirically underpinned in the Patricians-concept by (Han, Nunes & Drèze, 2010, pp. 25). Though, the authors' concept builds on distant ratings of briefly noticed subtle signals, thus cultural capital is not explicitly mentioned. Bourdieu's (1987, pp. 105-106) concept of cultural capital is based on knowledge. In other words: taste needs communication beyond mundane and manifold 'meet and greet'. It thus needs what Coleman (1983, pp. 273) classifies as a desideratum for a comprehensive understanding of consumption patterns: peer group exchange and peer group assessment. At the same time the term Patricians – just as the other four terms defined by Han, Nunes & Drèze (2010, pp. 17) – belong to a more fine-grained category than social classes. These categories are lifestyles. The importance of peer groups has already been addressed in chapters II.-3.1.1 and II.-3.2.1**.** Lifestyles are the motivational companion piece of peer groups. In conjunction they may fully tap the potential of sociometric status evaluation. Changes in lifestyle rather originate in peer changes than income changes. Lifestyle changes in turn manifest changes in consumption patterns (Coleman, 1983, pp. 274; McGinnis, Frendle & Gentry, 2012, pp. 74). Lifestyle segmentation allows not only seeing who buys which good. It allows to ascertain who uses this particular good in the same way (Holt, 1997, pp. 334). However, these likewise distilled behavioural patterns are subject to steady change, as Holt (ibid, pp. 345) acknowledges "[…] people will 'simply not stay out in the boxes drawn up for them by sociologists, marketers, or demographers' […]". Traditionally, middle class was sub-divided into three substrata. The lower part was eager for instant gratification, the upper part was mainly quality and taste driven, while 'the middle class' was known for values like respectability and conformity (Coleman, 1983, pp. 269). Individuality, a typical trait of the upper tier, has increasingly diffused into all strata of the middle class. Propelled by the collective disillusion of non-affordability of the American dream of a good and sophisticated upper-class life and by egalitarian education systems in Europe (ibid, pp. 271; Kyvik, 2004, pp. 397-398), middle class increasingly developed its own sense of individuality.

Within the middle class Indie lifestyles have even developed their own status structure based on a distinctive and complex set of social and cultural capital (Arsel & Thompson, 2011, pp. 797). Status enhancement within and between these peer groups works literally the same way as proposed in the social ladder effect in chapters II.-3.1.2 and II.-3.2.1. Besides Indie lifestyles, a broad variety of lifestyles have developed within middle class, which are shown in figure II-6. Stereotypical middle-class values are placed in relation to autonomy and

conformity and are additive outside in. All values are summed up in 'the centre of gravity' called 'Traditional middle-class values'. Best Self Inc. and i-Average are lifestyles with a relatively high amount conformity. Interestingly these lifestyles are more frequently followed in emerging markets. Particularly younger individuals to follow this lifestyle believe in meritocracy. Consequently, their self-optimisation is centred on investments in skills and knowledge (Kravets & Sandikci, 2014, pp. 127-128). The more these individuals profit from internationalisation of their home countries, the more autonomous they are, which is reflected by the (Un-)Confident Cosmopolitain (ibid). Hence, Indie and Bricoleur lifestyles are typically Western lifestyles. They do not share any traditional middle-class values and even economic resources are not even considered as pivotal. This is underlined by Moiso, Arnould and Gentry (2013, pp. 313), who found that greater economic capital opens a broader variety of lifestyles for the individual, which is widely embraced by a vast majority of them. In sum, social classes may function to classify individuals by income. For successful segmentation individuals need to be classified by their lifestyles, which in turn emerge from interests and tastes of their peer groups. Recent development shows that these smaller getting peer groups increasingly develop their own status structure in which the role of income diminishes.

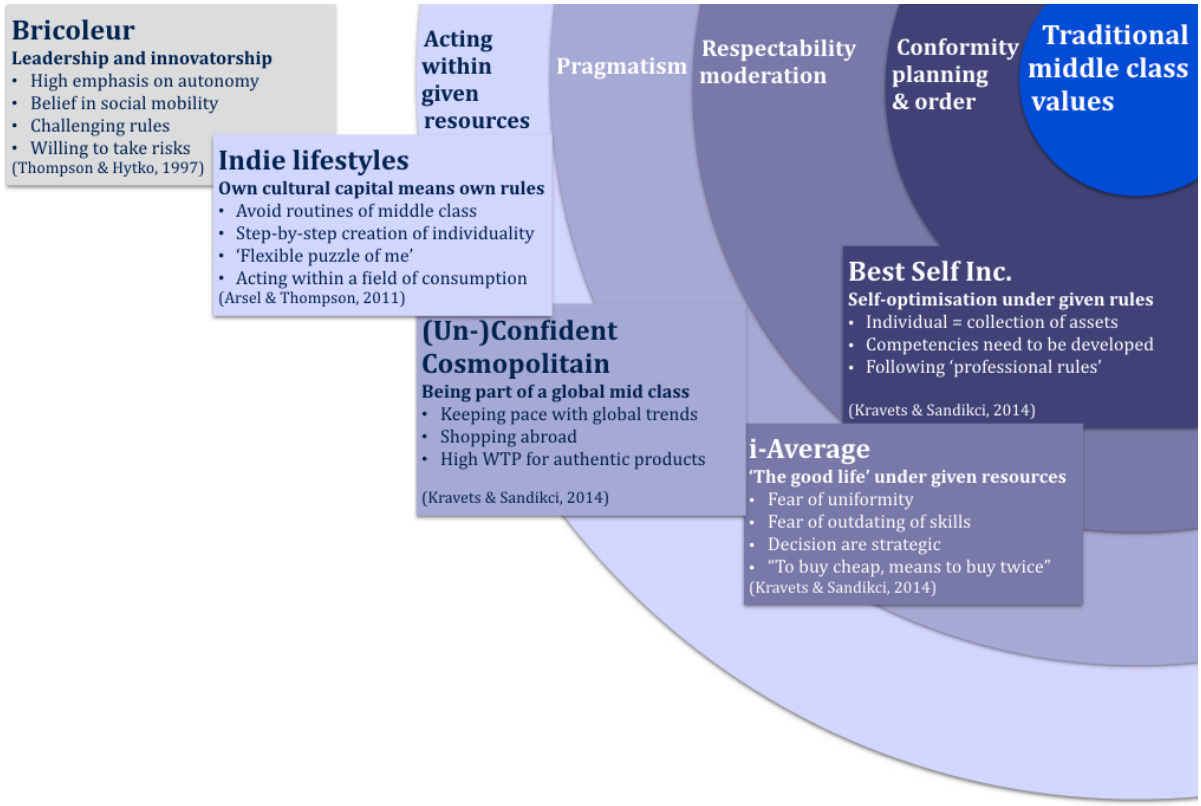


**Figure II-6: Example of mid-class lifestyles and distance to traditional mid-class values (Based on Thompson & Hytko, 1997; Arsel & Thompson, 2011; Kravets & Sandikci, 2014)**

# II.-4 Introductory decisions of Limited-Editions

## II.-4.1 Costs of Limited-Edition introduction

Scarcity messages, especially if quantity related, are known to increase a supplier's bottom line not only by increased profits. Though, not the entire marginal price compared to a regular product can be billed as the marginal profit of a Limited-Edition. There is a cost margin in comparison to a regular product (Balachander & Stock, 2009, pp. 345 /347; Amaldoss & Jain, 2008, 938). These costs often stem from higher requirements for customisation a Limited-Edition induces (Aggrawal, Jun & Huh, 2011, pp. 261), which can be assigned to promotional costs for the essentials and differentiation cost for supplemental customisation.

*Promotional costs* consist of adaption costs and expenditures on additional promotion. The latter are necessary, because a successful Limited-Edition is antithetic to reliable word-of-mouth spreading by customers (Jang, Ko, Morris & Chang, 2015, pp. 998). Remember that the majority of the satisfaction of a Limited-Edition customer stems from fulfilment of social needs in the context of reference group effects. Somebody having successfully chased the Limited-Edition of a handbag may be eager to take it for a walk the next night out with friends. However, telling her friends about the outlet she got it from, will – if it ever happens – not happen before she can be sure the Limited-Edition is sold-off. Otherwise she would harm her level of uniqueness within that group she recently acquired paying for the signalling value of her handbag. Although promotional expenditures for Limited-Editions may exceed those of a regular product, it has been shown, that advertising of scarcity appeals are beneficial to the value perception of a product (Eisend, 2008, pp. 36). As already mentioned in chapter II.-2.1, a credible signal of quantity scarcity needs a confirmation for the owner. Insignias specifying total unit count and individual serial number belong to the essentials of Limited-Edition differentiation from regular products (Stock & Balachander, 2005, pp. 1187).

In most cases a Limited-Edition is tantamount to a commitment to a lower unit count than under natural demand. Exceptions from that are rare in reality and will be discussed in the following chapter. Thus, every unit lost means a loss of revenue. In line with operation research models of Ha (1997, pp. 1094) and Padmanabhan and Vrat (1990, pp. 1724-1725), these costs can be modelled as *opportunity costs* for lost sales. Opportunity costs need hence to be apportioned over the remaining units in order to prevent losses stemming from Limited-Edition introduction. Figure II-7 depicts the price premium per unit as a function quantity reduction. Equation II-1 shows the minimum condition for a profitable sole product quantity limitation.

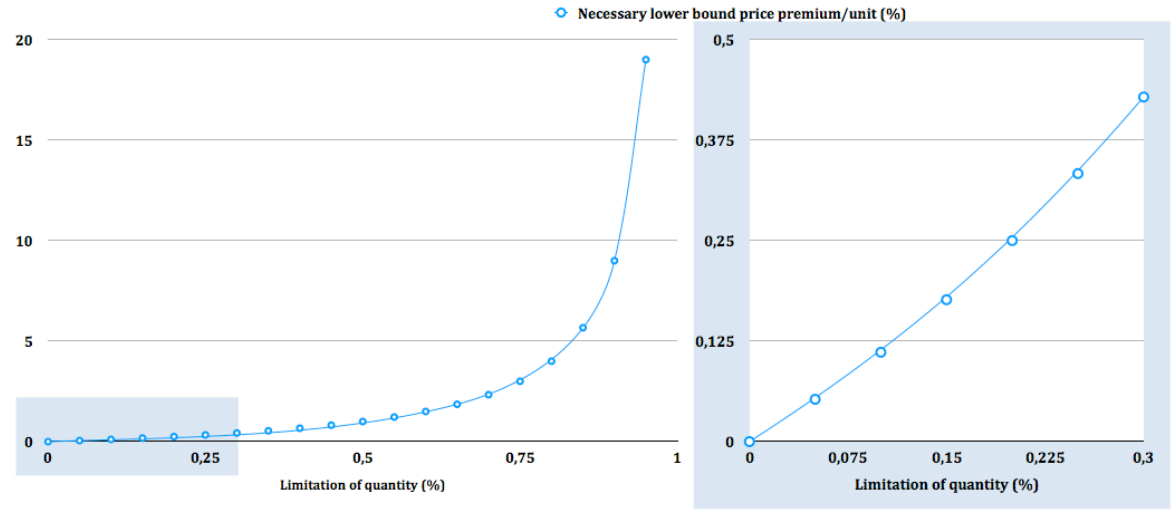


**Figure II-7: Price premium per unit as a function of quantity reduction**

$$1 - \frac{p_{dem>sup}}{p_{dem=sup}} > \frac{\left(\frac{p_{dem=sup} \times sup_{dem=sup}}{sup_{dem>sup}}\right) - p_{nat}}{p_{dem=sup}} > 1 - \frac{sup_{dem>sup}}{sup_{dem=sup}}$$

**Equation II-1: Minimum conditions for profitable sole product quantity limitation (without cost for LQS introduction)**

*Differentiation costs* indicate all expenditures to make a Limited-Edition stand out from regular products above the necessary adaption. Amaldoss and Jain (2008, pp. 937) denote these further differentiations 'costly features'. As standalone strategies Limited-Editions dominate costly features in terms of revenue, sales volume and profit (ibid, pp. 939). Costly features cater for snobs with a strong desire to contrast. Intuitively they are assumed to increase the signalling value part of utility like Hublot's Limited-Edition Ferrari Unico Magic Gold, which makes use of scratch resistant gold alloy and comes with the lowest total unit count of all Big Bang Ferrari wrist watches (Hublot, 2018a). Nevertheless, Porsche's additional power kit, exclusive to its Limited-Edition 911 Turbo S shows that costly features may also increase usage value (Porsche, 2017, pp. 56; Balachander & Stock, 2009, pp. 340). The necessary condition for feasibility of these features is a consumer's marginal willingness pay above marginal cost of feature introduction (Amaldoss & Jain, 2008, pp. 937). Netessine and Taylor (2007, pp. 113) point out that these costs are not similar to the feature's additional labour and material costs. Rather the cost structure of the firm must support product additions and empirical research is needed to capture the heterogeneity of customers and their preferences. Luxury goods suppliers however, have made significant effort in handling these difficulties. Managed with increasing levels of professionality, they are aware of optimising their product variety. The target function is thus, a balance of their customers' valuation of exclusivity with the exquisiteness of a high-quality assortment signalling deliberate

frugalness (Nueño & Quelch, 1998, pp. 64-65). Thus, costly features help to underline exclusiveness and support snobbism, but as a sole strategy perform comparably inferior to Limited-Editions. Yet, they increase product valuations, when sufficient market research on customer desires and their heterogeneity was done. Especially luxury suppliers seem capable of handling this complexity. In sum, it can be proposed that . . .

***A Limited-Edition is the precondition and costly features are the supplement to underline the product's quintessence and brand perception. This priority helps costly features to strengthen social effects exploitation.***

**Proposition 6a: Limited-Edition as a base for costly features**

***Offering costly features as part of a Limited-Edition product depends on the presence of snob effects: feature's magnitude and value are subject to strength of snob effects. Magnitude and value increase with the strength of snob effects. Quantity limit of a Limited-Edition is assumed to be a declining function of number and level of features added.***

**Proposition 6b: Costly features as a function of snob effects**

## II.-4.2 Pricing of Limited-Editions

With strong social effects, both conformism and snobbism present, snob demand increases with price. Although revenues from snobs increase, profits usually decline. The reason is the decline in follower demand, who usually produces a downward facing demand curve and represent the larger population in a market (Amaldoss & Jain, 2005a, pp. 1457). Albeit Becker's (1991, pp. 1112) model for at an least partly upward sloping demand curve, originally explaining popularity of restaurants and social events, it makes a remarkable point mentioning the inflexible capacity of the popular restaurant in the short-term: the result is excess demand with relatively high prices.

Price level in this case is 'high', but well below market clearing price. The same price level is mentioned in the model of Stock and Balachander (2005, pp. 1190) explaining introductory scarcity as an instrument for quality differentiation. In their empirical investigation on new entries in the US-car market, this price level gets specified mentioning an introductory price for scarce cars strictly above the price level of their non-scarce contemporaries (Balachander, Liu & Stock, 2009, pp. 1625). DeGraba (1995, pp. 337) specifies the price level during introductory period as the market average of willingness to pay. In an evenly split market between informed and uninformed buyers this would equal a price level half way between both buyer types' valuations. An exception to this rule of thumb to cap Limited-Edition price levels strictly below market clearing prices is introduced by Amaldoss and Jain (2008, pp. 938-939).

In this model Limited-Editions are added to the setting mentioned at the beginning of this chapter. It departs from the aforementioned models as first period price, targeted at leaders is lowered in order to seed followers. The introduction of a Limited-Edition causes a buying frenzy among followers, who are assumed to buy in the second period. Second period price increases and could theoretically equal (or even outstrip) market clearing price as a reaction to a demand externality caused by scarcity. In laboratory tests by Amaldoss and Jain (2010, pp. 628) quantity predictions were met but not price predictions. Thus, it seems straightforward to conclude that . . .

***Limited-Editions have an upper bound price level strict below market clearing price of high valuation consumers. The stronger the social effects, the more this price level approaches market clearing price at the valuation of high value customers. The stronger social effects are the later peak price level will appear in process.***

**Conclusion 1: Upper Bound price level**

Becker (1991, pp. 1114) does not allow for price variations, which may be attributed to a single period perspective. DeGraba (1995, pp. 336-338) expects skimming in the second period absent scarcity, yet with scarcity the buying frenzy arranges a sell-off in the first period. Even though applying his model as specified rationing could be repeated at a lower price in the second period, once again above the willingness to pay (WTP) of lower valuation customers. A comparable outcome is proposed by Balachander, Liu and Stock (2009, pp. 1634): the higher product preference triggered by introductory scarcity persists in later periods. Combined with skimming pricing, usually applied for technology products, this means that scarcity may not be capable of negating a price to skim. Yet, it may result in a higher price path for at least the introduction and adjacent periods. However, Amaldoss and Jain's (2008, pp. 940) model even predicts penetration in presence of strong social effects, it seems straightforward to conclude that . . .

***Limited-Editions may mitigate skimming effects, even if a scarcity signal is limited to introductory period. Allowing for variable pricing seems beneficial to Limited-Editions.***

**Conclusion 2: Allowance for variable pricing**

Limited-Editions are able to generate price premiums above non-scarce competitors as shown in the research of Balachander, Liu and Stock (2009, pp. 1625). Although the price premium declines in later stages of product life cycle, offering a Limited-Edition under competition has several advantages: it helps to underline existing quality differences between sellers and results in price premiums for both the regular and the Limited-Edition product in comparison to their counterparts from the lower quality supplier (Balachander & Stock, 2009, pp. 343). If the competition is rather about taste, than about product quality Limited-Editions of both suppliers will gain a price premium above the respective regular products with sufficiently low costs for Limited-Edition introduction. With rising costs, the first mover will be the sole producer of a Limited-Edition, again with a price premium above its non-scarce sibling (ibid, pp. 347-348). DeGraba (1995, pp. 337) specifies these price premiums insofar as he mentions them above reservation price of low valuation customers. It is also defined to be below that of the high valuation customers. Thus, it can be concluded that . . .

***Limited-Editions sell at price premiums above regular non-scarce products. Their lower bound price is assumed to be strictly above the product valuation of low value customers.***

**Conclusion 3: Lower bound price level**

If Limited-Editions sell at price premiums above their non-restricted siblings and every price premium has to be balanced with value increases for the customer according to Porter (1985, pp. 131), these higher valuations imply Limited-Editions may have a price tag on their own. Hence, Limited-Editions could be sold with a price information given. On the other hand, there is a wealth of research giving exactly the oppositional advice. Lynn (1989, pp. 263/269) for example observed a higher desirability for a scarce good in the absence of price information. For the vast majority of consumers this is backed by Szybillo (1973, pp. 73), who found no general tendency among consumers to increase willingness to pay in simultaneous appearance of scarcity message and price. Verhallen (1982, pp. 321) sharpens this requirement by mentioning, that the potential of a scarcity message may only be exploited to its fullest in the absence of any other information about the product. Then again, the same researchers found that desirability of scarce goods is mediated by consumers' expectations on their expensiveness (Lynn, 1989, pp. 263/269) and positive interactions of price and scarcity at least for leaders or snobs (Szybillo, 1973, pp. 73). This is further backed by more recent results which either indicate higher prices for scarce goods (Balachander, Liu & Stock, 2009, pp. 1634; Amaldoss & Jain, 2010, pp. 632-633) or result in higher product valuations especially for LQS messages (Jang, Ko, Morris & Chang, 2015, pp. 994). Hence, Porter's (1985, pp. 131)

requirement to hold both customer value and customers' sacrifice balanced, can be satisfied especially by Limited-Edition scarcity messages.

In general, customers' valuations are largely based on product aspects, regardless if they support usage value or signalling value, and consumers' price expectations arise from these value judgements (Zeithaml, 1988, pp.13). This relationship between valuation and price may be one reason behind Swiss horologist Bucherer's (2018) decision not only to place conspicuous and expensive Limited-Edition wrist watches next to their non-limited counterparts, but also to add price information in both cases and name the Limited-Edition as the most important differentiating feature among all other features. Another reason to model supply restrictions as a value increasing feature may be the chosen distribution channel: the online store. Today's online product presentation standards originate in E-commerce's history as a trade platform for pure commodity-like, hence usage value-oriented products according to Overby and Lee (2006, pp. 1164). Price information was thus the primary concern of online stores. However, the more complex and differentiated products became, the more product features and at least optical impressions were provided by online sellers (Bakos, 1997, pp. 1690). Meanwhile, online stores have increasingly proven their suitability for more complex and less usage value-oriented products, such as more signalling value-oriented conspicuous products as in the case of Bucherer mentioned in the beginning. At the same time, online store presentations increasingly diffused to offline shops. The bricks-and-clicks model of fully integrated offline-online retailers providing buyers with a consistent shopping experience across channels (Kacen, Hess & Chiang, 2013, pp. 12) are only one example for assimilation between online and offline product presentation standards. Even offline-only retailers adapt to online product presentation standards naming all value driving features in ascending order to justify price tag displayed below. Research by Kardes, Cronley, Kellaris and Posavac (2004, pp. 373) further documents, that with an increasing information load on product features, price increasingly becomes a proxy for a product's quality. On the one hand that argues for a limitation of information to the necessary, but makes the mentioning of price tags a mandatory information on the other. In sum, with price information being mandatory and particularly Limited-Editions having proven their potential to increase consumers' value inferences of products and consumers increasingly demanding justification for price premiums subject to changed standards of product information, it is straight forward to propose:

*Proposition 7 see next page*

**Scarcity information in general and Limited-Edition specifications in particular are value driving features. As such they have to prove their feasibility for price premiums, hence, Limited-Edition specifications have a distinct willingness to pay.**

**Proposition 7: Limited-Edition and price information**

| Paper | Price premium | Price level | Variability of price | | Scarcity time restriction | Type of research |
|---|---|---|---|---|---|---|
| | | | Before LE | After LE | | |
| Becker, 1991 | $p_{dem>supp} > p_{dem<supp}$ | $p_{dem>sup} < p^*$ | None | None | None | Theoretic model |
| deGraba, 1995 | $v^L < p_{dem>supp} < v^H$ | $p_{dem>sup} = \frac{\sum_{i=1}^{n} p_i}{n}$ | $p_{dem>sup\|tm} > p_{dem>sup\|tm+1}$ | None | Introductory | Theoretic Model |
| Stock & Balachander, 2005 | None | $p_{dem>sup} < p^*$ | None | None | Introductory | Theoretic model |
| Amaldoss & Jain, 2008/2010 | $p_{dem>sup\|tm+1} > p_{dem>sup\|tm}$ | $p_{dem>sup} \geq p^*$[11] | None | $p_{dem>sup\|tm} < p_{dem>sup\|tm+1}$ | $dem_{tm+1} > sup_{tm+1}$ | Theoretic model (2008), partly experimental proven (2010) |
| Balachander & Stock, 2009 | $p_{dem>sup} > p_{dem=sup}$[12] | Not mentioned | Not mentioned | Vertical case: Price competition for regular product | None | Theoretic model |
| Balachander, Liu & Stock, 2009 | $p_{dem>sup\|tm} \geq p_{dem>sup\|tm+1}$ $p_{dem>sup} \geq p_{dem=sup}$[13] | $p_{dem>sup} \geq p_{dem=sup}$ | $p_{dem=sup\|tm} < p_{dem=sup\|tm+1}$ | $p_{dem>sup\|tm} < p_{dem>sup\|tm+1}$, s.t. $p_{dem<sup} > p_{dem=sup}$ for all *tm* | Introductory | Empirical study of market data |

**Table II-3: Price effects for scarce goods (dem>sup) compared to regular goods (dem=sup; dem<sup) and over time (tm).**

[11] Prices above market clearing price are an assumption stemming from buying frenzy and the fact that Amaldoss and Jain (2008) did not explicitly cap second period price level.

[12] This is true for both quality (vertical) and taste (horizontal) competition in duopoly markets. For sufficiently low cost both suppliers will offer Limited-Editions in both cases. For intermediate cost, only high quality supplier under vertical competition and only first mover under taste competition offers a Limited-Edition. Under vertical competition high quality supplier enjoys the advantage of price premiums for both regular and Limited-Edition product compared to the respective products of the lower quality supplier (Balachander & Stock, 2009).

[13] Not clearly attributable to either lower (price premium) or upper (price level) bound, subject to market analysis as Balachander, Liu & Stock (2009) is an analysis of scarcity effects in the US-car market and nor a theoretic model.

## II.-4.3 Quantity settings of Limited-Editions and duration decisions

Quantity determinations of Limited-Editions largely depend on levels of excess demand. There are two parameters measuring excess demand, namely the true level of excess demand and the planned level of excess demand. The *true level of excess demand* is the outcome of any Limited-Edition decision. It is defined as the number of interested customers that have not been served by a Limited-Edition offer and thus functions as a performance measure. This measure is possibly useful for future Limited-Edition planning. In Becker's (1991, pp. 1115) comparison one restaurant ended up enjoying excess demand while the other suffered excess supply. Given the competitive setting of both virtually offering the same product shows how much the true level of excess demand is subject to uncertainty.

$$\Delta\widehat{dem} = \frac{\widehat{dem}_{dem=sup} - sup_{dem>sup}}{\widehat{dem}_{dem=sup}}$$

**Equation II-2: Planned level of excess demand**

The *planned level of excess demand* ($\Delta\widehat{dem}$ *in equation II-2)* represents the relative margin between natural estimated demand ($\widehat{dem}_{dem=sup}$) for a regular product absent scarcity message and the quantity limit set for a Limited-Edition ($sup_{dem>sup}$). Replicating the idea of Becker (1991) with strong social effects in an experimental Limited-Edition setting, Amaldoss and Jain (2010, pp. 632) showed that planned levels of excess demand may also be negative. They argue that especially in presence of strong assimilation effects buying frenzies may occur. As explained in the previous chapter, snobs prefer the Limited-Edition because of their higher exclusivity and get additionally incentivised by lower prices. Although followers demand declines as a reaction to penetration pricing, the revenue generated by their sales is higher than in the absence of a Limited-Edition. As a result, the supplier sells more of the Limited-Edition than of the regular product offered before. Although these results show, that a supplier could possibly increase his sales with a Limited-Edition offer, it seems reasonable to set the minimum level of planned excess demand equal to zero. This is synonymous to an upper bound for quantity limit equalling natural demand for the regular product. Frist of all: a Limited-Edition needs to be credible and there is no greater harm to future Limited-Edition offers than having to admit a non-sell-off. Another reason is the strong presence of both differentiation and assimilation effects. Differentiation effects are a necessary condition for upward slopes in the demand curve (Amaldoss & Jain, 2005b, pp. 35). Assimilation effects as the necessary condition to allow for penetration pricing in phase 2 (Amaldoss & Jain, 2008, pp. 939) seem as much exposed to uncertainty as the true level of excess demand. Till date there

are no product or brand variables known to be deliberately changed by suppliers to assure an increase in assimilation effects. Hence, the supplier has to completely rely on volatile exogenous status games in the society which have themselves not been fully uncovered as shown in chapter II.-3.1. And last of all: the results of Amaldoss and Jain (2010, pp. 626) perfectly describe a setting where a Limited-Edition fully replaces a regular non-limited product. The reality may be closer to the results of Balachander and Stock (2009, pp. 338), who propose a mixed setting of a Limited-Edition and a regular product under two competitive subsets. Both subsets rely on differentiation and assimilation effects and the planned level of excess demand is strictly positive. For quality competition the high-quality supplier has a slightly lower level of planned excess demand, than its lower quality counterpart. Yet, to avoid the regular product becoming too attractive to snobs the quantity limit for the Limited-Edition should not increase too much (ibid, pp. 345). Under taste competition with no quality differences between suppliers, the planned level of excess demand should be larger compared to quality competition (ibid, pp. 348). These results are backed by reality insofar that Limited-Edition models of luxury car makers stay significantly below the sales of their regular siblings. For example, Ferrari sold 2.638 units of their regular F12 Berlinetta in 2015 (Ferrari, 2016, pp. 36). The Tour de France Limited-Edition stops at a predetermined 799 units (ibid, pp. 4.). At the same time Porsche's 911 GT3 RS was limited to only 600 units (Barnett, 2018), while the regular GT3 is estimated with 3.500 annual sales[14] (Porsche, 2016, pp. 138). This relation also shows that higher regular sales go in line with higher levels of planned excess demand (Porsche = 82,86% vs. Ferrari = 69,67%) for Limited-Edition variants in order so send credible signals to potential customers. It can thus be proposed that . . .

***Limited-Edition offers of luxury and upper premium goods should be costly featured variants of regular products. Their level of planned excess demand is an increasing function of the natural demand of the regular product. Level of planned excess demand is also assumed to be a declining function of the magnitude of reference group effects.***

**Proposition 8a: Quantity level for luxury products**

This phenomenon gets clearer when demand curves are clearly downward sloping due to little or inexistent social effects. One empirical example is shown in the US-car market study by Balachander, Liu and Stock (2009) which was already brought up the previous chapter. Supported levels of planned excess demand are rather low yet spawn a quality signal supporting higher and longer enduring product preference (ibid, pp 1635). DeGraba (1995, pp.

[14] This is an estimate based on the assumption that Porsche sold a total of 31.350 units of its 911 model (see source given). From earlier research a percentage of approximately 11% is ordered as 911 GT3.

336) specifies the level of planned excess demand in that he mentions the n-1th customer to be the last one soluted. Combined with the assumption that levels of planned excess demand should increase with sales of the regular product, this makes mass and premium producers who are usually less attractive to leaders due to high sales volumes stuck between rock and a hard place: for economic reasons it seems rational for them to stay close to natural demand. Otherwise opportunity costs as already discussed in chapter II.-4.1 are hardly manageable. For the sake of sending credible signals to the market they seem obliged to commit to lower unit counts (higher levels of planned excess demand). Limited-Edition mavericks are thus economically unfeasible. This may explain why MINI, a brand which inclined to commit to Limited-Editions in its history quite frequently (Austin Mini Websearch, n.d.) recently changed its strategy. The sales of the Austin MINI have been surpassed by those of the BMW model in a very short time period. Although BMW managed to create one the most conspicuous subcompacts in the market, BMW justifies its conspicuousness-based price premiums above base model using costly featured special editions without scarcity message. The '7-model' for example resembles the appearance of the first Austin model using exclusive alloy rims, colour combinations and seat covers but omits a scarcity messages (BMW Group, 2016). In line with proposition 1 models and study results by Balachander, Liu and Stock (2009, pp. 1635) and DeGraba (1995, 336) suggest to restrict scarcity messages to earlier phases of product life cycle. While introductory scarcity is helpful especially for technology products to secure long term product preference (Balachander, Liu & Stock, 2009, pp. 1635): this is obviously less important for example for inexpensive fashion goods. Fashion goods in contrast have very short life cycles and shopping decisions are made more impulsive (Denning, 2015). Thus, the time factor plays an important, yet different role. It can thus be proposed that. . .

***Limited-Edition offers of mass market and premium goods should be reserved to introductory period. The longer the product's life cycle the more the supplier should focus on quality signalling. Short product life cycles are better off capitalising on the buying frenzies.***

**Proposition 8b: Scarcity strategy for mass and premium products**

# II.-5 Results and implications

## II.-5.1 Managerial implications

### *II.-5.1.1 People*

Scarcity messages heavily depend on social interactions. While in the LTS-case basically limited to scepticism about product usage value of a fraction of customers, LQS messages fully depend on the interplay of snobbism and conformism. Chapter II.-3.1 has shown, that these interactions are mostly peer group interactions and thus rely on deeper social interaction as opposed to brief one-time encounters of hardly related individuals. This setting requires a different, conformity-based status definition closer to sociometric status than socioeconomic status. Sociometric status definition is not only capable to capture peer group interaction. It does also capture the status structure within a peer group.

Peer group conduct is especially important as the conventional class structure of society increasingly fragments into subcultures and lifestyles having not only their own group conduct, but also an individual status structure. Group conduct is important to market researchers as it defines fashion trends for example. Knowing the status structure means to identify influential individuals within each group or subculture.

Digging deeper into conventional variables of segmentation, chapter II.-3.2 has also shown that age alone may predict only a fraction of a person's state in the status hierarchy. This has two major reasons: the social ladder effect and autonomy. Individuals climbing the social ladder engage in the steady interplay of conformism and snobbism. They conform to the rules of their current member group in search of acceptance. Snobbism is basically a judgement of the members of this group, once the individual conforms to another. This process will reiterate many times in life. One example why this effect will gain in pace in the future is the assumption that people will most likely not do the same job at the same employer for their entire life (Marsen & Gorman, 2001, pp. 495). Hence, people are obliged to change member groups more often. Autonomy shows overlap with a person's age as life experience and social integration approach climax. This is true for many Western cultures. In new markets such as Asia, Latin America, Eastern Europe and Africa the number of younger citizens with high levels of autonomy is considerably higher. Grown-up in an age of meritocracy they acquired higher levels of education and a higher number of life goals in earlier ages. Getting to know them in the sense of market research means to know their stage of autonomy rather than their age.

Social networks already show linkages between individuals. Seeing a social network through the eyes of network theory, individuals represent nodes, while linkages between them represent the network's edges. The most promising among these edges are those with high traffic. High traffic can be defined in the sense of frequency and amount of data being shared between two or more individuals. The higher the traffic, the more worthwhile it seems to analyse the content of traffic (Girvan & Newman, 2002, pp. 7812; Newman & Girvan, 2003, pp. 1). Additionally, micro blogging services provide directed edges in the sense of leaders and followers (Jabeur, Tamine & Boughanem, 2012, pp. 113). Combining the ideas of network theory with social networks and new data analysis tools tailored to handling large sample sizes (e.g. big data handling) seems much more promising in the context of market research and segmenting than traditional tools.

### *II.-5.1.2 Product*

Scarcity messages can increase the attractiveness and desirability of products. This is especially true for LQS messages, such as Limited-Editions. As only LQS messages require changes in the physical product, implications for LTS messages are to be discussed in the promotion subchapter. Especially expensive and conspicuous products often capitalise on reference group effects. To fully exploit snobbism and conformism a true Limited-Edition seems mandatory: finite unit counts signal the commitment to scarcity. This is important for snobs to know not everyone can own the same product. Conformists are supposed to value this particular signal as sign of 'I am a part of it'. Individual serial numbers signal the uniqueness of every single unit especially to snobs. Developing a clean sheet product as a Limited-Edition is especially difficult in the absence of demand figures gained by selling predecessors due to opportunity cost problem. However, Bugatti's Veyron which was sold in sequential tranches of several Limited-Editions (Bugatti, 2018) lends at least anecdotal support for the feasibility of Limited-Editions in the absence of regular products. These Limited-Edition mavericks were often proposed in economic models in research. Research results also imply small levels of planned excess demand for these products. There are two major reasons to explain this: first, strong reference group effects especially for conspicuous luxury products imply sales close to natural demand. Second, luxury products should be scarce per se, so sending credible signals of commitment require less surrender of sales. Both arguments highlight the importance of valid demand forecasts in the context of Limited-Editions. A best practice seems to be a Limited-Edition version of a regular product. The regular product provides the generic product and costly features differentiate and enhance the Limited-Edition's unique value proposition. Costly features are supposed to be tailored to the product and catering to the needs of snobs

in this particular product category. With lifestyles and subcultures fragmenting (see II.-5.1.1) demand for well differentiated goods is expected to increase. Costly features provide a more cost-efficient alternative compared to multiple product lines (Amaldoss & Jain, 2010, pp. 621). Even though this requires additional market research and segmentation, snobs' higher willingness to pay for additional signalling value is supposed to compensate for additional costs. The increasing tendency of both, men and women, of leaning towards leadership and independence will likely play in favour of the snobs-to-conformists-ratio. Face validity from practice shows that horologists opt for fewer regular products while simultaneously accompanied by more Limited-Edition versions. Car markers opt instead for one Limited-Edition at a time per regular product.

Opportunity cost problem and the requirement of larger regular sales requiring larger levels of planned excess demand make Limited-Edition mavericks hardly feasible even for conspicuous mass and premium products. Research results advice to limit scarcity signals to introductory period involving the positive ancillary effect of increased product preference for adjacent non-scarce periods of product life cycle. Unlimited special editions justifying uniqueness by visible and exclusive features are an opportunity when focussing on additional revenues. Very low volume Limited-Editions of an existing regular draught horse product in cooperation with charity organisations and/or celebrities are another opportunity, if the focus is on publicity and brand image maintenance. One example is Opel's Brian Adams version of only seven subcompact Adam models auctioned off for a children charity organisation (Opel, 2014). Both cases however show, that differentiation by additional features is mandatory. Inexpensive fashion goods can also capitalise on introductory scarcity, but for different reasons: consumers' uncertainty about product quality may also imply uncertainty about stability of fashion trends. Consumers' reluctance is one possible outcome. Introductory scarcity may thus enhance the rapidity of purchase decisions.

### *II.-5.1.3 Price*

Assuming there are at least two different levels of customer reservation prices for LQS goods seems straightforward and is backed by theoretical research. Differences in reservation price levels stem from either informational disparities between consumers or reference group effects as discussed in chapters II.-3 and II.-5.1.1. In the latter case snobs are inclined to have a demand which increases with price. Conformists' demand follows the traditional slope of the demand curve. These two price levels have proven meaningful for the approximation of upper and lower price bounds respectively. In sum the pricing window for LQS

goods is assumed to be somewhat narrower than the margin between reservation price levels. This is especially true for Limited-Editions.

The upper bound price level is assumed to be somewhat below WTP of high valuation customers. Lower bound price level is strictly above willingness to pay of low valuation customers. This implies there might be a price premium for scarcity (see chapter II.-4.2). Within the pricing window for scarcity ranging from fairly above lower valuation customers' WTP to close to high valuation customers' reservation prices should be allowed to vary. This seems reasonable because of reference group effects for conspicuous luxury products or value effects for inexpensive scarce goods. In the former case Limited-Editions mavericks can capitalise on the interplay of snobs and conformists by lower price levels in earlier sales periods to gain critical sales mass of snobs. Once this threshold is passed, conformists start mimicking snobs' behaviour and the resulting buying frenzy allows prices to increase. In sum, the price may increase closer to high valuation customers' WTP with strength of reference group effects, especially those of conformists. In the latter case prices should be allowed to vary, because especially an introductory scarcity allows for price premiums.

### *II.-5.1.4 Promotion*

Scarcity messages provide a promising alternative to conventional incentives such as price promotions and couponing. While LQS messages attract customers leaning towards couponing. LTS messages show comparable results for those inclined to price promotions (Jang, Ko, Morris & Chang, 2015, pp. 991). In general scarcity messages seem to have a more or less salient time component. Expensiveness of goods can be assumed to decline with increasing prominence of time. Performance of LTS and demand side scarcity messages in combination with inexpensive and/or non-conspicuous goods lend support to this assumption. In sum, LTS or demand side scarcity signals such as quantity countdowns in TV- and online shopping seem to be the strategy of choice for singular projects. Among these are collaborations of suppliers from different segments, like grocery chain Aldi Süd with fashion designer Jette Joop (Aldi, 2016) or mass fashion retailer H&M's collaborations with fashion designers like Karl Lagerfeld and Balmain. They also provide an opportunity for experimental collaborations where even suppliers are uncertain about the quality of the goods offered if suitability to customers' tastes is defined to be one aspect of quality. H&M's collaboration with German musician Cro (Fischer, 2013) is only one example, in which H&M tested design patterns originating in smaller subcultures, which deviated from their traditional line.

With well-being being related to status striving, the promotional focus for especially LQS-based advertising of scarcity may shift away from product-centred ostensible 'bling bling'-signalling. Taking reference group effects into account for promotions, goal achievement and self-gifting seem more promising (see chapters II.-3 and II.-5.1.1). As promotion for premium and luxury goods usually highlights ideals rather than realities, role models like the 'man of action hero' and independent women provide interesting opportunities. As these stereotypes represent role models, living up to these ideals seems of much higher importance than truly fulfilling them. Consequently, these images suit both self-gifting motives and shopping as a compensation. The former type purchases because they may have reached an important intermediate life goal. The latter may buy to at least keep up the appearance of being successful.

The fragmentation of lifestyles and subcultures (see chapters II.-3.2.3 and II.-5.1.1) makes it difficult to position a firm's image tailored to a large variety of lifestyles and being perceived as credible by all consumers. This is problematic for mass suppliers but may be less of a problem to premium and especially luxury companies. Often these companies have a rich history and have always been cherishing their heritage and values. Customers increasingly value authenticity and reliability more than company values tailored around their lifestyles (Loveland, Smeesters & Mandel, 2010, pp. 405; Alexander, 2009, pp. 556). However, if lifestyles are particularly worth targeting, this is true for lifestyles sharing many traits with Bricoleur and Indie styles. In these segments, high valuation for uniqueness, autonomy and individuality are especially promising with regard to snobs and thus Limited-Edition promotions. However, there are some combinations of new markets and lifestyles that are problematic in terms of Limited-Editions: markets where consumers grew up with insufficient natural supply and consumers following derivatives of the i-Average lifestyle. Limiting supply in both time and quantity may make them feel traced by "[…] the ghosts of the past […]" (Kravets & Sandikci, 2014, pp. 136).

## II.-5.2 Future Research

There is a wealth of research with a focus on reference group effects. Especially interactions between reference group effects, suitable product types and types of scarcity messages have been well defined. Economic modelling has concentrated on demand patterns of snobs and conformists in various settings. Demand patterns, especially with a focus on quantity have at least partly been documented in experimental settings. Older studies focussed more on variables like desirability, product valuation and attractiveness as a function of scarcity signals. Though scarcity has been well documented by these publications on a high level, the

research till date seems a bit like starting to build a house from the roof. The briefness of the pricing section in this chapter (II.-5.1.3) is an indicator that some basics lack deeper insights.

Proposition 1 for example gives an idea that some signals of quantity scarcity may in fact be perceived as a matter of time running out. On the other hand, if scarcity is clearly perceived as a matter of quantity, the precise level of quantity remains vague. For suppliers it may be interesting to know in which situations or for which products they can rely on scarcity relative to natural demand, such as bringing 90% of natural demand to a round number and publish this as a scarcity message. This also raises the question to what extent consumers are informed about natural demand levels in different product categories. Correspondingly in which situations and for which products absolute scarcity settings are a necessity. In case of absolute scarcity settings consumers' perception of threshold values like 1.000 or 10.000 units may be interesting. In terms of pricing, the question of a reservation price for scarcity surfaces again in the context of product presentations in online shopping contexts.

In practice Limited-Editions are often the companion of a regular product. Despite this relevance only Balachander and Stock (2009) researched that case. The companionship of Limited-Edition and regular product raises the question for further differentiation in addition to scarcity messages. A combination of Limited-Edition and costly features seems a promising and cost-efficient way to tackle the problem. Questions coming up include the validity of the assumed restriction to expensive and conspicuous products and the willingness to pay in non-luxury markets. Within luxury markets product categories could be identified that support either more conspicuous or more usage value-oriented features. In combination with reference group effects, the relationship between strength of snob effects and the magnitude and value of the features as well as the relationship between effect strength and quantity setting of the Limited-Edition are of interest. In desk research it was also found that that assumed costliness and uniqueness of features seem to be negatively related to the quantity of the Limited-Edition.

In terms of social effects, it is interesting to note that the definition of status seems to be stuck in the age of Veblen. This implies for example that some random guy at the other end of town, briefly met at the supermarket driving a Mercedes-Benz and wearing a Hugo Boss suit and an Hublot wrist watch would make me concern more about my own status, than a colleague or close friend upgrading his lifestyle compared to mine. It seems thus consequent to concentrate status research on smaller sub-branches of society. A proposal for a more peer group-based definition of status with SWB and belongingness as dependent variables and moderators like autonomy may yield more precise results. A meaningful and compact

construct to retrieve autonomy measures in shopping contexts may additionally enrich toolboxes of both market researchers and scientists. Another assumption to empirically furnish evidence is status as a function of conformity.

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# Appendix II

## Appendix II-1:

### Status Relations by Gender in Belk 1978

| Reporting gender | Men | Men | Women | Women | Both | Both |
|---|---|---|---|---|---|---|
| Reporting about Consumption of | Men | Women | Men | Women | Men | Women |
| Success | | | | | | |
| Less successful | | 2 | | 2 | | |
| More successful | 1 | | | | 2 | |
| Money | | | | | | |
| Missing less money | 1 | 3 | 1 | | | |
| Missing more money | | | 1 | | | |
| Education | | | | | | |
| Less educated/education | | 2 | | 1 | | |
| Less highly educated | 1 | | | | | |
| More highly educated | | | | | 2 | |
| Occupation | | | | | | |
| Lower occupation | 1 | | | 1 | | |
| Medium occupation | | 1 | | | | |
| Higher occupation | 1 | | | | | |
| Higher occupational class | | | | | 2 | |
| Income | | | | | | |
| Lower income | | | | 1 | | 1 |
| Higher income | | | | | 2 | |
| Total by manipulation | 5 | 8 | 2 | 5 | 8 | 1 |
| **Total by gender** | | **13** | | **7** | | **9** |

## Appendix II-2:

### Martial Consumption Decision Roles by Shopping Phase by Davis & Rigaux, 1974, pp. 56-57

**Changes to original model:**

- Centre of decisions neither husband (>1,75)/wife dominant (<2,25); nor autonomic (>25%)/synchratic (<75%) has been created
- Tendency is shown as virtual extension of given direction

| Phase of Purchase Decision | Problem Recognition | | Internal & External Search | | Final Decision | | W | H | C | A | S |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dimension | Influence | Role Specialisation | Influence | Role Specialisation | Influence | Role Specialisation | | | | | |
| Visible to all | | | | | | | | | | | |
| Child Clothing | W | A | W (C) | A (C) | W (C) | N (C) | 0 | 0 | 4 | 0 | 0 |
| Wife Clothing | W | A | W (+) | A (+) | W (C) | N (C) | 1 | 0 | 2 | 1 | 0 |
| Cosmetics | W | N | W (+) | A (+) | W (C) | N (C) | 1 | 0 | 2 | 1 | 0 |
| Outside Entertainment | B | N | B (C) | N (C) | B (C) | S (+) | 0 | 0 | 3 | 0 | 1 |
| Vacation | B | S | B (W) | N (C) | B (H) | S (+) | 1 | 1 | 1 | 0 | 1 |
| Housing | B | S | B (C) | N (C) | B (H) | S (+) | 0 | 1 | 2 | 0 | 1 |
| Husband Clothing | B | N | B (C) | N (C) | B (H) | N (C) | 0 | 1 | 3 | 0 | 0 |
| Car | H | N | H (+) | N (A) | B (C) | N (S) | 0 | 1 | 1 | 1 | 1 |
| Visible to peers | | | | | | | | | | | |
| Other Furnishings | W | A | W (H) | A (+) | W (C) | N (C) | 0 | 1 | 2 | 1 | 0 |
| Living Room Furniture | W | N | W (+) | N (C) | B (H) | S (+) | 1 | 1 | 1 | 0 | 1 |
| Alcoholic Beverages | B | N | B (H) | A (+) | B (C) | N (C) | 0 | 1 | 2 | 1 | 0 |
| TV & Stereo | B | N | H (+) | N (A) | H (C) | N (S) | 0 | 1 | 1 | 1 | 1 |
| Wife (=W) / Autonomic (=A) ∑ | 5 | 3 | 5 | 5 | 4 | 0 | | | | | |
| Both (=B) / None (=N) ∑ | 6 | 7 | 5 | 7 | 7 | 8 | | | | | |
| Husband (=H) / Synchratic (=S) ∑ | 1 | 2 | 2 | 0 | 1 | 4 | | | | | |
| Tendency In direction given (+) | Centre (C) | | Wife (W) / Husband (H) | | Autonomic (A) / Synchratic (S) | | 4 | 8 | 24 | 6 | 6 |

## Appendix II-3:

### Bem Sex Role Inventory changes by Carver et al. (2013)

Research from Carver, Vafaei, Guerra, Freire & Phillips (2013, pp. 2) based on Bem Sex Role Inventory (BSRI-12; Bem, 1974, pp. 156)

| **Femine** | **Factor Loading** | | **Masculine** |
|---|---|---|---|
| Warm | 0.62 | 0.50 | Has leadership abilities |
| Gentle | 0.48 | 0.49 | Strong personality |
| Affectionate | 0.77 | 0.40 | Acts as leader |
| Sympathetic | *0.39* | *0.28* | Dominant |
| Sensitive to other's needs | *0.36* | *0.28* | Defends own beliefs |
| Tender | -0.06* | *0.28* | Makes decisions easily |

| | |
|---|---|
| * | Factors excluded by Carver et al. (ibid, pp. 5) |
| *0.00*italic figures | Factors with questionable loadings below .40, but included by Carver et al. (ibid) |

## Appendix II-4:

### Bem Sex Role Inventory overtime changes in desirability for females from Auster & Ohm (2000)

| Females for females 1972 (ibid, pp. 519) | | | Females for females 1999 (ibid, pp. 519) | | | | Females for oenselves 1972 (ibid, pp. 521) | | |
|---|---|---|---|---|---|---|---|---|---|
| Rank | BSRI-Trait | MEAN | Rank | BSRI-Trait | MEAN | C 1972 | Rank | BSRI-Trait | MEAN | C 1999 |
| 1 | Feminine | 6,56 | 1 | Feminine | 6,48 | 0 | 1 | Loyal | 6,54 | 1 |
| 2 | Loyal | 6,52 | 2 | Loyal | 6,40 | 0 | 2 | Independent | 6,33 | 16 |
| 3 | Affectionate | 6,32 | 3 | Understanding | 6,26 | +5 | 3 | Defends own beliefs | 6,20 | NE |
| 4 | Compassionate | 6,32 | 4 | Sensitive to others' needs | 6,26 | +7 | 4 | Individualistic | 6,20 | 16 |
| 5 | Gentle | 6,28 | 5 | Warm | 6,24 | +2 | 5 | Self-sufficient | 6,19 | 14 |
| 6 | Tender | 6,28 | 6 | Loves children | 6,21 | +3 | 6 | Understanding | 6,14 | -3 |
| 7 | Warm | 6,28 | 7 | Eager to soothe hurt feelings | 6,21 | +5 | 7 | Ambitious | 6,10 | NE |
| 8 | Understanding | 6,28 | 8 | Sympathetic | 6,14 | +5 | 8 | Self-reliant | 6,06 | NE |
| 9 | Loves children | 6,24 | 9 | Compassionate | 6,10 | -5 | 9 | Compassionate | 6,02 | 0 |
| 10 | Cheerful | 6,20 | 10 | Tender | 6,10 | -4 | 10 | Sensitive to others' needs | 6,02 | -6 |
| 11 | Sensitive to others' needs | 6,08 | 11 | Cheerful | 6,07 | -1 | 11 | Willing to take a stand | 5,95 | NE |
| 12 | Eager to soothe hurt feelings | 5,84 | 12 | Gentle | 6,00 | -7 | 12 | Affectionate | 5,81 | 1 |
| 13 | Sympathetic | 5,76 | 13 | Affectionate | 5,95 | -10 | 13 | Cheerful | 5,80 | -2 |
| 14 | Does not use harsh language | 5,64 | 14 | Flatterable | 5,61 | 1 | 14 | Sympathetic | 5,76 | -6 |
| 15 | Flatterable | 5,12 | 15 | Does not use harsh language | 5,27 | -1 | 15 | Has leadership abilities | 5,72 | NE |
| 16 | Soft-spoken | 4,80 | 16 | Makes decisions easily | 5,12 | +3 | 16 | Assertive | 5,65 | NE |
| 17 | Defends own beliefs | 4,68 | 17 | Yielding | 4,98 | +1 | 17 | Warm | 5,60 | -12 |
| 18 | Yielding | 4,52 | 18 | Independent | 4,95 | NE | 18 | Willing to take risks | 5,58 | NE |
| 19 | Makes decisions easily | 4,48 | 19 | Self-sufficient | 4,90 | NE | 19 | Strong personality | 5,41 | NE |
| 20 | Willing to take a stand | 4,16 | 20 | Individualistic | 4,83 | NE | 20 | Loves children | 5,26 | -14 |

| | 1972 vs 1999 Consexuals ranking drop-outs | Consexuals vs self 1999 ranking drop-outs: |
|---|---|---|
| | Soft-spoken | Gentle<br>Tender<br>Does not use harsh language<br>Flatterable<br>Yielding<br>Female |

### Legend to symbols

| | |
|---|---|
| Trait | Continually desired female trait continual since 1972 |
| Trait | 1999 new entry consexuals AND self-rating female trait |
| Trait | Male trait |
| C 1972 | Rank change 1972 vs 1999 Consexuals |
| C 1999 | Rank change Consexuals vs self 1999 |
| NE | New entry trait (compared to next proximate list to the left) |

## Appendix II-5:

### Bem Sex Role Inventory overtime changes in desirability for males from Auster & Ohm (2000)

| | Females for females 1972 (ibid, pp. 519) | | | Females for females 1999 (ibid, pp. 519) | | | Females for oneselves 1972 (ibid, pp. 521) | | |
|---|---|---|---|---|---|---|---|---|---|
| **Rank** | **BSRI-Trait** | **MEAN** | **Rank** | **BSRI-Trait** | **MEAN** | **C 1972** | **Rank** | **BSRI-Trait** | **MEAN** | **C 1999** |
| **1** | Masculine | 6,40 | **1** | Masculine | 6,48 | 0 | **1** | Loyal | 6,35 | 13 |
| **2** | Ambitious | 6,08 | **2** | Ambitious | 6,40 | 0 | **2** | Defends own beliefs | 6,15 | 5 |
| **3** | Has leadership abilities | 6,00 | **3** | Has leadership abilities | 6,26 | 0 | **3** | Willing to take a stand | 6,02 | 7 |
| **4** | Strong personality | 5,96 | **4** | Acts as a leader | 6,26 | 2 | **4** | Understanding | 6,00 | NE |
| **5** | Self-sufficient | 5,96 | **5** | Independent | 6,24 | 3 | **5** | Independent | 6,00 | 0 |
| **6** | Acts as a leader | 5,92 | **6** | Self-sufficient | 6,21 | -1 | **6** | Ambitious | 5,98 | -4 |
| **7** | Defends own beliefs | 5,88 | **7** | Defends own beliefs | 6,21 | 0 | **7** | Willing to take risks | 5,94 | 6 |
| **8** | Independent | 5,88 | **8** | Athletic | 6,14 | 5 | **8** | Self-reliant | 5,94 | 1 |
| **9** | Self-reliant | 5,84 | **9** | Self-reliant | 6,10 | 0 | **9** | Self-sufficient | 5,90 | -3 |
| **10** | Willing to take a stand | 5,80 | **10** | Willing to take a stand | 6,10 | 0 | **10** | Has leadership abilities | 5,77 | -7 |
| **11** | Competitive | 5,60 | **11** | Strong personality | 6,07 | -7 | **11** | Compassionate | 5,73 | NE |
| **12** | Makes decisons easily | 5,52 | **12** | Competitive | 6,00 | -1 | **12** | Sensitive to others' needs | 5,63 | NE |
| **13** | Athletic | 5,48 | **13** | Willing to take risks | 5,95 | 3 | **13** | Assertive | 5,63 | 2 |
| **14** | Loyal | 5,40 | **14** | Loyal | 5,61 | 0 | **14** | Individualistic | 5,62 | 2 |
| **15** | Individualistic | 5,28 | **15** | Assertive | 5,27 | NE | **15** | Affectionate | 5,56 | NE |
| **16** | Willing to take risks | 5,28 | **16** | Individualistic | 5,12 | -1 | **16** | Strong personality | 5,54 | -5 |
| **17** | Understanding | 5,16 | **17** | Makes decisons easily | 4,98 | -5 | **17** | Acts as a leader | 5,52 | -13 |
| **18** | Forceful | 5,12 | **18** | Aggressive | 4,95 | NE | **18** | Sympathetic | 5,50 | NE |
| **19** | Analytical | 4,92 | **19** | Dominant | 4,90 | 1 | **19** | Warm | 5,42 | NE |
| **20** | Dominant | 4,92 | **20** | Analytical | 4,83 | -1 | **20** | Cheerful | 5,27 | NE |
| | **Male traits . . .** | | | **1972 vs 1999 Consexuals ranking drop-outs** | | | | **Consexuals vs self 1999 ranking drop-outs:** | | |
| | | | | Forceful | | | | Competitive<br>Makes decisons easily<br>Athletic<br>Analytical<br>Dominant<br>Aggressive<br>Masculine | | |

### Legend to symbols

| | |
|---|---|
| Trait | Continually desired male trait continual since 1972 |
| Trait | 1999 vs 1972 new entry consexuals AND self rating male trait |
| Trait | Consexuals vs self rating 1999 new entry male trait |
| Trait | Female trait |
| C 1972 | Rank change 1972 vs 1999 Consexuals |
| C 1999 | Rank change Consexuals vs self 1999 |
| NE | New entry trait (compared to next proximate list to the left) |

## Appendix II-6:

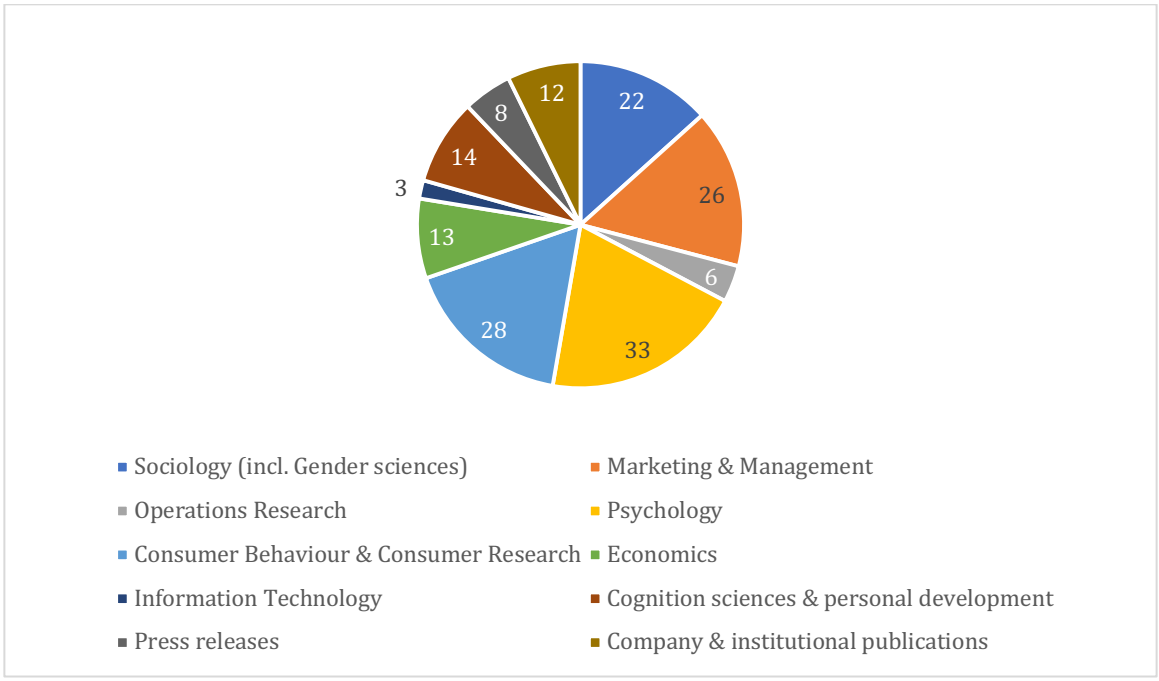
### Classes of American Society by income, income in relation to average income (GDP ppp), disposable income for life standard above class standard in relation to average of class based on Coleman, 1983

| | Yearly Income | Percentage of GDP | Income of over-privileged class members | |
|---|---|---|---|---|
| | | | Absolute | Percentage |
| Upper-Upper | >100.000 | 6,44 | | |
| Lower-Upper | ≤100.000 | 6,44 | 200.000-250.000 =225.000 | 2,25 |
| Upper-Middle | 45.000 | 2,90 | 70.000-80.000 =75.000 | 1,67 |
| Middle Class | 24.000 | 1,55 | 36.000-39.000 =37.500 | 1,563 |
| Working Class | 16.000 | 1,03 | 24.000-26.000 =25.000 | 1,563 |
| American per capita GDP ppp (1983) | 15.531,18 | 1,00 | | |
| Lower Americans | 9.900 | 0,64 | 15.000-16.000 =15.500 | 1,566 |
| Lower-Lower | unknown | unknown | unknown | unknown |

Coleman, 1983, pp. 274; International Monetary Fund, 2017 (https://www.imf.org/external/datamapper/NGDPDPC@WEO/OEMDC/ADVEC/WEOWORLD/USA)

## Appendix II-7:

### Bibliography statistics



Part III

# III. Has ‘Limited-Edition’ got a price tag?

## III. Abstract

According to Lynn (1989, pp. 269), scarcity messages, such as Limited-Editions, should be promoted in the absence of price information, because price information may mitigate scarcity’s effect on consumers’ product valuation. Verhallen (1982, pp. 310) even recommends, to waive all other information. Nevertheless, Limited-Edition scarcity messages are increasingly shown among other product characteristics, often as the major differentiating product trait and thus next to price tag. This standard of product presentation originates in online store settings, but increasingly diffused to offline outlets, even in the absence of integrated multi-channel concepts. If Limited-Edition is an important product characteristic, it will have to prove its value increasing capabilities like all other product characteristics in terms of willingness to pay (WTP). To elicit WTP for Limited-Editions, a stated preference choice experiment was conducted. Participants were able to gradually improve their Limited-Edition choice by individual serial numbers and options for lowering supply. Experiment was stretched over a period of seven weeks to identify capabilities of minimum change product improvements to hedge against price mark-downs. Results show, that especially conspicuous products benefit from Limited-Edition offers and further personalisation, propelled by the need to differentiate. Limited-Edition offers of non-conspicuous and inexpensive products benefit from variety seeking behaviour, but sales improvements were higher with changes in the physical product. Both improvements displayed their capabilities to hedge against price mark-downs.

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# III.-1 Introduction

Swiss horologist and jeweller Carl F. Bucherer posts Limited-Edition wrist watches side by side with non-limited examples. A price information is also given next to each. Only one mouse click away, the suitor also finds a wealth of information on the number of complications, case material, country of origin and the total unit count of the Limited-Edition (Bucherer, 2018). Mercedes-Benz offers limited end of the line 'Final Edition' passenger cars as a configuration option in their online configurator (Toma, 2018). Notwithstanding, that some also opt to omit pricing information as Hermès online reseller Baghunter (2018) does. In all cases, the scarcity message comes at least with additional information on product characteristics.

According to Verhallen (1982, pp. 310), this type of product presentation – and especially price tagging scarcity messages (Lynn, 1989, pp. 269) – may be wrong, if scarcity messages' potential to increase consumers' valuation should be exploited to its fullest. Verhallen's and Lynn's observances are from pre-internet era, and internet has changed many shopping habits. E-commerce started-off a sales platform for pure commodity-like usage value-oriented products (Overby & Lee, 2006, pp. 1164). Price information were, thus, the primary concern of online stores. However, the more complex and differentiated products became, the more product features and at least optical impressions were provided by online sellers (Bakos, 1997, pp. 1690). As online stores increasingly prove their suitability for more complex and less usage value-oriented products, online store presentations increasingly diffuse to offline shops. The bricks-and-clicks model of fully integrated offline-online retailers providing buyers with a consistent shopping experience across channels are only one example for assimilation between online and offline product presentation standards. Customers increasingly switch between channels: offline stores are thus the figurehead of brand prominence to catch consumers' attention. Online stores reduce consumers' search cost by providing the most important product characteristics and off-course price information. Yet, especially for the purchase of food and clothing, consumers still rely on offline stores, which is also reflected by consumers' higher willingness to pay for these categories in offline environments (Kacen, Hess & Chiang, 2013, pp. 19). For this symbiotic relationship to become effective, customers need reliable information to make their purchase decisions. This way online product information standards made their way into offline sales arrangements. If this is true, scarcity messages, such as Limited-Editions, can not only be listed next to other product characteristics. They even become an important characteristic of product themselves. As such, they must prove their capability to increase value, which in turn implies, there is a willingness to pay for scarcity (Porter, 1985, pp. 131).

To elicit consumers' willingness to pay for scarcity, an experiment was conducted composed of a paper pencil derivative of conjoint analysis, in order to underline shopping decisions not to be made online. Participants are making choices on serial number accentuated Limited-Editions, which provide the most effective (Aggrawal, Jun & Huh, 2011, pp. 24; Jang, Ko, Morris & Chang, 2015, pp. 994), yet, most severe supply side commitment to scarcity. The Limited-Edition variations asked, are consequently highlighted as the sole differentiating feature of product choice. Price information is placed immediately adjacent to ensure participants correctly infer the relationship between both. To compare alternating and combination effects features as changes in the physical product provide another choice option. In order to measure price effects of Limited-Edition and feature offers over time, the experiment is stretched over a period of seven weeks, of which the main stated preference choice game is done in last five weeks. Additional incentives for participants ensure an alternative price path to product improvement, which is modelled using a predetermined mark-down path.

The remainder of this work is organised as follows: a brief literature overview on scarcity message research in general and their value effects in particular is given in the proximate part (chapter III.-2). Value effects of scarcity messages provide the base for hypotheses development on willingness to pay for Limited-Editions in the same part. Study design is described in chapter III.-3. Sample properties are introduced forthwith (chapter III.-4). In chapter III.-5, model settings of the main linear regression model will be explained. Results of hypotheses and specific discussions are provided in chapter III.-6, while in the final chapter (III.-7) a general discussion, managerial implications, limitations and opportunities for future research are provided.

# III.-2 Literature overview and hypotheses development

According to commodity theory, a good's value is a decreasing function of its availability (Brock, 1968, pp. 246). One of the early experiments lending proof to the findings of Brock (ibid) was the cookie experiment by Worchel, Lee and Adewole (1975, pp. 909). Cookies were rated more desirable and valuable when they were scarce due to unexpectedly high appetite from former respondent group, than under accidental reasons for scarcity. Sellers try to capitalise on this relationship by underlining scarcity of their products. Examples from practice include messages like *'Only a few units left'* or stock level countdowns as the most common examples of demand side scarcity messages. Under these conditions, a seller signals shortage of stock despite thorough supply planning. Although, common sense may imply, there is no stronger signal than a considerable crowd of consumers making positive feet votes, supply side messages have shown to be more effective (Verhallen, 1982, pp. 47-49; Gierl & Huettl,

2010, pp. 227). In this case, a seller does not even seem to plan supply thoroughly: before sales start, sellers send messages of either restricted sales durations or restricted quantity. One of the most popular combinations of supply side scarcity and quantity scarcity are Limited-Editions. In this case, the seller commits to a finite quantity. Often this signal is accompanied by a certificate or insignia informing the owner not only about the quantity restriction. Personal serial number further underlines the product's uniqueness, which will be the definition of Limited-Edition used throughout this study. Supply side scarcity messages in general have proven their suitability to increase a good's attractiveness, popularity or desirability (Lynn, 1989, pp. 263; Verhallen, 1982, pp. 47). Lately, they were also shown to positively influence consumers' attitudes towards products (Gierl & Huettl, 2010, pp. 229). Limited-Editions have proven their potential to even increase consumers' purchase intentions, especially, for symbolic brands (Aggrawal, Jun & Huh, 2011, pp. 22). In particular sales of conspicuous products seem to profit from publicly spread quantity restrictions (Amaldoss & Jain, 2010, pp. 632). Conspicuousness of a product, is a major pre-condition for reference group effects to become effective through their large signalling value proportion of total utility. Thus, snobs are able to differentiate from the crowd by signalling uniqueness through public usage of the good (Leibenstein, 1950, pp. 189; Veblen, 1912, pp. 74-76). Followers, on the other hand, can signal affiliation by mimicking snob behaviour. In the absence of Limited-Editions, strong reference group effects can lead to undesirable outcomes such as snobs shunning expensive products, due to too many followers owning them, ending-up in declining profits for the supplier (Amaldoss & Jain, 2005b, pp. 40).

While effects on the sales side are ample, empirical evidence on the revenue side seems meagre. Although, Lynn (1989, pp. 262) has shown customers are aware of higher prices for scarce goods, he draws the conclusion that scarcity messages may only exert their full potential in the absence of price. This is backed by Szybillo (1973, pp. 36), who found no interaction of price and scarcity either. Verhallen (1982, pp. 309), even encouraged to waive all other information if scarcity should be exploited to the fullest. On the other hand, there are numerous theoretic models which posit profit increases triggered by Limited-Editions. As the sold quantity is ex ante restricted, higher profits will mostly originate from price increases, which in turn will be a result of valuation changes by customers: DeGraba (1995, pp. 337) for example applies introductory scarcity to hedge against price declines due to different valuations by customers. Low valuation customers would, thus, feel forced to purchase earlier for higher prices in fear of totally missing an important shopping opportunity otherwise. Amaldoss and Jain (2008, pp. 939) proposed, that Limited-Editions may pose one of the few profitable ways for firms to handle strong reference group effects and to preserve natural distribution

function of markets, hence, goods finding their way of highest valuation. Balachander and Stock (2009) showed, that Limited-Edition strategies can increase consumers' valuations for goods. According to them, this is especially true in the case of quality competition among sellers (ibid, pp. 347). Increases in customer valuations originate from quality signals inferred from scarcity signals. Scarcity is, thus, seen as the more credible signal for quality. At the same time, scarcity messages are less easy to mimic by competitors, if compared to a pure price premium strategy. In their study on introductory scarcity in the US-car market, higher valuations for supply restricted products find empirical support, which even includes positive price effects (Balachander, Liu & Stock, 2009, pp. 1634). In conjunction with a myriad of positive value effects for scarcity ranging from Brock (1968, pp. 246), Worchel, Lee and Adewole (1975, pp. 909), Lynn (1989, pp. 265) to Jang, Ko, Morris and Chang (2015, pp. 994), this raises the question for the price of scarcity. According to Porter (1985, pp. 131), an effective value creation has to find its justification in a price premium. Aside from differences in willingness to pay and willingness to accept (Knetsch & Sinden, 1984, pp. 508), of which the latter does not play a role in this context, the empirical term for subjective value is expressed in the former (Wertenbroch & Skiera, 2002, pp. 228). With value effects of scarcity messages unquestionable, Limited-Editions being among the strongest commitments to scarcity and valuations of purchase decisions finding their empirical manifestation in willingness to pay, it seems straightforward to hypothesise:

**Willingness to pay for a Limited-Edition of a product is higher than willingness to pay for the same non-scarce product.**

**Hypothesis 1: WTP for Limited-Edition vs. non-scarce product**

Adding value to products in general, is usually done by either adding features or supportive services (Peck, Payne, Christopher & Clark, 1999, pp. 421). Added features in turn, are able to increase consumers' willingness to pay, if they perceive them beneficial, important or of unique value (Ravald & Grönroos, 1996, pp. 25). Value increases from Limited-Editions are most common in a combination with conspicuous products and reference group effects among buyers. For the consumer side, this is supported by Szybillo (1973). Although, he was not able to find a significant interaction of price and scarcity, as mentioned above, leaders were willing to pay significantly more than followers for a scarce good (ibid, pp. 37). On the product side, Jang, Ko, Morris and Chang (2015, pp. 994) found higher product valuations for conspicuous Limited-Edition products, than for non-conspicuous time restricted examples. Moreover, in situations absent Limited-Edition, Amaldoss and Jain (2005a, pp. 1457) found reference group effects to decrease profits. Higher purchasing power snobs started buying inexpensive goods, due to too many conformists buying 'their' products. In contrast snobs'

loyalty got restored applying a Limited-Edition strategy. Additionally, conformists felt in a rush to buy the remaining products, which resulted in higher prices and was a significant contributor to increased profits in the Limited-Edition setting (ibid, 2010, pp. 631). Compared to non-conspicuous products, consumers' utility judgements for conspicuous products are much more driven by their value to express status. This proportion of utility can be called signalling value, the remainder represents the good's usage value. The only difference in the comparison of Limited-Edition conspicuous products and non-scarce conspicuous ones mentioned above, is the supply restriction of the former, which increased signalling value beyond given conspicuousness of the physical product. This unique trait of Limited-Editions, may be one driver behind the assumption of Amaldoss and Jain (2008, pp. 939), that as a pure strategy Limited-Editions may dominate the addition of features and a line-up of multiple products. In case of conspicuous products, it seems thus not too far-fetched to name Limited-Editions among the most important alternatives to feature-adding. For non-conspicuous products, signalling value is per se not part of consumers' utility judgement. Their utility entirely relies on the good's usage value and, thus, increases in willingness to pay can only be achieved through usage value improvements. It is, thus, rational to hypothesise:

**Comparing additional willingness to pay for a product with an additional feature to a product with a Limited-Edition scarcity message. . .**
**a) WTP for the Limited-Edition is higher than WTP for the feature in case of conspicuous products.**
**b) WTP for the feature is higher than for the Limited-Edition in case of more usage value-oriented products.**

**Hypothesis 2: WTP for Limited-Edition vs. feature**

Reference group effects in general, and differentiation in particular, are to a large extent driven by the need for uniqueness. According to Tepper-Tian, Bearden and Hunter (2001, pp. 61), especially snobs seek to avoid similarity. One way of Limited-Edition offers to prevent too much similarity to others is the seller's commitment of supply quantity restriction. It, thus, protects the product's owner against too many co-owners. At the same time, it increases consumers' competition for the product. Competition among consumers plays a role in Limited-Edition research, mostly as a mediator. Lynn (1991, pp. 47) mentions the mitigating effect of competition on the scarcity message's price effect. The role of competition in recent works, is more positively connoted, as competition mediates the scarcity effect on purchase intention in the research of Aggrawal, Jun and Huh (2011, pp. 22-23). Positive effects of consumer competition on value and sales are mentioned by DeGraba (1995, pp. 337) and Becker (1991, pp. 1115). In the former case, consumers are forced to pay above individual valuation. Demand gets increased by the demand of others as a result of social effects in the latter case. According

to Monroe (1990, pp. 74-75), consumers' higher product valuations are not limited to explicit value increases like features and Limited-Edition statements. Perceived value can also be increased by a reduction of sacrifice. This would usually imply a lower price for the good. In case of sales of conspicuous products to snobs, this may become a different meaning: spending money on an expensive product means also the risk of a failed investment, if too many others can potentially co-own 'his' or 'her' product. A lower quantity limit means increased competition on the one hand, but also an insurance against too many co-owners and, thus, an insurance against failed investments. Willingness to pay for a lower quantity limit, is thus akin to a willingness to pay for this kind of insurance.

Another possibility of Limited-Editions to cater for the needs of uniqueness striving consumers, is the uniqueness of the product itself, especially in line with this study's definition of an individual serial number commitment. According to Sirgy (1982, pp. 289), the purchase of conspicuous goods is to a large extent driven by motives of self-concept formation. This includes purchases which are not bought from the shelf and give at least a feeling of individualism (Goldsmith & Freiden, 2004, pp. 229; Herbas-Torrico & Frank, 2017, pp. 11). Franke and Schreier (2008, pp. 103) showed, that high need for uniqueness (NFU) individuals are not only more likely to buy individualised products. High NFU individuals are also assumed to have a higher willingness to pay for personalised products, partly because they expect them to be more expensive, partly because of the higher product satisfaction emanating from them (Goldsmith & Freiden, 2004, pp. 236). A higher willingness to pay for increased uniqueness in general in the context of Limited-Editions, was also shown by Wu, Lu, Wu & Fu (2012, pp. 271). Especially for conspicuous consumption products it seems thus consequent to hypothesise:

**Given a conspicuous product's Limited-Edition scarcity message can be enhanced by personalisation of serial number and/or further limitation of availability, . . .**
**a) an additional WTP exists for personalisation.**
**b) an additional WTP exists for a lower quantity limit.**

**Hypothesis 3: WTP for Limited-Edition improvement**

Prices plotted along product life cycles often appear as a declining function of time. The reason for these price declines is recessive demand (Lazear, 1986, pp. 31). To minimise revenue impact several optimising techniques have been developed. These techniques are ranging from predetermined price reaction functions to demand (Smith & Achabal, 1998, pp. 295) to optimal pricing as a function of time and inventory left, known as Dynamic Pricing (Zhao & Zheng, 2000, pp. 376) and more recently to pricing ladders with predetermined fixed

increments of decline (Heching, Gallego & van Ryzin, 2002, pp. 152). Among the reasons for price declines are obsolescence of product, seasonal volatility of demand and differences in consumers' reference prices. Obsolescence means ageing of goods, due to competition. In recent times, this is especially known from consumer electronics' markets. Yet, 'fashion trends' as a subspecies are already well-known in the apparel and fashion industry. As such, it describes a divergence of fashion trends in a comparison of season opening and its ending, forcing sellers to compensate late buyers by lowering price. Pashigian and Bowen (1991, pp. 1017) subsume obsolescence under the uncertainty hypothesis of pricing. Another reason for prices to decline, is seasonal volatility of demand. Under this hypothesis, prices have to react to changes in demand as a given externality. Demand is predicted using historical store traffic data and prices are used as a tool to steer store traffic by price incentives in times of lower store traffic. Although, the general price trend is downward facing, prices are also allowed to increase as a reaction to increased store traffic. Hence, this idea is for example much closer to the idea of Dynamic Pricing proposed by Gallego and van Ryzin (1994, pp. 1005-1006). The price discrimination hypothesis shares many traits with reference group effects, as at least two different reference price levels are assumed with declining arrival of demand with time. Early buyers value being the first to own – and probably publicly use – the product over product performance and sacrifice (Lazear, 1986, pp. 31). Innovators, but also snobs, may be among these consumers. Genuine buyers are akin to followers or conformists. Reduction of sacrifice and uncertainty are among their prime shopping motivations (ibid, pp. 32; DeGraba, 1995, pp. 334; Amaldoss & Jain, 2005a, pp. 32) and thus prices have to decline to incentivise them. DeGraba (1995, pp. 338) proposes introductory scarcity to prevent a product from skimming in second period. Balachander, Liu and Stock (2009, pp. 1634) have shown, that the same strategy is capable of reducing downward slope of price curve with time. In the most extreme example, including strong reference group effects, Amaldoss and Jain (2008, pp. 940) even demonstrated a switch to penetration price strategy, as a reaction to buying frenzies among conformists. While scarcity messages seem to provide some protection against non-uniqueness of product – which is another major reason for price declines over time (Lazear, 1986, pp. 32) – by definition, variations in the physical product provide another promising way: according to Gallego and van Ryzin (1994, pp. 1003) these variations reduce competitive pressure as they make products less comparable to competition. In sum, it is, thus, straightforward to hypothesise:

**Given a product is exposed to price declines over its life cycle, offering features or Limited-Edition options as part of continuous product improvement along life cycle can mitigate price declines.**

**Hypothesis 4: Mitigation of mark-down pricing by product improvement**

# III.-3 Study design

As Verhallen (1982, pp. 59) points out, scarcity is strongest in the absence of all other information. More explicitly, Lynn (1989, pp. 272) mentions the competing role of price and scarcity information. Designing product offers, which contain no other information but a scarcity message, are somewhat contrary to most of nowadays shopping situations. Product feature information and price are the major arguments in sales promotions. To question if this notion holds a price-based stated preference choice game was designed. Products offered in this study are all products with price and product features being part of promotions. Following the findings of Balachander and Stock (2009, pp. 346), where high quality brands are always in advantage when offering Limited-Editions, the opportunity of capitalising on the quality signalling function of well-known brands was valued stronger than the negative aspects of brand effects. Thus, real products from well-known and popular brands were used, similar to the Swatch wrist watch used in the study of Aggrawal, Jun and Huh (2011, pp. 21). Nine different products were chosen: three consumables, three conspicuous durables and three durables of invisible and mostly utilitarian shopping motivation. Each product was introduced with a picture and five product features, of which four remained unchanged throughout the study and the fifth was varied in every round. To avoid people from being uninterested in the product, due to taste dependent product features, such as colour, taste, texture or weave, pictures were monochrome and taste dependent features were mentioned to be adjustable to respondents' taste. To imitate real shopping behaviour, the 7 rounds of the study were stretched over a minimum period of seven weeks (7W-questionnaire). In the first phase, respondents were asked for their willingness to pay for each of the nine products. Each product was introduced by mentioning the four main product features. In the following round, the same task and description as in the previous round was given, but this time a lower and upper price bound for the product category was given as an additional information. These two stages represent a fast-forward simulation of the first three stages of the AIDA-model, where the extend of information about the product and especially pricing increase gradually (Rawal, 2013, pp. 39-40). In these two stages, respondents were asked to either mention a price of €0,- or to simply leave the price information unfilled, if not interested in the product at all. This non-option was also available in the subsequent stages, by not making a decision on the product options offered and respondents were informed accordingly. According to Verhallen (1982, pp. 321), this is a pivotal step especially, when eliciting measures for scarcity messages, as scarcity messages may increase a product's attractiveness, but are unable to evoke attractiveness measures. After these two stages, base price ($pB/ p^b$) for each participant i and product j was made according to Equation III-1 and recorded in each respondent's

base price matrix. The lower of the two prices given, was chosen, to capitalise on the idea of WTP as an interval (Schlereth, Eckert & Skiera, 2012, pp. 762).

$$p_{ij}^{b} = min\left(p_{ij}^{tm=1}, p_{ij}^{tm=2}\right), s.t.\ p_{cat(j)}^{min} \leq\ p_{ij}^{b} \leq\ p_{cat(j)}^{max}$$

**Equation III-1: Base price rule**

From the third stage on, the survey turned into a discrete choice game of products, similar to conjoint analysis. Each product was offered as a base product and an improved product, varying the fifth product feature only. This is similar to the procedure chosen by Amaldoss and Jain (2010, pp. 633) creating a realistic choice set, yet, drawing respondents' attention to the differentiating aspects. Consequently, the differentiating feature was accentuated visually as well as in the introduction statement of each questionnaire. It was mentioned as the final feature next to price information to justify price difference between product options (Porter, 1985, pp. 131). All products and their utilitarian features are shown in table III-1. Limited-Edition traits were also designed as this differentiating product feature and varied from stage 4 on. Individual level Limited-Edition specifications, such as serial number and unit limit were stored individually for each user-product combination and offered as a part of product improvement in subsequent stages as shown in table III-2.

Stages 4 and 5 were designed to retrieve hedonic individual level traits of Limited-Editions, represented by individual serial number decisions. Consumer competition was asked in stage 6, lowering the limit from 1000 available units to 500. Yet, the product specific individual choice of the hedonic level was kept in line with experimental setting by Worchel, Lee & Adewole (1975, pp. 908). In the final stage, the individual level Limited-Edition from previous stages was offered against abundant availability to test effectiveness of a neutral scarcity signal *'As long as stock lasts'* (Lynn, 1989, pp. 272). The highest choice level option in this stage, was a combination of product specific individual level Limited-Edition and utilitarian product enhancement in order to test the viability of a combination of Limited-Edition and typical additional product features as proposed by Amaldoss and Jain (2008, pp. 941). In this case, the feature is offered in last round, simulating *'Final edition'* car models offered by Mercedes-Benz (Daimler, 2018).

| Product category | Example product | Unchanged features | Variable feature | |
|---|---|---|---|---|
| | | | Base | Enhanced |
| Smartphone wallet | Fossil iPhone wallet (FS) | • Real leather<br>• Varying colours<br>• 3 credit card slots<br>• Magnetic latch | Cow leather | Goat leather |
| Sugar | Südzucker Fein Zucker 1000gr (SZ) | • Pure refined sugar<br>• Fine crystals<br>• Universal usage<br>• Paper package | German sugar beets | Organic German sugar beets |
| Shower curtain | Ikea Uddgrund (UD) | • Polyester curtain<br>• Varying textures<br>• Water repellent<br>• Size 200x180cm | Vertical stability: Edge double sewed | Vertical stability: Rubber enforced edge |
| Messenger bag | Freitag F12 Dragnet (FT) | • Made from truck canvas<br>• Varying colours<br>• Sturdy<br>• Sufficient space for 13" notebook | No pencil storage | Rubber belt for 3 pencils |
| PC Mouse | Logitech M317 Wireless Mouse (LG) | • Rubberised surface<br>• Varying colours<br>• Ergonomically shaped<br>• 1-year battery life span | Cordless range 5 m | Cordless range 7m |
| Chocolate bar | Lindt Alpenvollmilch 100gr (LT) | • Full cream milk from the alps<br>• Varying tastes<br>• Filled with whipped chocolate mousse<br>• Aroma safe package | Cocoa beans in Lindt quality | Fair trade cocoa beans in Lindt quality |
| Tablet PC | Apple iPad Air (AP) | • High definition display<br>• Aluminium body in varying colours<br>• 64 GB hard drive space<br>• WiFi and SIM chip slot | Smart cover material: plastic | Smart cover material: leather |
| Wake-up light | Philips HF3550/01 Wake-up light (PL) | • Alarm clock with sunrise simulation<br>• Varying wake-up modes<br>• Smartphone docking station<br>• Manageable using sleep-apps | VHF radio | DAB radio |
| Red wine | Freixenet Solar Gran Rioja Crianza 2008 (FX) | • Made from Tempranillo grapes<br>• 2008 is an excellent Rioja vintage<br>• ≥2 years matured in oak barrel<br>• Dry and rank taste | Geographic origin denomination | Qualified geographic origin denomination |

**Table III-1: Product and feature specifications**

Prices were varied in exponential steps of 5%, depending on the number of distinct choice levels available (base price × 1,05 for choice level 2; base price × $1{,}05^2$ for the next higher choice level for the same stage, if available). The low-level increment was chosen, because it was aimed to test, if Limited-Editions have a WTP in the presence of price information, not to

test the magnitude of WTP. Price increments chosen are in line with Lynn's (1990, pp. 713) notion, that people are more likely to opt for moderate price changes and may be scared by larger ones. Low price increments also explain, why utilitarian product enhancements were marginal in many cases. Base prices of subsequent rounds were either the last chosen price, if previous round's choice level was >1, or last chosen price × 0,95, if previous round's choice level equalled 1. The rule was only altered in week 5 (price/1,05), in order to avoid habituation effects. Respondents were not informed about choice rules or previous week's chosen prices (Amaldoss & Jain, 2010, pp. 633). Only product related decisions were uncommented carried over to the following week and only if necessary for decision making. The full structure of the choice game can be seen in figure III-1.

| Choice No | Stage 3 | Stage 4 | Stage 5 | Stage 6 | Stage 7 |
|---|---|---|---|---|---|
| 1 | Utilitarian base | As long as stock lasts | Limited-Edition No 462 of 1000 | Limited-Edition Serial No (Ind-S5) of 1000 | Abundantly many |
| 2 | Utilitarian enhanced | Limited-Edition No 462 of 1000 | Limited-Edition No1 of 1000 | Limited-Edition Serial No (Ind-S5) of 500 | Limited-Edition Serial No (Ind-S5) of (Ind-S6) units |
| 3 | N/A | N/A | Limited-Edition No 1000 of 1000 | N/A | Limited-Edition Serial No (Ind-S5) of (Ind-S6) units<br><br>Utilitarian enhanced |
| 4 | N/A | N/A | Limited-Edition Individual Lucky Number of 1000 | N/A | N/A |

**Table III-2: Variable product feature changes by stage**

Two different versions of a socio demographic questionnaire were designed. One for pretest student sample ($SD_{stud}$) and the other one for the two samples of working people ($SD_{work}$ for Tribes sample and MSE workforce sample). Besides age (grouped) and sex, both versions were designed to collect information on subsistence and short to mid-term security of subsistence in order to gather information on economic autonomy. Sociodemographics were asked in first round. To perfectly match data from all the stages of the 7W-questionnaire in the data set of one person, each respondent generated an individual code in round 1, which was reaffirmed in round 2. From round 3 on respondents recognised their questionnaire with their product specific individually varying prices and recorded choices, using the code printed in the header of each page of the questionnaire. The code was a combination of the initials for place of birth, first name and sex mixed with day of birth and the last two characters of year of birth. A fit of sex given in SD-part and sex initial as well as a fit of year of birth and age group were consequently among the first criteria of data sample revision. Two respondents have been sorted out accordingly.

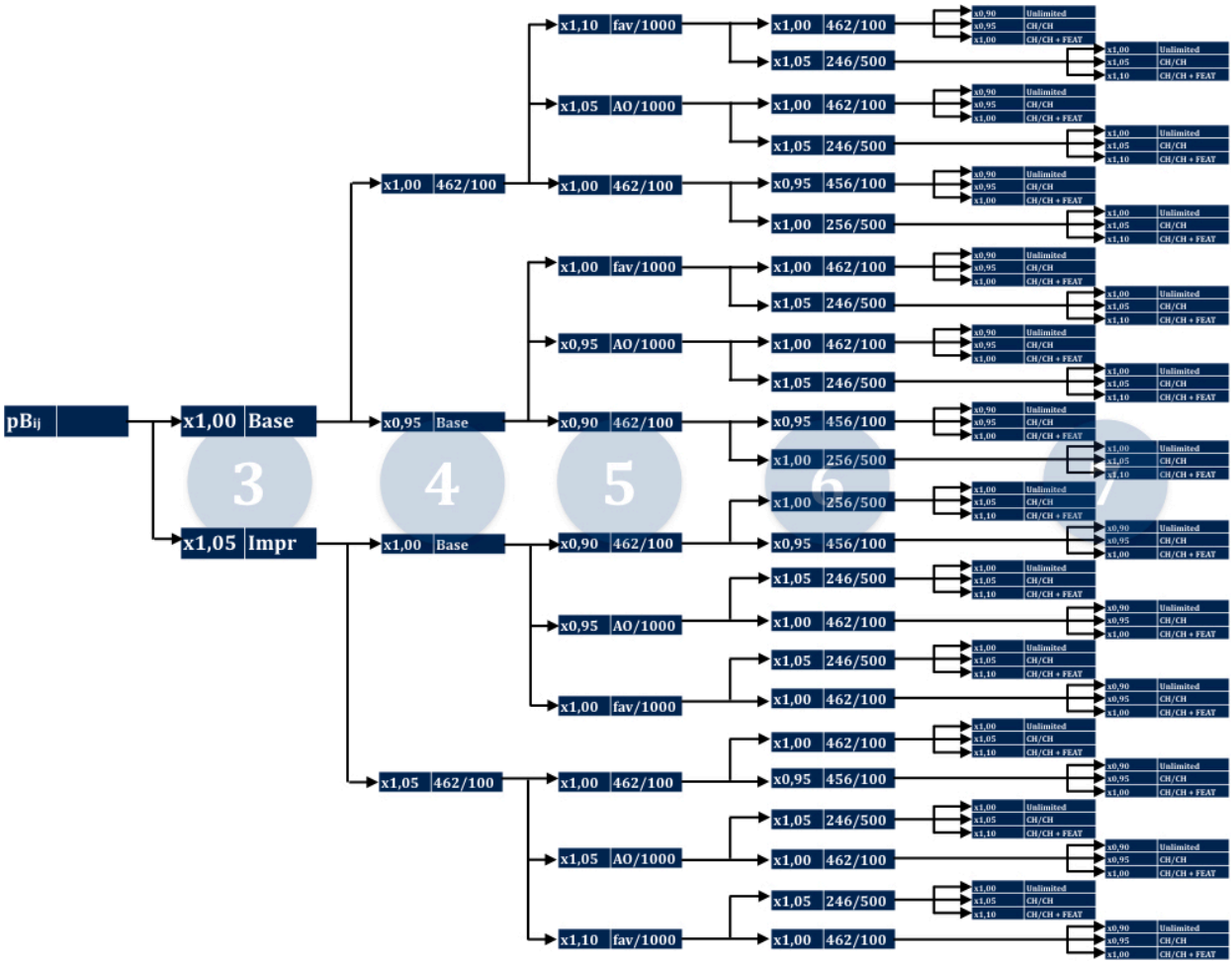



**Figure III-1: Choice game structure**

| Table short cut | R-code | Item |
|---|---|---|
| Price quality inference | PN | A high product price is an indicator of high product quality to me. |
| Buying Frenzy | FY | Advertising containing limited quantity availability of a product is panic mongering to me. |
| Well-known brands | BR | Seeking high quality products, I usually rely on well-known brands. |
| Many buy heuristic | AN | If many others buy a product, this poses a reason to buy to me. |
| Demand Quality inference | LN | From a high demand, I usually infer a high product quality. |
| Availability quality | QL | If a company promotes a limited product quantity, I usually infer higher product quality compared to unlimited availability. |
| Missed opportunity | RG | If I buy high demand products, I – among other arguments – fear to miss something otherwise. |
| Empty shelf | SF | If I am indifferent between several products, I tend to buy the one from the relatively emptier shelf space. |

**Table III-3: Item set of TQ-questionnaire**

A questionnaire on respondents' general attitude towards scarcity signals, quality and price inferences and susceptibility to buying frenzies (TQ-questionnaire) was also handed to all respondents in first round. Attitudes were asked on a 5-point Likert scale ranging from strongly agree to strongly disagree. The set of items is shown in table III-3.

Questionnaires on respondents' lifestyle attitudes (TL-questionnaire) and their attitudes towards products (TR-questionnaire), are pre-test questionnaires to elicit suitability of products for the stated preference choice game (7W-questionnaire). The TL-questionnaire includes eight items (shown in appendix III-2) mostly on individual susceptibility to reference group effects. In the TR-questionnaire (see appendix III-3), another eight items were asked to elicit respondents' opinion of suitability to reference group effects on the product level. Consequently, this questionnaire had to be filled-in for each of the nine products.

**VS**

| Product | Mean |
|---|---|
| Tablet PC | 4,459 |
| Messenger bag | 4,353 |
| Smartphone wallet | 3,729 |
| Red wine | 3,259 |
| Chocolate bar | 2,482 |
| Shower curtain | 2,141 |
| PC Mouse | 2,141 |
| Wake-up light | 1,882 |
| Sugar | 1,212 |
| μ | 2,851 |
| σ | 1,148 |

**DF**

| Product | Mean |
|---|---|
| Tablet PC | 3,835 |
| Messenger bag | 3,600 |
| Red wine | 3,318 |
| Smartphone wallet | 2,800 |
| Wake-up light | 2,788 |
| Chocolate bar | 2,576 |
| PC Mouse | 1,824 |
| Shower curtain | 1,706 |
| Sugar | 1,165 |
| μ | 2,851 |
| σ | 0,907 |

**AF**

| Product | Mean |
|---|---|
| Tablet PC | 4,271 |
| Messenger bag | 3,424 |
| Red wine | 3,376 |
| Chocolate bar | 2,459 |
| Smartphone wallet | 2,365 |
| Wake-up light | 2,271 |
| PC Mouse | 1,894 |
| Shower curtain | 1,694 |
| Sugar | 1,141 |
| μ | 2,544 |
| σ | 0,979 |

**CM**

| Product | Mean |
|---|---|
| Tablet PC | 4,271 |
| Red wine | 3,129 |
| Messenger bag | 3,035 |
| Chocolate bar | 2,788 |
| Wake-up light | 2,718 |
| Smartphone wallet | 2,694 |
| PC Mouse | 1,871 |
| Shower curtain | 1,576 |
| Sugar | 1,224 |
| μ | 2,590 |
| σ | 0,921 |

**SN**

| Product | Mean |
|---|---|
| Tablet PC | 4,165 |
| Red wine | 3,035 |
| Wake-up light | 2,588 |
| Smartphone wallet | 2,518 |
| Messenger bag | 2,318 |
| Chocolate bar | 2,306 |
| PC Mouse | 1,553 |
| Shower curtain | 1,235 |
| Sugar | 1,153 |
| μ | 2,590 |
| σ | 0,921 |

**TY**

| Product | Mean |
|---|---|
| Sugar | 4,694 |
| Shower curtain | 4,412 |
| PC Mouse | 4,400 |
| Wake-up light | 3,682 |
| Smartphone wallet | 3,671 |
| Chocolate bar | 3,376 |
| Messenger bag | 3,259 |
| Red wine | 2,918 |
| Tablet PC | 2,729 |
| μ | 3,682 |
| σ | 0,693 |

**QS**

| Product | Mean |
|---|---|
| Tablet PC | 4,024 |
| Red wine | 3,847 |
| Messenger bag | 3,200 |
| Chocolate bar | 2,847 |
| Smartphone wallet | 2,718 |
| Wake-up light | 2,259 |
| PC Mouse | 1,812 |
| Shower curtain | 1,729 |
| Sugar | 1,494 |
| μ | 2,659 |
| σ | 0,915 |

**SC**

| Product | Mean |
|---|---|
| Sugar | 4,624 |
| PC Mouse | 4,082 |
| Shower curtain | 4,012 |
| Wake-up light | 3,306 |
| Smartphone wallet | 3,012 |
| Chocolate bar | 2,918 |
| Messenger bag | 2,671 |
| Red wine | 2,671 |
| Tablet PC | 1,506 |
| μ | 3,200 |
| σ | 0,937 |

**Table III-4: Pre-test trait means by item of TR-questionnaire**

Similar to Jang, Ko, Morris and Chang (2015, pp. 993), the pre-test in this case included respondents' opinion on visibility, uniqueness and conformity. These purchasing motives of Limited-Edition products have been complemented by items on perceived utility, expected likelihood of compliment from others when owning the good and an item explicitly asking for the attractiveness of the product as a function of a Limited-Edition offer. As table III-4 shows, there was also an item added, in which respondents were asked to rate the product on a 5-point scale with utility, performance, durability and reliability on the one end and brand, prestige and design on the opposite end of the continuum. The scale yielded some interesting differences to the utility scale: although constructed with high similarity to utility scale, the average correlation was only 0,52 with the highest correlation in case of sugar (0,76), being the only obvious pure commodity in the study. As visibility of product is the necessary condition for both, conspicuousness and reference group effects, the item was reversed (IV), but with modified formulation (see table III-3). Results showed that respondents share an idea of visibility congruent to study purpose and thus product choice was confirmed during pre-tests. Correlations with VS-item were constantly negative and ranged from -0,04 (sugar) to -0,47 (messenger bag).

# III.-4 Sample

## III.-4.1 Description of subsamples

The total sample consists of two main samples (Tribes=FR and MSE workforce=JL) and two pre-test samples (PreTest =UN and Students=ST). Sample structure is shown in table III-5. Margins between $N_{min}$ and $N_{max}$ originate from different attractiveness judgements across the nine different products. Respondents not having filled-in the entire 7W-questionnaire series for at least one product, are already excluded (84). After successfully pretesting suitability of products to study with 85 master students, sampled during a marketing and strategy lecture (UN-sample), the 7-weeks stated preference choice game was designed. It was tested with 100 students of another marketing and strategy lecture one year later. Students were introduced to the study with the purpose of generating a data sample for a market research foundation course, which most of them were about to visit the following semester. Importance of honest answers, especially in the context of interest in the product, was underlined, to yield a valid sample for their course. Questionnaires were passed around in a box on the beginning of lecture, to test if respondents had problems in finding 'their' questionnaire using the personal code. Lecture did not start before all questionnaires were collected. Students were told to ask all comprehension questions coming to their mind filling-in the questionnaire. Follow-up analysis of pre-test resulted mostly in minor changes such as misspelling

and type face changes. Study design was kept as designed for the other two samples. JL and FR sample were generated using snowball sampling to assure voluntariness of participation. The JL-sample consists of workers of a medium-sized technology industrial enterprise. FR-sample consists of parishioners. Both samples were generated with equal structures in mind, choosing suburbs of cities below a population of 200.000 inhabitants in south-west Germany. In both cases, prospective respondents were asked, if they were interested in a study to improve market research instruments. People signalling consent, found the first questionnaire in their company in-box (JL) or letterbox (FR). In both cases respondents were asked to fill-in the questionnaire within the next three days. Filled-in questionnaires were also collected from their in- or letterboxes. Similar to pre-test, there was a minimum time of seven days before they found the next questionnaire in their letterbox. For comprehension questions, JL-sample members were given an e-mail address of the researcher. In case of the FR-sample, an instant messenger group was established. Questions in both cases were more dealing with study subject and respondents wondering why and how product prices change, than with comprehension problems.

| **Subsample Name** | **Questionnaires** | **R-code** | **$N_{min}$** | **$N_{max}$** | **$Age_{\mu}$** | | **$Fem_{\%}$** | **Education** | |
|---|---|---|---|---|---|---|---|---|---|
| PreTest | • $SD_{stud}$<br>• TR<br>• TL | UN | 81 | 85 | ≤21<br>22-24<br>25-27<br>28-30<br>31-33<br>≥33 | 1<br>53<br>24<br>6<br>0<br>1 | 54,12% | Bachelor degree | |
| Tribes | • TQ<br>• $SD_{work}$<br>• 7W | FR | 20 | 50 | 39,96 | | 47,06% | University<br>Foreman<br>GSC<br>JHIC<br>SMSC<br>None | 37,25%<br>15,69%<br>11,76%<br>25,49%<br>9,80%<br>0,00% |
| MSE work-force | • TQ<br>• $SD_{work}$<br>• 7W | JL | 2 | 22 | 46,23 | | 54,55% | University<br>Foreman<br>GSC<br>JHIC<br>SMSC<br>None | 9,09%<br>9,09%<br>18,18%<br>27,27%<br>31,82%<br>4,55% |
| Students | • TQ<br>• $SD_{stud}$<br>• 7W | ST | 32 | 46 | 25,69 | | 51,28% | Bachelor degree | |

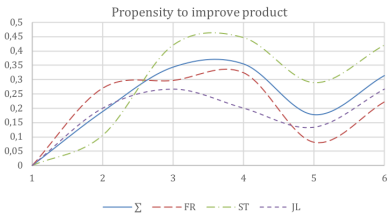
**Table III-5: Sample structure**

## III.-4.2 Combination of subsamples

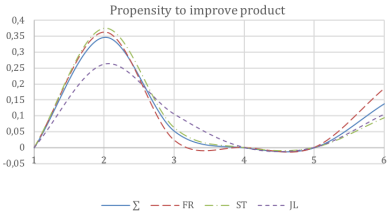
As all three subsamples filling-in the 7W-questionnaire (UN, FR & JL) yielded valid results for willingness to pay analysis, a combination of subsamples was examined. In total 13 respondents with peculiarities in response behaviour were identified and excluded from sample. To analyse opportunities for combinations, the populations should not defer too much in terms of shopping behaviour. As a proxy for shopping behaviour, the average per group propensity to improve product choice in stages 3 to 7 has been plotted as shown in figure III-2 and checked for face validity. Note that for cost reasons tablet-PC, wake-up light and red wine have been excluded from pre-test questionnaire, due to low attractiveness ratings after the first two stages. Chocolate bar was used as a test product for respondents' awareness for unrealistic answer alternatives (with 99% of respondents taking notice and acting accordingly), and was excluded from pre-test after round 3. In a second test, results of the TQ-questionnaire were checked for mean differences applying T-tests or Welch-tests and Mann-Whitney-U-tests. Table III-6 shows the results. In sum, the results show that FR and JL can be combined, whereas the ST-sample shows too many deviations from both. This is congruent to what was expected before, as preconditions for FR and JL were equal, claiming for individuals with a regular salary. Though, for linear regression analyses in this work tablet-PC, wake-up light and red wine have to be excluded due to too low sample sizes. However, tendencies and indicators of shopping behaviour for these products is shown in chapter III.-6.4.2.

After combining FR and JL samples, the SD- and TQ-items have been standardised and a factor analysis of TQ-items was conducted. As this analysis is for explorative purposes only, decision rule for number of factors fixing, was the highest p-value according to PCA. The aim was to gain more predictive strength by item combination. P-value of Bartlett-test for sphericity is well below 0,05 (< 2.22e-16), yet a KMO-criterion of 0,57 can be signified miserable according Kaiser and Rice (1974, pp. 122). However, the generated factors seemed consistent as regards to content: both quality items lumped together, frenzy items in one factor and a third factor for price and bandwagon items. The full result of the factor analysis is shown in table III-7. As doubts remain, due to insufficient KMO performance, two regression models have been computed for every product at every stage of analysis. One model containing single items shown in the uniqueness table of table III-7, another contains the factor combination shown to the right of the same table plus the brand item (BR) as the single item with the highest uniqueness. Items were combined taking their factor loadings as weights divided by the sum of their respective factor loadings and then standardised as shown in equation III-2.

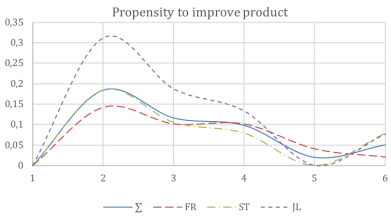
**Smartphone wallet**



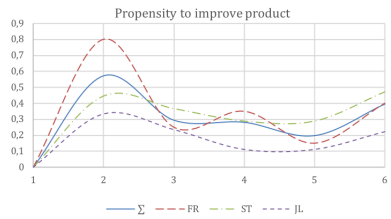

**Sugar**



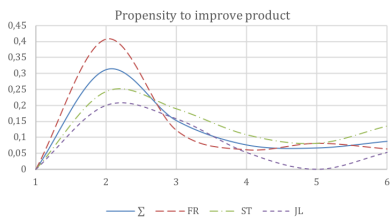

**Shower curtain**



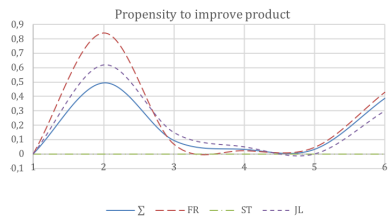

**Messenger bag**



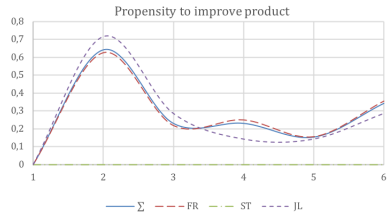

**PC mouse**



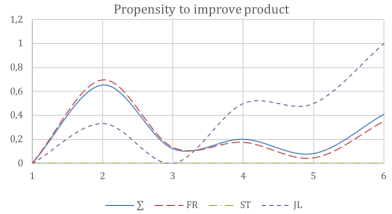

**Chocolate bar**




**Tablet PC**




**Wake-up light**




**Red wine**

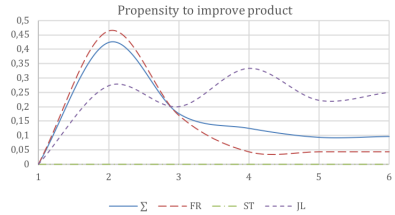
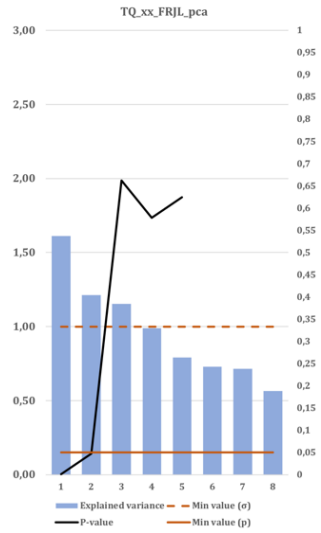



**Figure III-2: Respondents' propensity to improve product**

| TQ Test *Sample* | Price quality in-ference | Buying frenzy | Well-known brands | Many buy heuristic | Demand quality in-ference | Availabil-ity quality | Missed oppor-tunity | Empty shelf |
|---|---|---|---|---|---|---|---|---|
| Variance Test | $H_0$:$\sigma^2_{FR}= \sigma^2_{ST}$<br>$H_1$: $\sigma^2_{FR}\neq \sigma^2_{ST}$ | | | | | | | |
| *FR vs. ST* | $\sigma^2_{FR}\neq \sigma^2_{ST}$ | $\sigma^2_{FR}= \sigma^2_{ST}$ | $\sigma^2_{FR}= \sigma^2_{ST}$ | $\sigma^2_{FR}= \sigma^2_{ST}$ | $\sigma^2_{FR}= \sigma^2_{ST}$ | $\sigma^2_{FR}\neq \sigma^2_{ST}$ | $\sigma^2_{FR}= \sigma^2_{ST}$ | $\sigma^2_{FR}\neq \sigma^2_{ST}$ |
| *JL vs. ST* | $\sigma^2_{JL}\neq \sigma^2_{ST}$ | $\sigma^2_{JL}= \sigma^2_{ST}$ | $\sigma^2_{JL}\neq\sigma^2_{ST}$ | $\sigma^2_{JL}= \sigma^2_{ST}$ | $\sigma^2_{JL}= \sigma^2_{ST}$ | $\sigma^2_{JL}= \sigma^2_{ST}$ | $\sigma^2_{JL}= \sigma^2_{ST}$ | $\sigma^2_{JL}\neq \sigma^2_{ST}$ |
| *FR vs. JL* | $\sigma^2_{FR}= \sigma^2_{JL}$ | $\sigma^2_{FR}= \sigma^2_{JL}$ | $\sigma^2_{FR}= \sigma^2_{JL}$ | $\sigma^2_{FR}= \sigma^2_{JL}$ | $\sigma^2_{FR}= \sigma^2_{JL}$ | $\sigma^2_{FR}\neq \sigma^2_{JL}$ | $\sigma^2_{FR}= \sigma^2_{JL}$ | $\sigma^2_{FR}= \sigma^2_{JL}$ |
| Mean Test | $H_0$: $\mu_{FR}=\mu_{ST}$<br>$H_1$: $\mu_{FR}\neq\mu_{ST}$ | | | | | | | |
| *FR vs. ST* | $\mu_{FR}\neq\mu_{ST}$ | $\mu_{FR}=\mu_{ST}$ | $\mu_{FR}=\mu_{ST}$ | $\mu_{FR}\neq\mu_{ST}$ | $\mu_{FR}=\mu_{ST}$ | $\mu_{FR}=\mu_{ST}$ | $\mu_{FR}=\mu_{ST}$ | $\mu_{FR}=\mu_{ST}$ |
| *JL vs. ST* | $\mu_{JL}\neq\mu_{ST}$ | $\mu_{JL}\neq\mu_{ST}$ | $\mu_{JL}=\mu_{ST}$ | $\mu_{JL}\neq\mu_{ST}$ | $\mu_{JL}=\mu_{ST}$ | $\mu_{JL}=\mu_{ST}$ | $\mu_{JL}=\mu_{ST}$ | $\mu_{JL}=\mu_{ST}$ |
| *FR vs. JL* | $\mu_{FR}=\mu_{JL}$ | $\mu_{FR}=\mu_{JL}$ | $\mu_{FR}=\mu_{JL}$ | $\mu_{FR}=\mu_{JL}$ | $\mu_{FR}=\mu_{JL}$ | $\mu_{FR}=\mu_{JL}$ | $\mu_{FR}=\mu_{JL}$ | $\mu_{FR}=\mu_{JL}$ |

**Table III-6: TQ questionnaire variance and mean differences** (Results computed in R)




TQ

| Item | Unique-ness | Quality | | Frenzy | | Bandwagon & Price | |
|---|---|---|---|---|---|---|---|
| LN | 0,142 | LN | 0,888 | RG | 0,664 | AN | 0,816 |
| AN | 0,306 | QL | 0,697 | FY | 0,574 | PN | 0,450 |
| QL | 0,489 | PN | 0,313 | SF | 0,477 | LN | 0,263 |
| RG | 0,551 | SF | 0,248 | PN | 0,206 | SF | 0,205 |
| PN | 0,657 | AN | -0,143 | BR | -0,209 | QL | -0,142 |
| FY | 0,665 | BR | -0,202 | AN | | BR | |
| SF | 0,669 | RG | | LN | | RG | |
| BR | 0,914 | FY | | QL | | FY | |

| Bartlett-test | KMO-criterion |
|---|---|
| X2 = 96,527 | 0,5733806 |
| df = 28 | |
| p-value < 2,22e-16 | |

**Table III-7: Results of TQ factor analysis** (Results computed in R: R-Core Team, 2017; Maier, 2015)

$$weight\ of item^k = \frac{factor\ loading^k}{\sum_{k=1}^{n} factor\ loading^k}$$

**Equation III-2: Calculation of item weights**

# III.-5 Description of linear regression model

While the willingness to pay comparison for the first two stages is done using oneway-Anovas, two different linear regression models have been calculated to account for all price effects of feature and Limited-Edition manipulations spanning more than two stages: a final regression after the 7-weeks experiment and an intermediate regression measuring effects of weeks 4 to 6. While former measures both feature and Limited-Edition manipulations on price, the latter is limited to scarcity manipulations offered to the participants. Dependent variable in both cases was the relative price ratio for each product *j* spanning the time periods involved: $prr^{ij}_{tm+n|tm}$. Relative span-ratios are the result of a division of each participant's ($i$) absolute price span ratio $pra^{ij}_{tm+n|tm}$ by the minimum price of the respective resulting absolute price ratio matrix of all individuals for one product as shown in equation III-4, which was done to make relative price changes comparable on a common base. Dependent variables related to manipulations are main effects for Limited-Edition (LE), feature (FEA), personalisation (ID), the competition effect (LC) and a variable for the combined offer of Limited-Edition and feature (LEFEA) for the final regression. LE for example counted Limited-Edition improvement choices along all stages. For the intermediate regression, personalisation main effect was split using one effect for each manipulation. ID thus became LF or LL for first or last of the line choices respectively and LI for lucky number serial choices. An additional variable for Limited-Edition base effect (CL) was also computed for the intermediate regression.

$$pra^{ij}_{tm=6|tm=3} = \frac{pd^{ij}_{tm=6}}{pd^{ij}_{tm=3}} \qquad pra^{ij}_{tm=7|pb} = \frac{pd^{ij}_{tm=7}}{pb^{ij}}$$

*Product j is held constant* *Product j is held constant*

**Equation III-3: Absolute price ratio span for intermediate regression (left) and full regression (right)**

$$prr^{ij}_{tm+n|tm} = pra^{ij}_{tm+n|tm} \times 1 \Big/ \min_{pra^{ij}_{tm+n|tm}} \begin{pmatrix} pra^{i=1,j}_{tm+n|tm} \\ \vdots \\ pra^{i=m,j}_{tm+n|tm} \end{pmatrix}$$

*Product j is held constant*

**Equation III-4: Dependent variable as a relative price ratio span**

While CL, LF, LL, LI, LC and LEFEA were dummy variables, the remaining variables were organised as corresponding columns, counting occurrence of effects throughout stages measured. The lowest in magnitude counter of all non-dummy variables was defined as maximum. For each variable this maximum value was divided by the counting stages of the respective variable which determined the margin added at each stage, depending on effectiveness of variable at this stage (Fahrmeir, Kneib & Lang, 2009, pp. 81-83). For example: every time a respondent opted for a non-improved product, BAS-variable, measuring price declines over time, was increased. As different levels of base products were offered, ranging from abundant products (stage 7) to base level Limited-Editions (e.g. stage 6), BAS-variable was increased at higher margin in former than in the latter case. The lowest maximum counter in the full regression model was FEA, with a maximum value of 2. This maximum value got divided by the total number of multiples needed for BAS-level. This procedure secured that main effects were only allowed to dominate other main effects as a matter of respondents' choice rather than as a matter of externalities innate to model formulation (Wold, Sjöström & Eriksson, 2001, pp. 113). For intermediate regression, this procedure was adapted accordingly.

Regression models both also accounted for sociodemographic variables and those variables gained from the TQ-questionnaire. For every product, an alternative model was calculated, using the factors retrieved from factor analysis discussed in chapter III.-4.2.

# III.-6 Willingness to pay for product improvements

## III.-6.1 Main effects of Willingness to pay for Limited-Edition or feature: procedure, results and discussion

For a direct comparison of Limited-Edition and feature respondents' choices of the first two weeks have been taken. Dependent variable is the price effect of either improvement. In both rounds a base product was compared to the same product with an improvement, which is either an additional feature (round 3) or a Limited-Edition scarcity message (round 4). These improvements are the independent variables. Means are compared using one-way Anovas between improved and non-improved product and between improvements. As the first row of either product in table III-8 shows, price for feature is always and highly significant above the non-featured product. This result shows, that respondents act in utility maximising conduct, which is of importance for the remaining stages. Willingness to pay for a Limited-Edition of the same product, is also significantly higher in all cases but for the sugar. Remarkable about this product is not the fact that it can only hardly reach significance. Introducing a pure commodity into the product line-up, the expectation was no significant price effect for a Limited-Edition offer at all. This gets somehow supported, given the sugar was the only product to display a significant negative price effect of Limited-Edition offer in the final regression after 7 weeks. Except for the chocolate bar, all products displayed significant price effects of Limited-Edition offer. As shown in table III-9, effect size ranges from unexpectedly strong effects for shower curtain to expected effect strength of smartphone wallet and messenger bag to almost non-existent effect sizes for PC-mouse and chocolate bar. However, the effect for the chocolate bar became significant and marginally larger, when controlling for overlaps in participants' choices with the Limited-Edition-feature combination in week 7. As hypothesis 1 proposed additional willingness to pay above the price of a non-scarce product and sugar was expected to perform poor on that, hypothesis 1 is supported.

| | Smartphone wallet: F(1,98) | | | Sugar: F(1,120) | | | Shower curtain: F(1,120) | | |
|---|---|---|---|---|---|---|---|---|---|
| NONE→FEA | 17,22 | 7,11e-05 | *** | 29,27 | 3,27e-07 | *** | 11,77 | 0,0008 | *** |
| NONE→LE | 19,06 | 3,15e-05 | *** | 3,10 | 0,0807 | . | 9,06 | 0,0032 | ** |
| LE→FEA | 0,05 | 0,8240 | | 17,45 | 5,64e-05 | *** | 0,26 | 0,6130 | |
| | μ(NONE)<μ(LE)=μ(FEA) | | | μ(NONE)≈μ(LE)<μ(FEA) | | | μ(NONE)<μ(LE)=μ(FEA) | | |

| | Messenger bag: F(1,112) | | | Chocolate bar: F(1,130) | | | PC-mouse: F(1,122) | | |
|---|---|---|---|---|---|---|---|---|---|
| NONE→FEA | 112,00 | <2e-16 | *** | 32,50 | 7,62e-08 | *** | 254,20 | <2e-16 | *** |
| NONE→LE | 18,23 | 4,11e-05 | *** | 10,26 | 0,0017 | ** | 6,54 | 0,0118 | * |
| LE→FEA | 24,36 | 2,80e-06 | *** | 7,41 | 0,0074 | ** | 126,20 | <2e-16 | *** |
| | μ(NONE)<μ(LE)<μ(FEA) | | | μ(NONE)<μ(LE)<μ(FEA) | | | μ(NONE)<μ(LE)<μ(FEA) | | |

**Table III-8: Feature vs. Limited-Edition-Anova results** (Results computed in R: R-Core Team 2017)

| | Shower curtain | Smartphone wallet | Messenger bag | Chocolate bar | PC-mouse | Sugar |
|---|---|---|---|---|---|---|
| Q7_LE | +,5687*** | +,4277*** | +,2658*** | +,0248$^{n.s.}$ | +,0201*** | -,4198*** |
| Q7_LE Alt: Q7_LEFEA | | | | +,0605*** | | |

**Table III-9: Limited-Edition main effects of final regression** (Results computed in R: R-Core Team 2017)

Mean differences in price effect were also compared between improvements. Taking pre-test results for utility orientation into account, significantly higher means for sugar, PC-mouse and shower curtain were expected, as these products are clearly usage value-oriented. For the first two products, expectations were fulfilled. Respondents significantly preferred the a longer wireless range over a Limited-Edition PC-mouse. Even the more symbolic 'organic'-labelled sugar was clearly preferred over the scarce version. The shower curtain is among the unexpected results: as a usage value-oriented product, additional vertical stability was expected to be preferred over a Limited-Edition version. Yet, both effects are even. The shower curtain does not only share this trait with the smartphone wallet, which is one of the most conspicuous products left in the study. Product and feature combination were also comparable, as the smartphone wallet was offered with a rather conspicuousness supporting feature (premium-quality leather type). In case of the uneven product feature combination, represented by the other conspicuous product (messenger bag) and a clearly utilitarian feature (pencil storage), respondents clearly preferred feature over Limited-Edition. Results of the final regression also include the combination of feature and Limited-Edition offered in the final stage, support assumptions on smartphone wallet and messenger bag insofar, that effect size is even larger for a pure Limited-Edition, than for a combination of both. For sugar and PC-mouse, expectations are confirmed as pure feature effect dominates the combination,

which in turn dominates the pure Limited-Edition. For the chocolate bar, the combination dominates pure feature and pure Limited-Edition produces the weakest effect in a regression of all three effects. The shower curtain repeats to provide unexpected results, as it still shows a comparable picture to the conspicuous products, yet, with one exception: the combination of feature and Limited-Edition was not selected at all. Table III-10 shows the sequence of dominance and evaluation, subject to hypothesis 2.

| Product | Sequence of dominance | | | | | H2a | H2b |
|---|---|---|---|---|---|---|---|
| Smartphone wallet | Limited-Edition (,4277***) | > | Combination (,1492***) | > | Premium leather (,1395***) | + | |
| Sugar | Organic sugar (,2403***) | > | Combination (,1202***) | > | Limited-Edition (<0***) | | + |
| Shower curtain | Limited-Edition (,5687***) | > | Better vertical stability (,1967***) | | | ? | |
| Messenger bag | Limited-Edition (,,2658***) | > | Combination (,1580***) | > | Pencil storage (,0773*) | + | |
| PC-mouse | Extended wireless range (,0859***) | > | Combination (,0459***) | > | Limited-Edition (,0201***) | | + |
| Chocolate bar | Combination (,0442***) | > | Fair trade chocolate (,0377**) | > | Limited-Edition (,0248$^{n.s.}$) | ? | |

**Table III-10: Feature vs Limited-Edition regression results** (Results computed in R: R-Core Team 2017)

## III.-6.2 Incremental Limited-Edition improvement: personalisation vs. increased consumer competition

### *III.-6.2.1 Incremental Limited-Edition improvement: stage description, application of research instruments and adaptions*

In this part of the analysis, price effects of weeks 4 to 6 are compared. These weeks represent stages of the study, in which respondents had the choice to buy a simple Limited-Edition (Q4), to personalise Limited-Edition by picking a serial number of their choice (Q5) and to ensure fewer people co-own the same product by selecting from a halved total quantity (Q6). To ensure a real Limited-Edition in line with the definition of the study, they were offered serial number 462 of 1000 (Q4_CL) in stage 4 as a base level Limited-Edition. This serial number is the result of expert discussions. Requirements resulting from them included picking a meaningless 3-digits number somewhere halfway between first and last without being a round number. Asking respondents for individual lucky numbers on the end of round 4 further confirmed requirements not to include cyphers like 1,3,7 or 9, representing common lucky numbers or parts of them. In the subsequent round, respondents were offered first (Q5_LF) and the last (Q5_LL) of the line serials and their individual lucky number serial for choice, if provided (Q5_LI). In the final Limited-Edition improvement round, respondents

were offered individual product serial combinations from round 5 with either 1000 units or 500 units (Q6_LC) as a unit restriction. If respondents did not opt for serial individualisation in Q5, they were offered serials 462 or 246 respectively.

To reproduce effects on price over the span of three sub-rounds, a sub-ratio between the price after Q6 and after Q3 is calculated. The remainder of dependent variable calculation follows the procedure explained in the previous chapter. As mentioned above, independent variables are the main effect of Limited-Edition offer after three rounds (LE), customer competition (LC), serial number individualisations (LF, LL, LI) and base effect (CL). Especially, when respondents seek to steadily improve their Limited-Edition choice, the full regression with all variables is exposed to singularities. Results under the separator in each table represent variable results after controlling for singularities. Tables in chapter II-6.2.2 are ordered to make products from the same category comparable.

Respondents' choices regarding individualisation (ID) and competition (LC) have also been summed-up, if necessary, resulting in variables used on the end of study as independent variables to interpret total resulting price effects over all 7 weeks. Procedure to calculate the dependent variable was basically identical except for input variables. The remainder of procedure was described in chapter III.-5. Results for these variables will be provided here, if supportive. As significance of effects can be misleading, directed graphs of choice behaviour are also provided (Sadiq & Orlowska, 2000, pp. 123). All participants selecting at least one improvement option for the specific product across the last five weeks of the experiment represent traffic along the edges of the graph (Aho, Garey & Ullman, 1972, pp. 132). The most densely populated path representing an end-to-end connection throughout the graph is highlighted in black, if existent. Traffic along this path is a percentage of total participants, who have made choices for the specific products for the entire five weeks.

### *III.-6.2.2 Incremental Limited-Edition improvement: results and discussion*

At first glance, the Limited-Edition price effects for the smartphone wallet shown in table III-11 seem disappointing, especially when keeping in mind, it is one of the more conspicuous products in the study. With a main effect only weakly significant and non-significant price effects for base effect and the majority of individualisations. The reason for this picture can be found tracing back the paths of singularities: for no other product the same respondents opted more often for a combination of base level and first of the line individualisation. With a minority of them also opting for increased competition (see figure III-3). The remaining respondents either skipped base level, picked a serial number personalisation (mostly lucky number) and opted for base products in the meantime or opted for base products at all.

Though, the graph shows a completed connection along the entire Limited-Edition enhancement path, it also shows diffusion of that path from CL onwards reaching its climax after LF, making significant effects for LC impossible. Fragmenting of effects in personalisation stage (LI, LF, LL) makes empirically seizable effects elusive.

| **Smartphone wallet** | | | | | **Messenger bag** | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Var | Estimate | Pr(>\|t\|) | | Singularities | Var | Estimate | Pr(>\|t\|) | | Singularities |
| Q6_LE | \|0,1575\| | 0,0943 | . | | Q6_LE | \|0,2552\| | 0,0000 | *** | |
| Q6_LC | \|0,0306\| | 0,2040 | n.s. | | Q6_LC | \|0,0450\| | 0,0154 | * | |
| Q5_LF | \|0,0116\| | 0,5653 | n.s. | | Q5_LF | \|0,0219\| | 0,0876 | . | |
| Q5_LL | \|0,0044\| | 0,8363 | n.s. | | Q5_LL | \|0,0167\| | 0,3791 | n.s. | |
| Q5_LF | \|0,0313\| | 0,1055 | n.s. | Alt: CL, LE | Q5_LI | \|0,0957\| | 0,0000 | *** | Alt: LE |
| Q5_LI | \|0,0591\| | 0,0943 | . | Alt: LE | Q4_CL | \|0,1914\| | 0,0000 | *** | Alt: LE, LI |
| Q4_CL | \|0,0626\| | 0,1050 | n.s. | Alt: LE, LF | | | | | |

**Table III-11: Limited-Edition stages results for conspicuous products**
(Results computed in R: R-Core Team 2017)

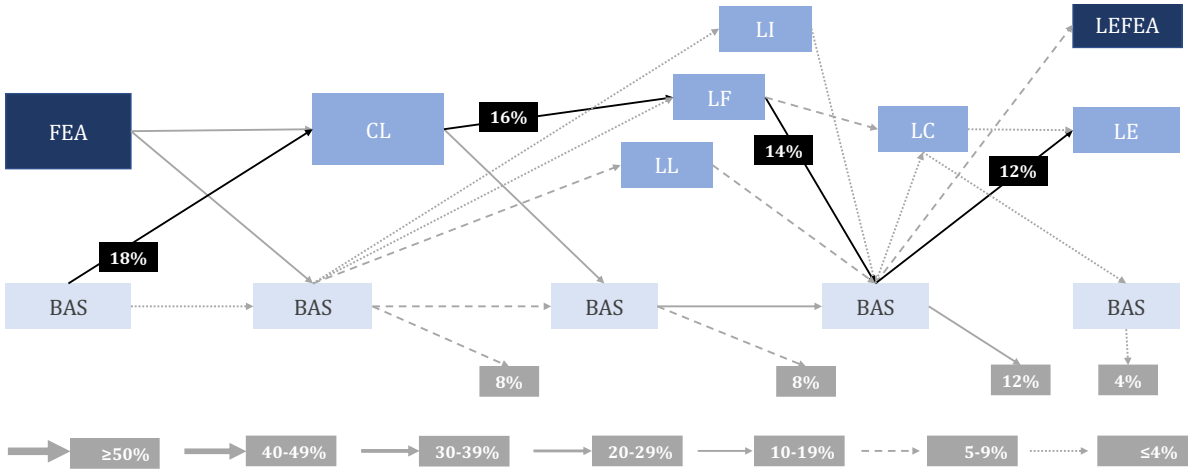



**Figure III-3: Choice graph for smartphone wallet**

The messenger bag's price is also subject to singularities, but to a somewhat lower degree. The strongly significant main effect for Limited-Edition stems mostly from a strong majority opting for base level, but many of them not opting for either personalisation or competition. Compared to the smartphone wallet, especially personalisation is much more driven by new entries in stage 5, as shown in the main improvement path in figure III-4. Participants waived CL after feature choice in favour of first of the line personalisation. Onwards, it were mostly the same participants seeking for increased scarcity (LC) in the subsequent stage. Rather than selective choice behaviour, this probably expresses a judgement about base level as a too weak signal of scarcity. Akin to the case of the smartphone wallet, a small group steadily personalises their product choice and tries to ensure against followers by limiting availability.

Non-significant overall effects for competition are reflected by no new entries in stage 6. Effects for personalisation are either weakly significant or weakly fail to reach significance. Although, there is a higher number of new entries during personalisation, fragmentation of this already relatively small group across the three choice options of this stage diminishes chances of reaching empirical support. This is especially true for the elicitation of combined price effects for Limited-Edition and feature, as it is the case for the final full regression. For both products, choice fragmentation during personalisation and competition phase are also supported for the respective main effects (LC, ID) in the final regression after 7 weeks.

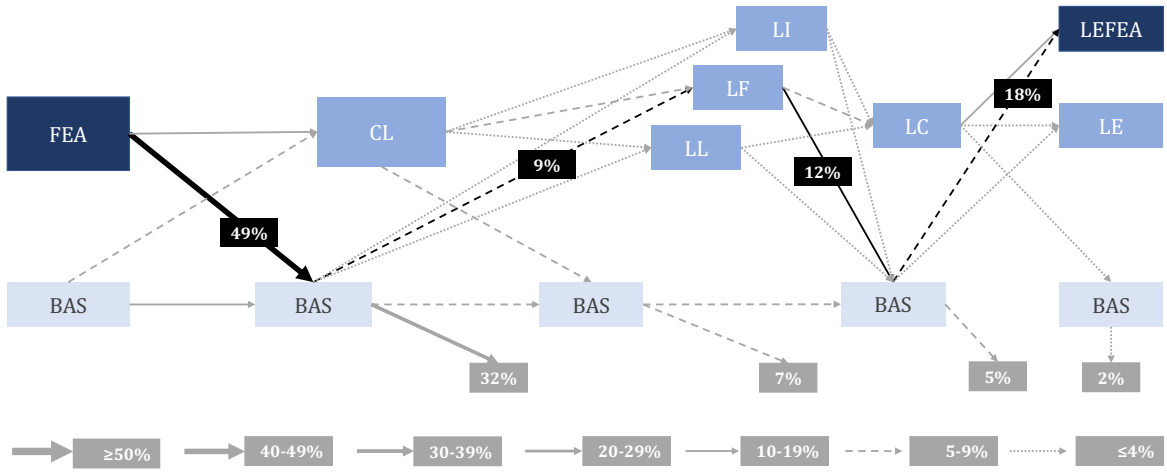



**Figure III-4: Choice graph for messenger bag**

| **Shower curtain** | | | | | **PC-mouse** | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Var | Estimate | Pr(>\|t\|) | | Singularities | Var | Estimate | Pr(>\|t\|) | | Singularities |
| Q6_LE | \|0,1896\| | 0,0000 | *** | | Q6_LE | \|0,3000\| | 0,0227 | * | |
| Q6_LC | \|0,0659\| | 0,0509 | . | | Q6_LC | \|0,0280\| | 0,0310 | * | |
| | | | | | | | | n. | |
| Q5_LF | \|0,0031\| | 0,0477 | * | | Q5_LF | \|0,0240\| | 0,2667 | s. | |
| Q5_LL | \|0,0118\| | 0,8666 | n.s. | | | | | | |
| Q5_LI | \|0,0711\| | 0,0509 | . | Alt: LE, CL | Q5_LL | \|0,0375\| | 0,031 | * | Alt: LE |
| Q4_CL | \|0,1421\| | 0,0509 | . | Alt: LE, LI | Q4_CL | \|0,1231\| | 0,0257 | * | Alt: LE, LF |
| | | | | | Q5_LI | Option not selected | | | |

**Table III-12: Limited-Edition stages results for non-conspicuous durables**
(Results computed in R: R-Core Team 2017)

As already mentioned in the previous chapter III.-6.1, the shower curtain's strong significant main effect is somewhat unexpected, given it is a non-conspicuous durable. Price effects mostly stem from personalisation of serial numbers, especially for first of the line products, but partly also from competition. However, tracing back the choice paths, the significant effects mostly stem from new entries in all stages, as shown in figure III-5. Rather than even a small group of participants consequently following a path of either individualisation, competition or a combination, as in case of conspicuous products, respondents make selective choices, which is reflected by the broken connection in the Limited-Edition improvement path: there is no connection between either step of personalisation an LC. Instead, there are more edges counter-cornered to either LE-path or BAS-path, which literally displays selective choice behaviour. Even more, figure III-5 illustrates, that this product does not even allow for a thoroughly connected improvement path from end to end.

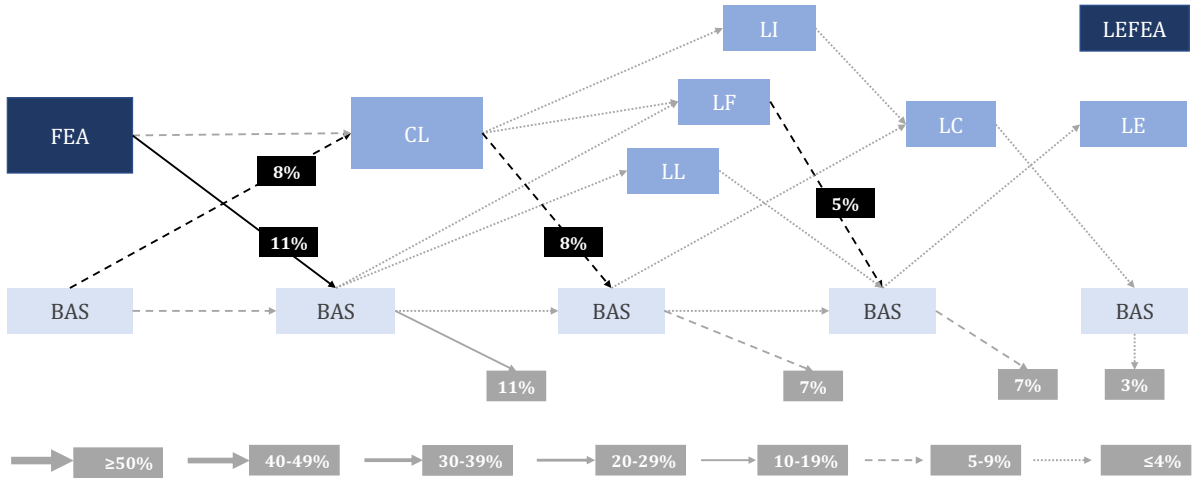



**Figure III-5: Choice graph for Shower curtain**

Limited-Edition effects for the PC-mouse are significant, but low in magnitude. Scarcity choice behaviour is even more selective, than in case of the shower curtain, which is once again reflected by more densely populated diagonal edges in the graph. Only very few respondents opting for base level, have picked any further improvement of Limited-Edition. This results in a very weakly populated Limited-Edition improvement path from the beginning on. Population along this path further thins-out until it gets interrupted after LC. Furthermore, no respondent opted for a lucky number serial and first of the line serial is also not significant. This selective conduct is also reflected by low singularities between variables. As shown in table III-12, after controlling for singularities, last of the line product individualisation was found to be significant, but at low effect size. Rather than a true preference for the last product, this can be seen as a preference for mature products, as a PC-mouse is a good of

daily use, where reliability plays an important role. In the final regression, this selective behaviour gets reflected by highly significant coefficients with a low effect size for both variables and both products. Significance level gets triggered by a relatively high number of new entries, yet price effects remain low, as other variables are more important in terms of price effects.

| **Sugar** | | | | **Chocolate bar** | | | | |
|---|---|---|---|---|---|---|---|---|
| Var | Estimate | Pr(>\|t\|) | Singularities | Var | Estimate | Pr(>\|t\|) | | Singularities |
| Q6_LE | N/A | | | Q6_LE | \|0,5037\| | 0,0006 | *** | 0,0006 |
| Q4_CL | N/A | | | Q6_LC | \|0,0890\| | 0,0023 | ** | 0,0023 |
| Q6_LC | Option not selected | | | Q5_LF | \|0,0630\| | 0,0006 | *** | Alt: LE |
| Q5_LF | Option not selected | | | Q4_CL | \|0,1260\| | 0,0006 | *** | Alt: LE, LF |
| Q5_LL | Option not selected | | | Q5_LL | Option not selected | | | |
| Q5_LI | Option not selected | | | Q5_LI | Option not selected | | | |

**Table III-13: Limited-Edition stages results for consumables**
(Results computed in R: R-Core Team 2017)

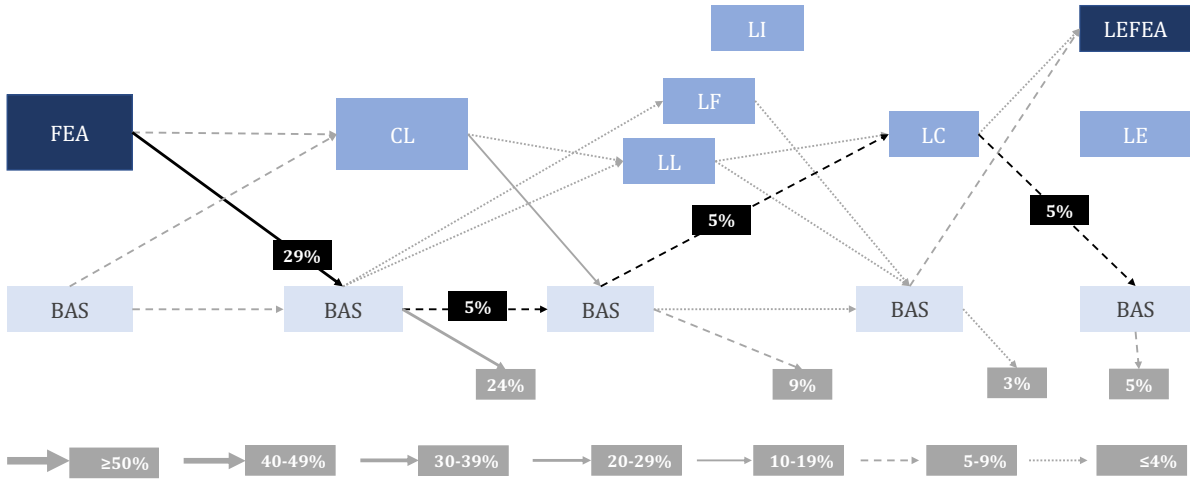



**Figure III-6: Choice graph for PC-mouse**

Having shown a weakly significant effect for Limited-Edition in the Anova after the first two stages, there is no Limited-Edition effect left in case of sugar at all after stage 6. This reflects the expectation of a pure commodity made in the beginning. In comparison to that, the chocolate bar shows a strong Limited-Edition main price effect throughout the stages of scarcity judgements. Akin to the non-conspicuous durables, there are low singularities between variables, reflecting a selective purchase behaviour. The strongly significant stage effects for base effect, personalisation and competition are triggered by steady a variation of consumers. Contrary to a typical Limited-Edition, a strong competition effect may simply stem from the fact that this product represents a combination of impulsive purchase and consumable, where resales are impossible once the owner seeks to exploit the product's utility. As

individualisation is on the one hand triggered by new entries, but limited to first of the line serials, the ID-effect in the overall regression does not reach significance. Compared to the non-conspicuous durables new entries in stage 6 are also too few to account for a significant LC-effect in the final regression.

Although, both sugar and chocolate bar are differing in their Limited-Edition price effects, their graphs display a common picture. In both cases, the main path never turns to the Limited-Edition improvement path. Rather both graphs display more or less densely populated mere connections of feature offers (figure III-7).

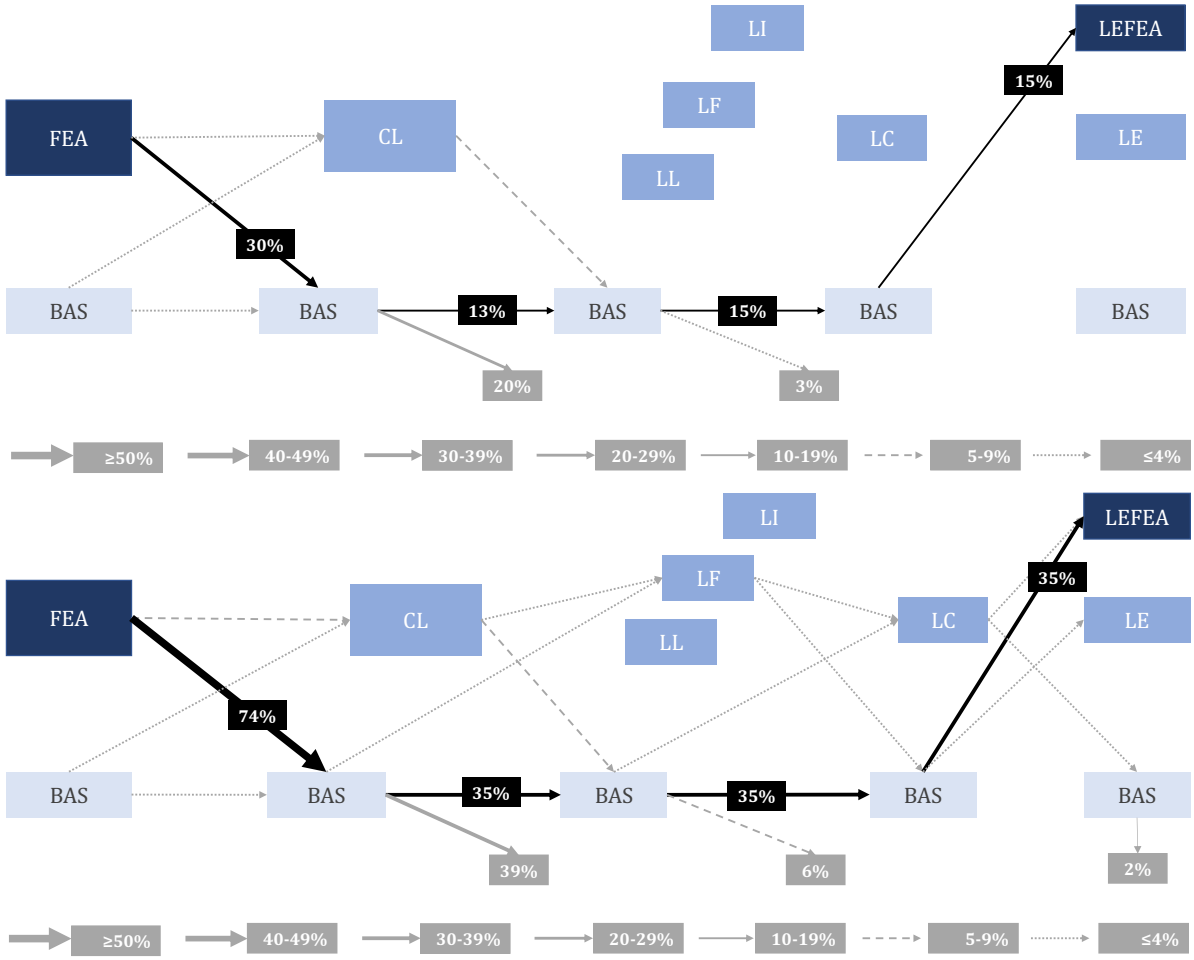



**Figure III-7: Choice graph comparison of sugar (top) and chocolate bar (bottom)**

In sum, the analysis results show that Limited-Edition choices are triggered by different motivations. Selective choice behaviour allows for significant price effects, mostly because of the variety of participants making isolated choices of product enhancement. Directed choice graphs and singularity analysis show, that Limited-Edition choices can be triggered by the same individuals, following a clear strategy of differentiation, often involving further restrictions of availability. This is especially true for conspicuous products, which were the only products in the study displaying a connected path of Limited-Edition choice. Except for the

pure commodity, where absence of scarcity effects on price was expected, all products show price effects for either personalisation or increased competition. Hypothesis 3 is thus supported not only for conspicuous products as proposed.

## III.-6.3 Time effects on price subject to product improvement offers: Limited-Editions and features vs. predetermined price mark-downs

### *III.-6.3.1 Time effects on price subject to product improvement offers: procedure description*

Remember, that the structure of the choice game brought respondents on an increasing price path, whenever improvements were chosen in the previous round. To clearly contrast from the increasing path, respondents were on a decreasing path, whenever base product options were chosen. This model configuration offers not only an additional incentive to pick base product. It also allows for a clearer differentiation of customer types and makes time effects on price measurable. As a side-effect, it comes closer to reality, as it represents a fast-forward simulation of price declines along product life-cycle. These price declines, known as skimming or mark-down pricing are common in many retail environments (Vinod, 2004, pp. 363). Akin to practice applications, price declines in this study are pre-determined as a function of sales time left (Zhao & Zheng, 2000, pp. 376). The basic assumption in this case is, that there is a price decline over at least the last four weeks of the experiment, resulting in a last round lower bound price of 77,96% of the round 3's base price. Pre-determined mark-down was modelled as a decreasing price ladder with fixed increments at an average of 5% per week, exactly matching the proposal made by Heching, Gallego and van Ryzin (2002, pp. 152). Any value better than the lowest price bound of each week, reflects mitigation of that mark-down. In this study, mitigations may either be attributable to features, Limited-Edition choices or both. The effect is measured in two ways: modelling of price effects using a survival analysis and the BAS-variable in the final regression as mentioned in chapter III.-5.

For survival analysis, Kaplan-Meier curves have been computed for each product (Therneau, 2015). In each comparison situation, the Kaplan-Meier curve for the product was compared to the skimming scenario which each respondent was exposed to filling-in the questionnaires of the experiment. Respondents could theoretically pursue this pure skimming scenario by picking the cheapest choice option in every stage of the experiment. Survival analysis is a method typically used in medicine. A population is observed or surveyed over several time periods. This population declines every time a predefined event occurs to a study participant. An event could be cure from a disease for example. All other participants remain 'at risk' of experiencing the event as long as in study (Rich, Neely, Paniello, Voelker, Nussenbaum

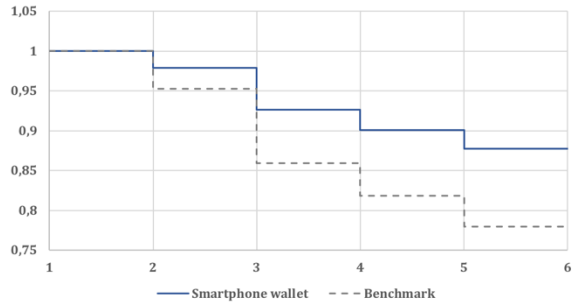
& Wang, 2010, pp. 333). In this case, average stage price outcome was modelled as the subject at risk of skimming. As the dependent variable is only allowed to decline by definition of method, average stage prices after stage 3 were taken as denominator. It represents not only every product's peak price level during study. It also represents first price level in study after ensuring respondents follow utility maximising conduct as reflected by highly significant results for feature-willingness to pay as shown in chapter III.-6.1. Subsequent stage price means have been plotted according to period and each margin resulting from comparison of current stage price mean and adjacent predecessor represents an event happened. Thus, population represented by stage 3 price mean declines over the four periods being observed.

### *III.-6.3.2 Time effects on price subject to product improvement offers: Results and discussion*

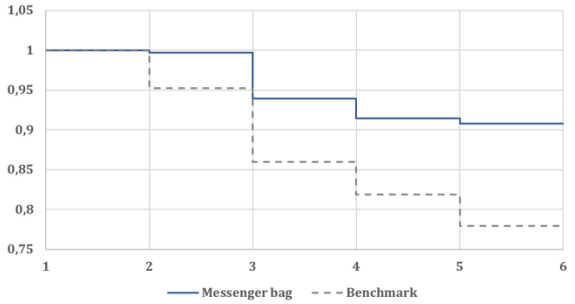
Besides face validity of the Kaplan-Meier comparisons of pure skimming benchmark and product curve shown for each product in figure III-8, the difference between both cases was also tested using a Cox regression (Therneau, 2015): significance of product-ß is given, if p-value < 0,05, which is the case for all products as shown in table III-14. Product-ß estimator can be interpreted that an increase of product by one unit equals a log-mitigation of skimming given by ß-estimate. The margin in product by one unit represents the difference between a product without improvement options (benchmark; dashed line in figure III-8) and the same product with improvement offers, which represents the actual mean price outcome of the experiment shown as the solid line in figure III-8.

Table III-14 shows the results in a decreasing order of mitigation effect sizes. Results of the regression clearly show the highest effects of mark-down mitigation for the two most conspicuous durables in the study. However, differences in effect sizes between messenger bag and smartphone wallet are larger than between smartphone wallet and chocolate bar. Taking Kaplan-Meier curves into account, it can be clearly seen, that chocolate bar and messenger bag perform strong in tm=2, which is base level Limited-Edition. Whereas the chocolate shows a strong price decline during personalisation (tm=3), the conspicuous durables remain relatively strong against mark-downs. On the contrary, PC-mouse and shower curtain display a constant level of price decline across all stages. As discussed in chapter III.-6.2 it is the selective choice behaviour of their consumers which accounts for the significant mitigation. Although, they also benefit from a relatively strong performance of the feature, granting them a relatively high stage 3 mean, a considerable part of their mitigation effect also originates from Limited-Edition choices. The sugar on the other hand, secures its weak in magnitude, but strongly significant mitigation effect entirely by strong feature sales.

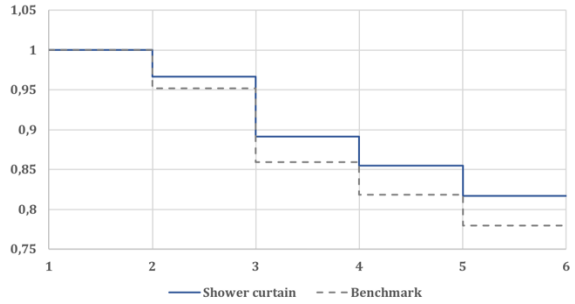
**Smartphone wallet**



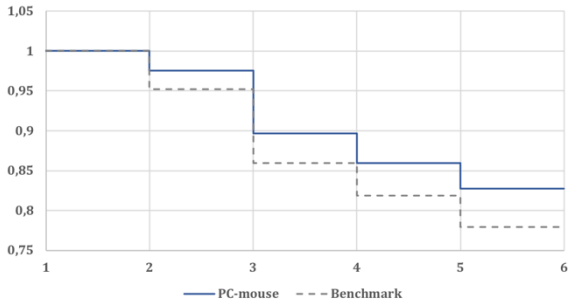

**Messenger bag**



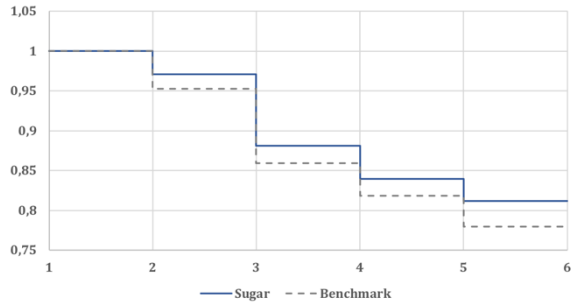

**Shower curtain**




**PC-mouse**




**Sugar**




**Chocolate bar**

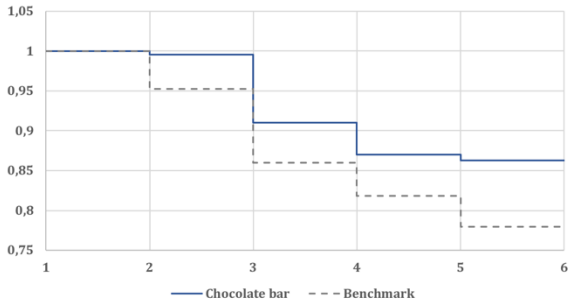



**Figure III-8: Kaplan-Meier curves of stage price results** (Results computed in R: R-Core Team, 2017; Therneau, 2015)

| | Coefficient | exp(coef) | se(coef) | z | pr | |
|---|---|---|---|---|---|---|
| Messenger bag | -0,9464 | 0,3881 | 0,0392 | -24,1 | <2e-16 | *** |
| Smartphone wallet | -0,6485 | 0,5228 | 0,0357 | -18,2 | <2e-16 | *** |
| Chocolate bar | -0,5264 | 0,5907 | 0,0344 | -15,3 | <2e-16 | *** |
| PC-mouse | -0,2817 | 0,7545 | 0,0322 | -8,76 | <2e-16 | *** |
| Shower curtain | -0,2171 | 0,8048 | 0,0316 | -6,86 | 6,90E-12 | *** |
| Sugar | -0,1811 | 0,8343 | 0,0314 | -5,77 | 8,00E-09 | *** |

**Table III-14: Results of Cox regression** (Results computed in R: R-Core Team, 2017; Therneau, 2015)

While Cox regression provides a full comparison of price trend, price effects of time were also measured using the BAS-variable in the full regression after seven weeks. Results, shown in table III-15 are ordered in an increasing order and mirror those of the Cox regression. In case of the conspicuous durables, effects do not even reach significance, implying an abolition of time effects on price. In sum, hypothesis 4 is supported.

| Messenger bag | | Smartphone wallet | | Chocolate bar | | PC-mouse | | Shower curtain | | Sugar | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| -,0507 | n.s | -,0940 | n.s | -,1372 | *** | -,1858 | *** | -,2389 | *** | -,8619 | *** |

**Table III-15: Regression results for time effect on price variable** (Results computed in R: R-Core Team, 2017)

## III.-6.4 Price effects: influences of personal traits and explorative results

### *III.-6.4.1 Price effects of sociodemographics and general attitudes towards Limited-Editions*

Among the sociodemographic variables with significant price effects over the entire study period, is education in case of the messenger bag. The effect is weakly significant at the 10%-level and weakly negative in magnitude (-,0106): people with a weakly lower than average education are marginally more likely to pay higher prices on product improvements in general. The significant price effect of sex (5%-level) in case of the chocolate bar, is not very surprising. Given its weakly negative in magnitude, it indicates, that men are marginally more likely to pay higher prices on product improvements. Sociodemographic price effects restricted to Limited-Edition choices, are education in case of sugar (5%-level) and chocolate (5%-level). As both are marginally negative in magnitude, they once more indicate men being marginally more willingness to pay for Limited-Editions.

Price effects for subsamples indicate weakly positive (all at 10%-level) effects for FR-dummy variable. For all over price effects, this is true for the PC-mouse (,0024). For Limited-Edition choices, this is true for messenger bag (,0180) and PC-mouse (,0194). These effects were tested for interactions with education and age, as the FR-sample is younger and more educated in average. These tests did not result in significant interactions. In case of the messenger bag, pre-study expectations were met, although, the interaction with age was not significant. For the PC-mouse results are somewhat unexpected. However, as all of these effects are only marginally significant and not high in magnitude, their relevance in general can be questioned.

As expected, participants' opinions on Limited-Edition choice have only limited influence on price of product improvements in general. Consequently, over the entire seven weeks only the factor for bandwagon and price-quality inference from chapter III.-4.2 has a highly significant (1%-level), but marginally negative (-,0066) influence on price in case of the chocolate bar. It means, that willingness to pay for product improvements in general marginally decreases the more people buy the product, the more expensive the product is, because price is not an indicator of quality. Although, effect size is very small in magnitude, it indicates, that variety seeking for consumables may be more propelled by curiosity than price (vanTrijp, Hoyer & Inman, 1996, pp. 289). And of course: variety seeking has nothing to do with other people buying the same product, as it relies on remedy of individual choice problems (McAlister & Pessemier, 1982, pp. 320).

Willingness to pay for variations of Limited-Editions, is marginally (10%-level; ,0103) increased by the frenzy-factor from chapter III.-4.2 in case of the messenger bag. This is typical for Limited-Edition choice behaviour: the fear to miss an important opportunity, low perceived availability due to relatively empty shelves and the increasing possibility of buying frenzies let participants increasingly turn towards Limited-Edition improvement. Personalisation is driven by the fear to miss their specific individual item. Competition gets increased to ensure others will miss this important opportunity. There is also a significant (5%-level), but very low in magnitude positive (,0002) price effect of brand in case of the PC-mouse. Marginally negative in magnitude and significance (-,0075=sugar; -,0059=chocolate bar; both 10%-level), effects for fear to miss an important opportunity in case of the sugar and quality inference from high demand, are basically confirmations for two facts: the sugar is a pure commodity, hence, there is no important opportunity to be missed. In case of the chocolate, it once more confirms, that purchasing chocolate is a matter of variety seeking, which can per se not be driven by the fact, that many others bought the same product as well as mentioned above.

### *III.-6.4.2 Explorative indicators of excluded products: results and discussion*

Three products were removed from main analysis. These products are tablet-PC, red wine and wake-up light. Although, statistically significant effects can be questioned, subject to low sample sizes, some results are too remarkable to ignore. Note that results in this chapter should be strictly treated as tendencies or indicators, mostly for tablet-PC and red wine. Gaining tendencies or indicators for wake-up light remained difficult, except for Kaplan-Meier curves and time effect analysis. As both are less sensitive to sample size violations, values for all three products could be computed. Gained indicators show a mitigation of skimming

especially for the two technology products and a weaker, but still large enough (appendix III-21) effect for red wine as shown in figure III-9.

The remainder of results is interesting, as they either confirm insights already gained from the other products, despite sample size issues. Other results gain remarkableness, because of a small sample size turning the same way in terms of purchase decisions, indicating what can be called a 'fan-product'. For tablet-PC and red wine indicators seem to confirm hypothesis 1 as shown in table III-16 with a clearer tendency for the former.

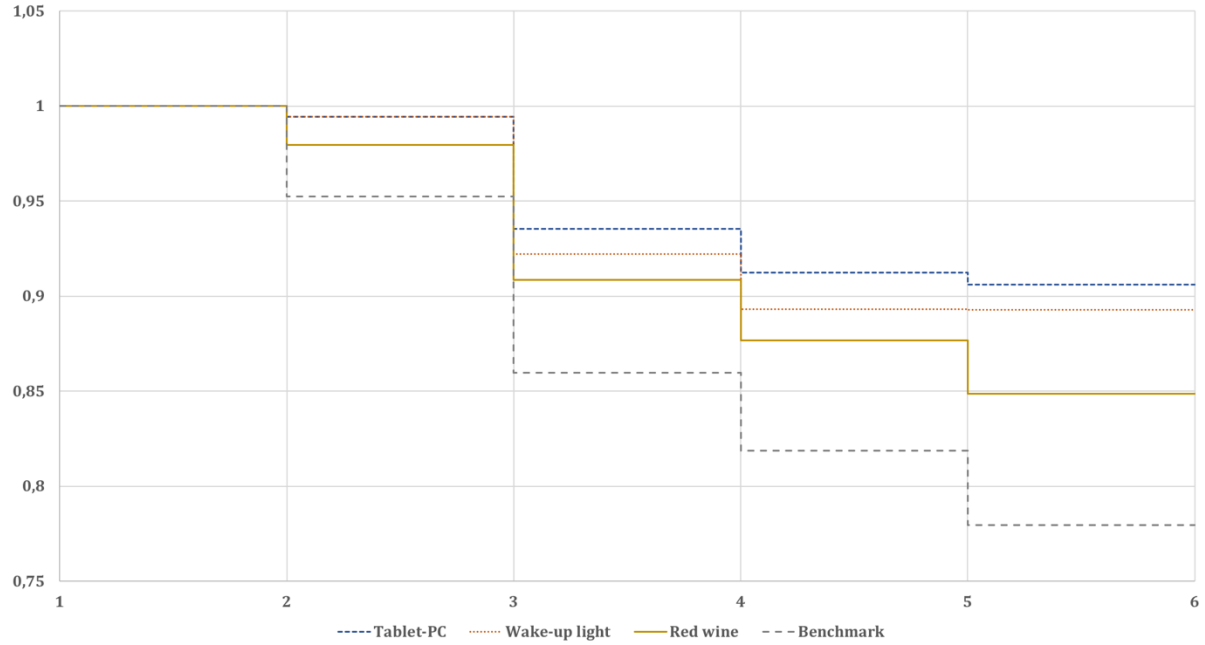



**Figure III-9: Kaplan-Meier curves of explorative stage price results** (Results computed in R: R-Core Team, 2017 ; Therneau, 2015)

| | Tablet-PC: F(1,70) | | | Red wine: F(1,60) | | |
|---|---|---|---|---|---|---|
| NONE_FEA | 61,92 | 3,18e-11 | *** | 18,95 | 5,31e-05 | *** |
| NONE_LE | 10,00 | 0,0023 | ** | 5.77 | 0,0194 | * |
| LE_FEA | 15,06 | 0,0002 | *** | 4.11 | 0,0472 | * |
| | μ(NONE)<μ(LE)<μ(FEA) | | | μ(NONE)<μ(LE)<μ(FEA) | | |

**Table III-16: Explorative Anova results for tablet-PC and Red wine**
(Results computed in R: R-Core Team, 2017)

Tablet-PC was originally selected to represent a mixture of high-tech and conspicuous product. The first trait can simply be derived from product category. The second trait arises, as an Apple product was chosen intentionally for that reason. Conspicuousness effects got finally confirmed during pre-test (see chapter III.-3). Each category isolated would cause opposed price effects with an expected strictly negative influence on price in the former case. Conspicuousness can be expected to exert positive price effects, especially in combination with Limited-Editions (Amaldoss & Jain, 2008, pp. 938). Negative price effect of time got fully

confirmed, while positive Limited-Edition main effect over the full seven weeks was not confirmed. Indicators show that adding a feature seems much more promising in terms of the tablet-PC with a positive main effect. Combined effects for feature and Limited-Edition are not as promising as the interaction of feature and Limited-Edition. This would imply a limitation of the feature offer, which is confirmed by Apple's strategy: limited quantity scarcity is only weakly deployed as in case of the unique piece yellow aluminium case, blue calf leather smart case iPad Pro, exclusively produced for an auction (Nield, 2016; Bolton, 2016). Limited time scarcity is more often used as in case of special edition smart cases (Apple, 2018). However, both editions were combinations with charity purposes. Analysis during Limited-Edition stages (4-6) indicated main effects, mostly stemming from personalisation of serial number. Once again, effects of quantity were higher for first of the line products, while price effects were larger for lucky number serial. Negative base effects indicate a majority of base effect voters moved on for further improvements of Limited-Edition as shown in the choice graph (figure III-10) below. The choice graph also shows a connected end-to-end Limited-Edition path almost equally populated as the main path connecting feature and combination. Unique for this choice graph is not only the existence of two parallel choice paths. This may reflect Apple-fans going the path of scarcity, yet, simple users derive more utility from the feature. While former is unique for Apple-products the latter reflects typical choice conduct for technology products. However, finally both paths merge in the combination of Limited-Edition and feature.

Choice graph for red wine shows the only consumable in study with a main improvement path through Limited-Edition main path. This is fortified by strong indicators for lucky number personalisation, competition and Limited-Edition main effect. However, the latter turns negative for the full seven weeks. This indicates the feature – being a qualified denomination of origin – may be a relatively stronger driver of price effects. The negative Limited-Edition main effect may also originate from the fact, that for matured alcoholic beverages numbered Limited-Editions are rather perceived as a standard signal of quality, especially in the premium sector. Raising additional willingness to pay becomes, thus, less likely. This is further confirmed by the tendency to slightly decrease willingness to pay for the combined factor of quality inferences from high demand and Limited-Edition signalling: premium red wine is a connoisseur product, where buyers usually rely on their own taste, rather than the tastes of others. Limited-Edition in this case signals standards of production and quality, rather than uniqueness to differentiate products from competitors.

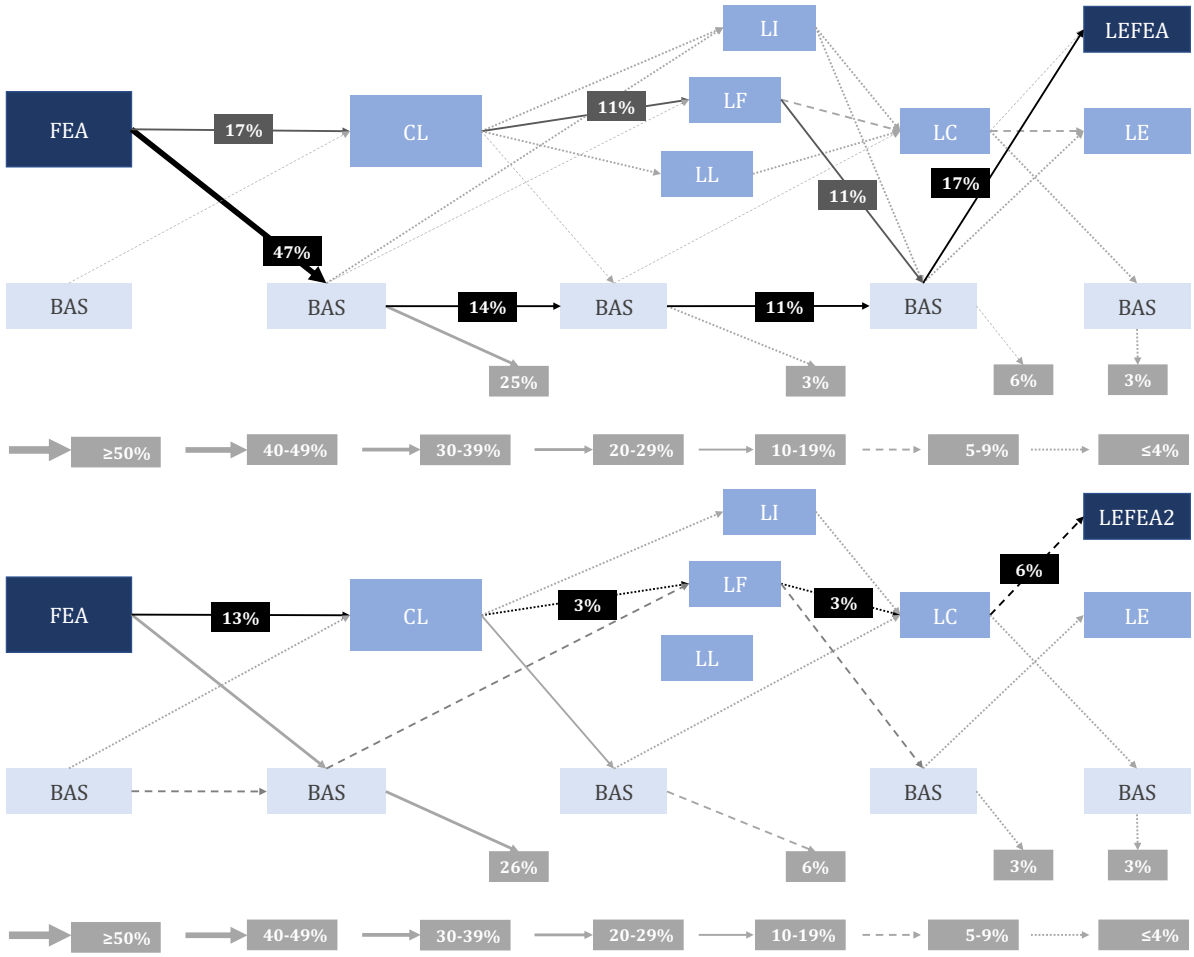



**Figure III-10: Choice graphs of tablet-PC (top) and red wine (bottom)**

# III.-7 Implications and discussion

## III.-7.1 General discussion

Starting point for this research was to fill the gap of willingness to pay in the context of scarcity messages. At the same time, retailers' recently developed consuetude to name scarcity messages among product features subsumed with a price tag was tested against advices from Verhallen (1982) and Lynn (1991) to place scarcity messages in solitude. To attain this goal a stated preference choice game was created as a paper pencil derivative of conjoint analysis in order to underline shopping decisions not to be made online. Serial number accentuated Limited-Edition was chosen as the most effective, yet, most severe supply side commitment to scarcity. Limited-Edition variations asked, were consequently highlighted as the sole differentiating feature of product choice and placed next to price information to ensure participants inferred to relationship between both. To compare alternating and combination effects, features as changes in the physical product were introduced. In order to measure price effects of Limited-Edition and feature offers over time, the experiment was stretched over a period of seven weeks with five weeks for the choice game part. To additionally incentivise

participants and ensure an alternative price path to product improvement, a predetermined mark-down path was implemented. Sociodemographics and respondents' opinions on scarcity strategies, price and quality inferences were retrieved.

Sociodemographic results were sparse with only men being found to have a weakly higher WTP for product improvements in general. Measures of subsistence and stability of subsistence have no influence on either choice behaviour. Limited-Edition choices could well be predicted by the fear of missing important shopping opportunities, the assumption of frenzy creation and the heuristic to opt for the product from the relatively emptier shelf. This is especially true for conspicuous products.

Willingness to pay for Limited-Editions was found for all products except for the pure commodity. In this case offering a Limited-Edition even produced a negative effect on price. Except a minority of consumers opting for a change in the physical product, the pure commodity also exhibits the strongest mark-down effect of all products, which means that consumers almost solely make price-based decisions. Grocery store conduct to start price wars on pure commodities such as milk, sugar or eggs is thus once more confirmed (Heil & Helsen, 2001, pp. 94). On the opposite end of spectrum, are conspicuous products, where time effects on price could be fully compensated with feature and Limited-Edition offers. In sum, mark-down mitigation for conspicuous products is more triggered by Limited-Edition offers, while hedging against mark-downs for non-conspicuous products is more driven by any kind of change in the physical product. As proposed by Amaldoss and Jain (2008, pp. 939), Limited-Editions of conspicuous goods are stronger profit drivers when compared to changes in the physical product by the addition of features in general. A new and somewhat surprising result is that Limited-Editions also raise a higher willingness to pay than a combination of feature and Limited-Edition. One exception to this, is illustrated by the significant interaction of feature and Limited-Edition: if the feature gets restricted in supply as well, it raises additional willingness to pay. Nonetheless, combinations of Limited-Edition and feature have been highly significant for all conspicuous products and the strong tendency towards this offer is also reflected in the majority of choice graphs. Hence, these offers are attractive choice options especially for products at the end of life cycle.

Although, it was out of this study's reach to explicitly control for reference group effects, snob behaviour is clearly visible for conspicuous products: a small group of participants consequently personalises their Limited-Edition choice and ensures against too many followers by spending additional money on a further restriction of supplied quantity.

That even non-conspicuous durables may benefit from Limited-Edition offers, was impressively demonstrated in case of the shower-curtain. Given it is a mass product of mostly private usage, a utilitarian feature was expected to have a stronger price effect than Limited-Edition offers. Though, within this study it represents the cheapest combination of individualisation, self-expression and low effort home improvement. Self-expression through home improvement is mostly known in conjunction with do it yourself (Williams, 2008, pp. 321). The shower curtain fulfils that need, without the effort necessary in case of usual do it yourself handcrafts. Yet, it allows for a considerable level of self-expression as this mass product merges into the home furniture mosaic, which was created already by its owner. Entry level Limited-Edition may already fulfil the need for sensation seeking, which is an important motive for variety seeking behaviour (Mc Alister & Pessemier, 1982, pp. 318). Personalisation of Limited-Edition – especially lucky number personalisation – helps the buyer to deepen self-expression. Limited-Edition offer may, thus, have been the cherry on the cake, which further strengthened curiosity, while the low price reduced the risk of failed investment. Both curiosity and attractive pricing are among the main motives for variety seeking, according van Trijp, Hoyer and Inman (1996, pp. 289) and make consumers usually switch between different suppliers. In this case, it may be the variety offered by one supplier, which makes consumers switch between different versions of the same product from the same supplier. The PC-mouse for example, which was the other non-conspicuous durable chosen may provide a relatively low price, implying low risk of bad buy, but opportunities to express oneself are meagre. Consequently, price effects from Limited-Edition offers are low to non-existent and consumers rather seek to increase usage value by opting for the feature. A trait which is also shared with inexpensive consumables. Both are rather unsuitable to public usage. The lack of price effects in case of consumables may also be explained by the fact that they are by definition not there to last.

## III.-7.2 Managerial implications

Both Limited-Editions and changes in the physical product provide cost-efficient ways to take price pressure from a product. Both are rather low-level improvements to a product, but they were sufficient to trigger consumers' curiosity in case of non-conspicuous products, while creating or restoring a product's exclusivity in case of conspicuous examples. Moreover, the more conspicuous and unique the product is, the higher is consumers' propensity to improve 'her' or 'his' Limited-Edition. Marketers, especially of conspicuous premium and luxury products should, thus, not focus on getting a high number of people gathered, before offering Limited-Edition products. This study has demonstrated once more, that especially

conspicuous Limited-Editions cater to a small group of people with a high willingness to pay for uniqueness and an insurance against too many co-owners. For a considerable proportion of participants, making Limited-Edition choices, it was less appealing to own just one piece of a Limited-Edition, instead they were willing to pay more for 'their' unique piece. This additional willingness to pay shows Limited-Editions offers get justified based on price effects rather than sold quantities. Additional revenues can be pocketed by offering individual serial numbers like birthdays or lucky numbers. Offers can be made exclusively to particular customers, as Luxury brand stores usually have a locally defined monopoly. Personal care and contact with customers should, thus, be easier to implement than for mass brands. As waiting lists for Limited-Edition products are a common means of product distribution, customers eager to have first of line products should be listed separately, as this study has demonstrated high competition among customers for this particular single piece. Another strategy already implemented, especially by jewellers and horologists has also found confirmation in this study: a unique feature and a unique product are only feasible in simultaneous limitation. The feature should, thus, not be available in conjunction with non-scarce products. Special gold alloys such as Hublot's (2018b) scratch resistant Magic Gold should, thus, be reserved to Limited-Edition examples only. Although, price effects for pure Limited-Editions have been higher than for combinations with a feature, there is considerable willingness to pay for the combination, especially at the end of product life cycle. This supports the 'Final Edition'-strategy by Mercedes-Benz, yet, especially some visible features like grille, rims and mirror covers should be exclusively reserved to these models, rather than combinations of popular, but widely available features from the model's regular line-up (Hommen, 2016).

For non-conspicuous products, Limited-Editions provide an interesting opportunity to increase website visits or app-user rates by capitalising on a combination of personalisation and participation. Especially for fashion items, limited quantity offers of weakly altered regular products can be distributed using one-to-one contact with customers via smartphone-app, which provide the only way to effectively distribute personalised serials of mass products. Events can be announced using company newsletters or push messaging and may me auctions or first come first serve gatherings possibly including charity purposes. Contrary to conspicuous luxury products, this may not be focussed on increases in revenue, but it increases customer loyalty and may put flagship stores and online or mobile shopping using the brand's proprietary facilities back into customers' mind. Among the examples of special offer gatherings are for example shopping events exclusively arranged for Platinum Card club members by fashion retailer Esprit (2018) for offline events and Late-Night shopping or Crazy nights organised by home electronics retailer Saturn and low-cost airline Germanwings respectively

for online special events (Saturn, 2018; FVW, 2004). In doing so, the way Esprit arranges these events is comparatively closer to the idea of exclusivity and shows that customers' attention unquestionable attracted by either sort of event can also be used to get closer to the consumer by means of uniqueness.

Limited-Edition effects for consumables were twofold: choice graphs showed customers are interested especially in combinations of feature and scarcity message, yet, price effects were low or non-existent. Somehow this can be seen as a confirmation of strategies already applied. Seasonal variations and trial balloons are usually offered with a scarcity message. While the former usually goes with limited time scarcity, the latter goes with limited quantity scarcity. Though, without fulfilling preconditions of a Limited-Edition by definition. This conduct may have an impact on short term sales, but as it already displays some wear given the myriad of pseudo-Limited-Edition chocolate bars, shower gels and shampoos, no customer is willing to pay more for something that is non-unique. Ferrero's (2018) summer break and Ritter Sport's (2016) "Oats and banana"-Limited-Edition show, that limited time scarcity could be the right strategy for regular promotions, while true Limited-Editions in mass markets may only reach their goals using direct customer contact free of third-parties via internet. In the latter case Ritter Sport applied methods like waiting lists and pre-orders usually known from luxury producers to create a frenzy which still produces eBay-bids worth 15 to 20 times the price of a regular chocolate bar (eBay, 2018).

## III.-7.3 Limitations and future research

Shortcomings of this study, are the magnitude of price effects and the lack of customer traits and opinions explaining choice behaviour. Getting back to Lynn's (1989, p. 267) example of an abolished price effect, when a price of US-$20,- was posted for the wine bottle, raises the question if the price chosen by Lynn just deviated from the respondents' expectations. In both cases, Lynn's and this study, the purpose was to find out, if people link scarcity to expensiveness, not to which magnitude of expensiveness. Future studies could, thus, focus on more expensive products and different magnitudes of price premiums to foster insights on the degree of WTP. The construction of this study, derived from conjoint also did not allow to measure, if scarcity effects could have been greater in extent in the absence of price information. Same applies to the difference between types of abundance. Although, it was kept in mind to test a neutral statement like *'As long as stock lasts'* against an obviously abundant product, it was not possible to deepen knowledge in this particular difference. That this question has not lost in relevance, was shown in a pre-test conducted for another study: although, messages like *'As long as stock lasts'* have become widespread in promotions, the majority of

respondents claims to make purchase decisions earlier than in the absence of a scarcity message. Moreover, they perceived more time pressure and linked the message more often with non-conspicuous products. Also, the gradually increasing offer sequence may have produced different results than for example making simultaneous offers for personalisation and increased competition. Albeit, the number of leavers during the conjoint phase was very low, fatigue effects, especially in the later stages can, thus, not be fully ruled out. In terms of shopping motivations in general and motives to increase WTP, subject to improvement offers in particular, a fit of lifestyle traits and participants' opinions about the products would offer interesting insights for market segmentation in the context of Limited-Editions and scarcity messages. Future research could for example capitalise on modelling choices as dependent variable using logit regressions to elicit consumers' purchase motives.

On the other hand, this research introduced two interesting tools originating in operations research and medicine, which are less sensible to low sample sizes, at the same time capable to illustrate customer choices and price effects. While choice graphs are convenient in the context of discovering repeated choices, Kaplan-Meier analyses and Cox regression are capable of showing differences between entire plotted curves.

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# Appendix III

## Appendix III-1:

## 7W questionnaire – Week 1

Univ.-Prof. Dr. Oliver P. Heil (Ph.D.)

Lehrstuhl für Marketing und Allg. Betriebswirtschaftslehre
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### Conjoint Measurement Test

Conjoint Umfragen finden üblicherweise computerbasiert statt. Auf Basis der letzten gegebenen Antwort errechnet die Software jeweils die Frage, die aus Sicht der Gesamtfragestellung eine schnellstmögliche Errechnung des Gesamturteils erlaubt. Dies setzt Probanden künstlich unter Zeitdruck. Im Rahmen dieser Umfrage wollen wir herausfinden, ob das Antwortverhalten unter Stress von einem reflektierten Antwortverhalten wesentlich abweicht. Zudem möchten wir Ihnen die Gelegenheit bieten das Conjoint Verfahren kennenzulernen, indem Sie Schritt für Schritt nachvollziehen können.

In der ersten Runde dieser Umfrage erhalten Sie alle den gleichen Fragebogen. Schon in der kommenden Woche werden Sie individuelle Fragebögen erhalten, bei denen die Fragen inhaltlich auf Ihre Antworten in der Vorwoche abgestimmt sind. Damit dies möglich ist, möchten wir bitten zunächst einen Code zu generieren an dem Sie für uns wiedererkennbar sind, gleichzeitig aber anonym bleiben.

| Bitte tragen Sie hier den ersten Buchstaben Ihres Geburtsorts ein. | Bitte tragen Sie hier die ersten Ziffern Ihres Geburtstags ein. | Bitte tragen Sie hier den ersten Buchstaben Ihres Vornamens ein. | Bitte tragen Sie hier die letzten beiden Ziffern Ihres Geburtsjahres ein. | Bitte tragen Sie hier Ihr Geschlecht ein. |
|---|---|---|---|---|
| | | | | |
| Beispiel: Tragen Sie ein **B** ein, wenn Sie in **B**uxtehude geboren sind. | Beispiel: Angenommen Sie sind am **05**.04.1988 geboren. Dann tragen Sie an dieser Stelle bitte 05 ein. | Beispiel: Tragen Sie hier ein **P** ein, wenn Sie **P**etra heißen. | Beispiel: Angenommen Sie sind am 05.04.19**88** geboren. Dann tragen Sie an dieser Stelle bitte 88 ein. | Zulässige Zeichen: W Weiblich; M Männlich; S Sonstige |



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### Allgemeine Angaben

Sozioökonomische Daten werden zur einfacheren Kundensegmentierung erhoben. Anders als bei einer Umfrage durch ein Unternehmen benötigen wir diese Daten nur für zusammenfassende statistische Auswertungen (z.B. Faktorenanalysen oder Regressionen). Ihren Code benötigen wir ausschließlich um die Datensätze am Ende der Umfragereihe korrekt zusammenzufügen. Nach dem Zusammenfügen wird der Code aus dem Datensatz gelöscht, sodass keine Möglichkeit mehr besteht Rückschluss auf Individuen zu ziehen.

| Ich . . . | . . stimme VOLL zu | . . stimme eher zu | . . bin unentschlossen | . . stimme eher nicht zu | . . stimme NICHT zu |
|---|---|---|---|---|---|
| Ein hoher Produktpreis ist für mich ein Hinweis auf eine hohe Produktqualität. | ○ | ○ | ○ | ○ | ○ |
| Werbung mit künstlich beschränkter Verfügbarkeit (z.B. Limited Editions), empfinde ich als Panikmache. | ○ | ○ | ○ | ○ | ○ |
| Auf der Suche nach qualitativ hochwertigen Produkten, verlasse ich mich auf bekannte Marken. | ○ | ○ | ○ | ○ | ○ |
| Wird ein Produkt von vielen gekauft, ist dies auch für mich ein Kaufargument. | ○ | ○ | ○ | ○ | ○ |
| Aus hoher Produktnachfrage schließe ich, dass ein Produkt qualitativ hochwertig sein muss. | ○ | ○ | ○ | ○ | ○ |
| Wirbt ein Unternehmen mit einer künstlich beschränkten Angebotsmenge, schließe ich daraus eine höhere Produktqualität als bei unbegrenzt erhältlichen Produkten. | ○ | ○ | ○ | ○ | ○ |
| Sehr gefragte Produkte kaufe ich unter anderem auch, weil ich fürchte andernfalls etwas zu verpassen. | ○ | ○ | ○ | ○ | ○ |
| Wenn ich unentschlossen bin, greife ich eher zu einem Produkt, dessen Regalplatz relativ weniger voll ist. | ○ | ○ | ○ | ○ | ○ |

Mein höchster Bildungsabschluss ist... ○ Universitäts-abschluss ○ Fachhochschulabschluss / Meister ○ Abitur ○ Mittlere Reife ○ Hauptschulabschluss ○ Kein Schulabschluss

Ich bin . . . ○ weiblich ○ männlich ○ sonstig

Ich bin . . . ○ ≤18 ○ 19-29 ○ 30-39 ○ 40-49 ○ 50-59 ○ 60-69 ○ ≥70

Ich bin beschäftigt als. . . ○ Führungskraft ○ AkademikerIn ○ FacharbeiterIn ○ ArbeiterIn ○ Verwaltungskraft ○ Auszubildende(r)/Hilfskraft / PraktikantIN

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### Zahlungsbereitschaft

Bitte geben Sie an, wie viel Sie maximal für die unten angegebenen Produkte zu zahlen bereit wären. Runden Sie jeweils auf den vollen Euro (keine Centbeträge). Sofern Produkte in verschiedenen Farben lieferbar sind, gehen Sie der Einfachheit halber davon aus, dass das Produkt in Ihrer Wunschfarbe lieferbar ist.

**FOSSIL iPhone 5s Geldbörse Texture**

Smartphone Etui mit 3 Karteneinschüben und einem Sichtfenster

- Echtes Leder
- Verschiedene Farben
- 3 Kreditkarteneinschübe
- Magnetverschluss

€_ _ _, _ _

**Südzucker Fein Zucker 1000gr**

Ein Kilogramm Küchenrafinadezucker in der Papierverpackung

- Reiner Raffinadezucker
- Feine Kristallgröße
- Universell einsetzbar
- Papierverpackung

€_ _ _, _ _

**IKEA UDDGRUND**

Duschvorhang 200x180 cm wasserabweisend

- Polyesterduschvorhang
- Verschiedene Muster
- Wasserabweisend beschichtet
- Größe: 200x 180cm

€_ _ _, _ _

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**Freitag F12 Dragnet**

Messenger Bag mit Hüftgurt, Größe 360x120x330mm

- Obermaterial: LKW-Planen
- Verschiedene Farben
- Wasserabweisend & strapazierfähig
- Ausreichend Platz für 13" Notebook

€_ _ _, _ _

**Logitech Wireless Mouse M317**

Kabellose, optische Maus mit Trackwheel

- Gummierte Oberfläche
- Verschiedene Farben
- Ergonomisch geformt
- 1 Jahr Batterielebensdauer

€_ _ _, _ _

**Lindt Alpenvollmilch 100gr**

100gr Schokoladentafel aus Vollmilchschokolade

- Alpenvollmilchschokolade
- Verschiedene Geschmacksrichtungen
- Gefüllt mit geschlagenem Schokoladenmousse
- Aromaschutzverpackung

€_ _ _, _ _

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# Appendix III-1:

## 7W questionnaire – Week 1

Univ.-Prof. Dr. Oliver P. Heil (Ph.D.)

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Apple iPad Air 2

Tabletcomputer mit hochauflösendem 9,7" Display

- Hochauflösendes Display (Retina)
- Aluminiumhülle in Gold, Silber und Spacegrau
- 64 GB Speicherkapazität
- WiFi und SIM-Kartenslot

€_ _ _, _ _

Philips Wake-up Light HF3550/01

- Wecker mit Sonnenaufgangssimulation
- Verschiedene Weckmodi wählbar
- iPhone/iPod Dockingstation (iPhone/iPod nicht Bestandteil des Lieferumfangs)
- Steuerung über Sleep-App des iPhones

€_ _ _, _ _


Freixenet Solar Gran Rioja Crianza 2008

- Rotwein aus der Tempranillo-Traube
- 2008 gilt als sehr guter Rioja Jahrgang
- Mindestens 2 Jahre im Eichenholzfass gereift
- Trockener, kraftvoller Geschmack

€_ _ _, _ _

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# Appendix III-1:

## 7W questionnaire – Week 2

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L03A61W

Zahlungsbereitschaft

Neben den Produkten sehen Sie nun die Ergebnisse einer kategorieweiten Internetpreisrecherche, die wir gestern und vorgestern durchgeführt haben. Geben Sie bitte erneut Ihre maximale Zahlungsbereitschaft für die unten abgebildeten Produkte an.

**FOSSIL iPhone 5s Geldbörse Texture**

Smartphoneetui

- Echtes Leder
- Verschiedene Farben
- 3 Kreditkarteneinschübe
- Magnetverschluss

| Untere Grenze | Obere Grenze |
|---|---|
| €12,90 | €499,00 |

€ _ _ _ ,_ _


**Südzucker Fein Zucker 1000gr**

Küchenrafinadezucker

- Reiner Raffinadezucker
- Feine Kristallgröße
- Universell einsetzbar
- Papierverpackung

| Untere Grenze | Obere Grenze |
|---|---|
| €0,65 | €1,29 |

€ _ _ _ ,_ _

**IKEA UDDGRUND**

Duschvorhang

- Polyesterduschvorhang
- Verschiedene Muster
- Wasserabweisend beschichtet
- Größe: 200x 180cm

| Untere Grenze | Obere Grenze |
|---|---|
| €1,99 | €2490,00 |

€ _ _ _ ,_ _

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**Freitag F12 Dragnet**

Messenger Bag mit Schultergurt

- Obermaterial: LKW-Planen
- Verschiedene Farben
- Wasserabweisend & strapazierfähig
- Ausreichend Platz für 13" Notebook

| Untere Grenze | Obere Grenze |
|---|---|
| €8,79 | €346,50 |

€ _ _ _ ,_ _

**Logitech Wireless Mouse M317**

Kabellose, optische Maus mit Trackwheel

- Gummierte Oberfläche
- Verschiedene Farben
- Ergonomisch geformt
- 1 Jahr Batterielebensdauer

| Untere Grenze | Obere Grenze |
|---|---|
| €1,95 | €204,30 |

€ _ _ _ ,_ _


**Lindt Mousse au Chocolat**

100gr Schokoladentafel aus Vollmilchschokolade

- Alpenvollmilchschokolade
- Verschiedene Geschmacksrichtungen
- Gefüllt mit geschlagenem Schokoladenmousse
- Aromaschutzverpackung

| Untere Grenze | Obere Grenze |
|---|---|
| €0,59 | €2,14 |

€ _ _ _ ,_ _

Weiter auf der Folgeseite!

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Univ.-Prof. Dr. Oliver P. Heil (Ph.D.)

Lehrstuhl für Marketing und Allg. Betriebswirtschaftslehre
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L03A61W

**Apple iPad Air 2**

Tabletcomputer mit 9,7" Display

- Hochauflösendes Display (Retina)
- Aluminiumhülle in Gold, Silber und Spacegrau
- 64 GB Speicherkapazität
- WiFi und 3G-SIM-Kartenslot

| Untere Grenze | Obere Grenze |
|---|---|
| €279,90 | €709,00 |

€ _ _ _ ,_ _

**Philips Wake-up Light HF3550/01**

Lichtwecker

- Wecker mit Sonnenaufgangssimulation
- Verschiedene Weckmodi wählbar
- Smartphone Dockingstation (Smartphone nicht Bestandteil des Lieferumfangs)
- Steuerung über Sleep-App des Smartphones

| Untere Grenze | Obere Grenze |
|---|---|
| €79,90 | €302,85 |

€ _ _ _ ,_ _


**Freixenet Solar Gran Rioja Crianza 2008**

0,75l spanischer Rotwein

- Rotwein aus der Tempranillo-Traube
- 2008 gilt als sehr guter Rioja Jahrgang
- Mindestens 2 Jahre im Eichenholzfass gereift
- Trockener, kraftvoller Geschmack

| Untere Grenze | Obere Grenze |
|---|---|
| €4,99 | €7,90 |

€ _ _ _ ,_ _

**Vielen Dank für Ihre Mithilfe!**

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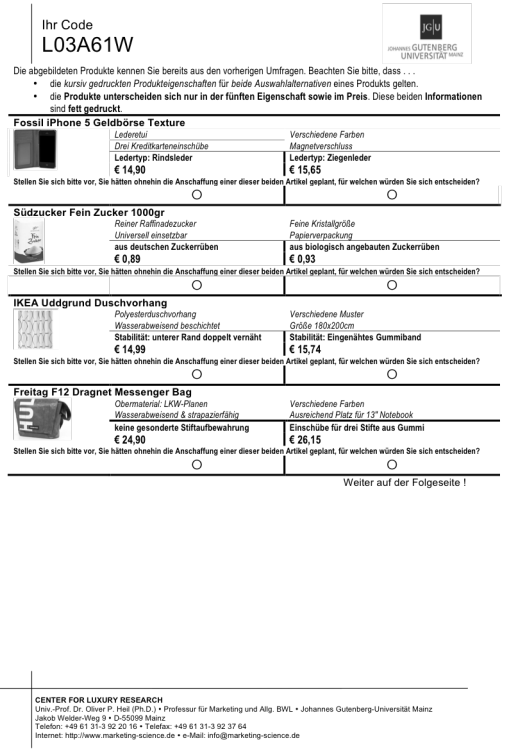
# Appendix III-1:

## 7W questionnaire – Week 3



Ihr Code
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Die abgebildeten Produkte kennen Sie bereits aus den vorherigen Umfragen. Beachten Sie bitte, dass . . .

- die *kursiv gedruckten Produkteigenschaften* für *beide Auswahlalternativen* eines Produkts gelten.
- die **Produkte unterscheiden sich nur in der fünften Eigenschaft sowie im Preis**. Diese beiden **Informationen** sind **fett gedruckt**.

**Fossil iPhone 5 Geldbörse Texture**

| *Lederetui* | *Verschiedene Farben* |
|---|---|
| *Drei Kreditkarteneinschübe* | *Magnetverschluss* |
| **Ledertyp: Rindsleder** | **Ledertyp: Ziegenleder** |
| **€ 14,90** | **€ 15,65** |

**Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?**

○ ○

**Südzucker Fein Zucker 1000gr**

| *Reiner Raffinadezucker* | *Feine Kristallgröße* |
|---|---|
| *Universell einsetzbar* | *Papierverpackung* |
| **aus deutschen Zuckerrüben** | **aus biologisch angebauten Zuckerrüben** |
| **€ 0,89** | **€ 0,93** |

**Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?**

○ ○

**IKEA Uddgrund Duschvorhang**

| *Polyesterduschvorhang* | *Verschiedene Muster* |
|---|---|
| *Wasserabweisend beschichtet* | *Größe 180x200cm* |
| **Stabilität: unterer Rand doppelt vernäht** | **Stabilität: Eingenähtes Gummiband** |
| **€ 14,99** | **€ 15,74** |

**Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?**

○ ○

**Freitag F12 Dragnet Messenger Bag**

| *Obermaterial: LKW-Planen* | *Verschiedene Farben* |
|---|---|
| *Wasserabweisend & strapazierfähig* | *Ausreichend Platz für 13" Notebook* |
| **keine gesonderte Stiftaufbewahrung** | **Einschübe für drei Stifte aus Gummi** |
| **€ 24,90** | **€ 26,15** |

**Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?**

○ ○

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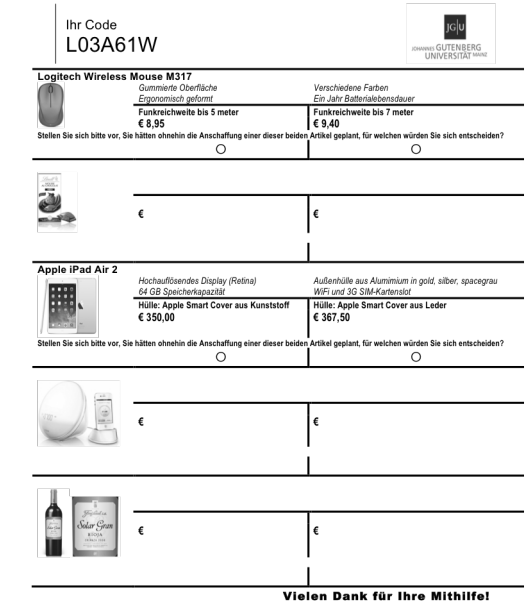

Ihr Code
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JOHANNES GUTENBERG UNIVERSITÄT MAINZ

**Logitech Wireless Mouse M317**

| *Gummierte Oberfläche* | *Verschiedene Farben* |
|---|---|
| *Ergonomisch geformt* | *Ein Jahr Batterielebensdauer* |
| **Funkreichweite bis 5 meter** | **Funkreichweite bis 7 meter** |
| **€ 8,95** | **€ 9,40** |

**Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?**

○ ○

€ €

**Apple iPad Air 2**

| *Hochauflösendes Display (Retina)* | *Außenhülle aus Alumimium in gold, silber, spacegrau* |
|---|---|
| *64 GB Speicherkapazität* | *WiFi und 3G SIM-Kartenslot* |
| **Hülle: Apple Smart Cover aus Kunststoff** | **Hülle: Apple Smart Cover aus Leder** |
| **€ 350,00** | **€ 367,50** |

**Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?**

○ ○

€ €

€ €

**Vielen Dank für Ihre Mithilfe!**

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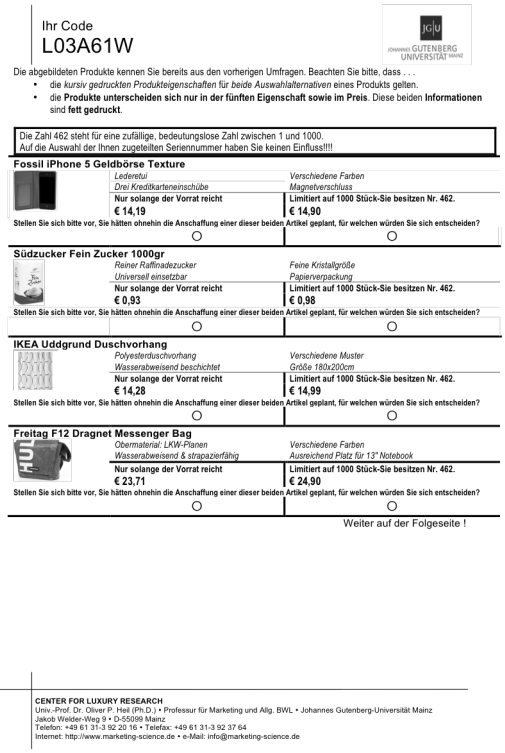
## Week 4



Ihr Code
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Die abgebildeten Produkte kennen Sie bereits aus den vorherigen Umfragen. Beachten Sie bitte, dass . . .

- die *kursiv gedruckten Produkteigenschaften* für *beide Auswahlalternativen* eines Produkts gelten.
- die **Produkte unterscheiden sich nur in der fünften Eigenschaft sowie im Preis**. Diese beiden **Informationen** sind **fett gedruckt**.

Die Zahl 462 steht für eine zufällige, bedeutungslose Zahl zwischen 1 und 1000.
Auf die Auswahl der Ihnen zugeteilten Seriennummer haben Sie keinen Einfluss!!!!

**Fossil iPhone 5 Geldbörse Texture**

| *Lederetui* | *Verschiedene Farben* |
|---|---|
| *Drei Kreditkarteneinschübe* | *Magnetverschluss* |
| **Nur solange der Vorrat reicht** | **Limitiert auf 1000 Stück-Sie besitzen Nr. 462.** |
| **€ 14,19** | **€ 14,90** |

**Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?**

○ ○

**Südzucker Fein Zucker 1000gr**

| *Reiner Raffinadezucker* | *Feine Kristallgröße* |
|---|---|
| *Universell einsetzbar* | *Papierverpackung* |
| **Nur solange der Vorrat reicht** | **Limitiert auf 1000 Stück-Sie besitzen Nr. 462.** |
| **€ 0,93** | **€ 0,98** |

**Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?**

○ ○

**IKEA Uddgrund Duschvorhang**

| *Polyesterduschvorhang* | *Verschiedene Muster* |
|---|---|
| *Wasserabweisend beschichtet* | *Größe 180x200cm* |
| **Nur solange der Vorrat reicht** | **Limitiert auf 1000 Stück-Sie besitzen Nr. 462.** |
| **€ 14,28** | **€ 14,99** |

**Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?**

○ ○

**Freitag F12 Dragnet Messenger Bag**

| *Obermaterial: LKW-Planen* | *Verschiedene Farben* |
|---|---|
| *Wasserabweisend & strapazierfähig* | *Ausreichend Platz für 13" Notebook* |
| **Nur solange der Vorrat reicht** | **Limitiert auf 1000 Stück-Sie besitzen Nr. 462.** |
| **€ 23,71** | **€ 24,90** |

**Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?**

○ ○

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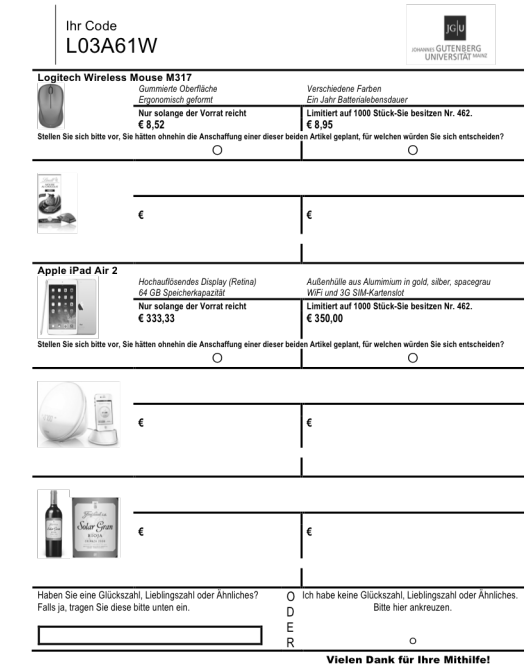

Ihr Code
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JOHANNES GUTENBERG UNIVERSITÄT MAINZ

**Logitech Wireless Mouse M317**

| *Gummierte Oberfläche* | *Verschiedene Farben* |
|---|---|
| *Ergonomisch geformt* | *Ein Jahr Batterielebensdauer* |
| **Nur solange der Vorrat reicht** | **Limitiert auf 1000 Stück-Sie besitzen Nr. 462.** |
| **€ 8,52** | **€ 8,95** |

**Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?**

○ ○

€ €

**Apple iPad Air 2**

| *Hochauflösendes Display (Retina)* | *Außenhülle aus Alumimium in gold, silber, spacegrau* |
|---|---|
| *64 GB Speicherkapazität* | *WiFi und 3G SIM-Kartenslot* |
| **Nur solange der Vorrat reicht** | **Limitiert auf 1000 Stück-Sie besitzen Nr. 462.** |
| **€ 333,33** | **€ 350,00** |

**Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?**

○ ○

€ €

€ €

Haben Sie eine Glückszahl, Lieblingszahl oder Ähnliches? Falls ja, tragen Sie diese bitte unten ein.

O D E R

Ich habe keine Glückszahl, Lieblingszahl oder Ähnliches. Bitte hier ankreuzen. ○

**Vielen Dank für Ihre Mithilfe!**

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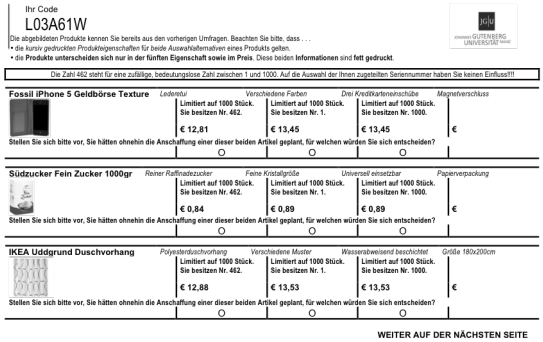
# Appendix III-1:

## 7W questionnaire – Week 5



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Die abgebildeten Produkte kennen Sie bereits aus den vorherigen Umfragen. Beachten Sie bitte, dass . . .
• die *kursiv gedruckten Produkteigenschaften* für beide Auswahlalternativen eines Produkts gelten.
• die **Produkte unterscheiden sich nur in der fünften Eigenschaft sowie im Preis**. Diese beiden **Informationen** sind **fett gedruckt**.

Die Zahl 462 steht für eine zufällige, bedeutungslose Zahl zwischen 1 und 1000. Auf die Auswahl der Ihnen zugeteilten Seriennummer haben Sie keinen Einfluss!!!

| **Fossil iPhone 5 Geldbörse Texture** | *Lederetui* | *Verschiedene Farben* | *Drei Kreditkarteneinschübe* | *Magnetverschluss* |
|---|---|---|---|---|
| | **Limitiert auf 1000 Stück. Sie besitzen Nr. 462.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1000.** | |
| | **€ 12,81** | **€ 13,45** | **€ 13,45** | **€** |
| **Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?** | ○ | ○ | ○ | |

| **Südzucker Fein Zucker 1000gr** | *Reiner Raffinadezucker* | *Feine Kristallgröße* | *Universell einsetzbar* | *Papierverpackung* |
|---|---|---|---|---|
| | **Limitiert auf 1000 Stück. Sie besitzen Nr. 462.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1000.** | |
| | **€ 0,84** | **€ 0,89** | **€ 0,89** | **€** |
| **Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?** | ○ | ○ | ○ | |

| **IKEA Uddgrund Duschvorhang** | *Polyesterduschvorhang* | *Verschiedene Muster* | *Wasserabweisend beschichtet* | *Größe 180x200cm* |
|---|---|---|---|---|
| | **Limitiert auf 1000 Stück. Sie besitzen Nr. 462.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1000.** | |
| | **€ 12,88** | **€ 13,53** | **€ 13,53** | **€** |
| **Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?** | ○ | ○ | ○ | |

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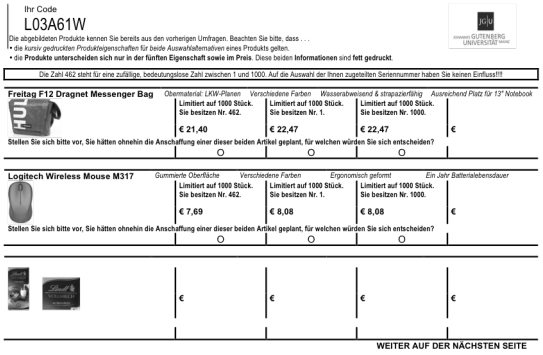

Ihr Code
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Die abgebildeten Produkte kennen Sie bereits aus den vorherigen Umfragen. Beachten Sie bitte, dass . . .
• die *kursiv gedruckten Produkteigenschaften* für beide Auswahlalternativen eines Produkts gelten.
• die **Produkte unterscheiden sich nur in der fünften Eigenschaft sowie im Preis**. Diese beiden **Informationen** sind **fett gedruckt**.

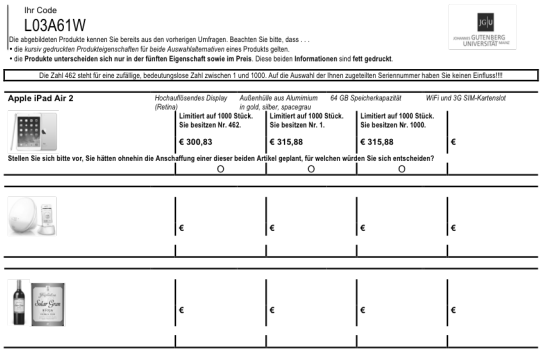
Die Zahl 462 steht für eine zufällige, bedeutungslose Zahl zwischen 1 und 1000. Auf die Auswahl der Ihnen zugeteilten Seriennummer haben Sie keinen Einfluss!!!

| **Freitag F12 Dragnet Messenger Bag** | *Obermaterial: LKW-Planen* | *Verschiedene Farben* | *Wasserabweisend & strapazierfähig* | *Ausreichend Platz für 13" Notebook* |
|---|---|---|---|---|
| | **Limitiert auf 1000 Stück. Sie besitzen Nr. 462.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1000.** | |
| | **€ 21,40** | **€ 22,47** | **€ 22,47** | **€** |
| **Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?** | ○ | ○ | ○ | |

| **Logitech Wireless Mouse M317** | *Gummierte Oberfläche* | *Verschiedene Farben* | *Ergonomisch geformt* | *Ein Jahr Batterielebensdauer* |
|---|---|---|---|---|
| | **Limitiert auf 1000 Stück. Sie besitzen Nr. 462.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1000.** | |
| | **€ 7,69** | **€ 8,08** | **€ 8,08** | **€** |
| **Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?** | ○ | ○ | ○ | |

| | | | | |
|---|---|---|---|---|
| | | **€** | **€** | **€** |

**WEITER AUF DER NÄCHSTEN SEITE**



Ihr Code
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Die abgebildeten Produkte kennen Sie bereits aus den vorherigen Umfragen. Beachten Sie bitte, dass . . .
• die *kursiv gedruckten Produkteigenschaften* für beide Auswahlalternativen eines Produkts gelten.
• die **Produkte unterscheiden sich nur in der fünften Eigenschaft sowie im Preis**. Diese beiden **Informationen** sind **fett gedruckt**.

Die Zahl 462 steht für eine zufällige, bedeutungslose Zahl zwischen 1 und 1000. Auf die Auswahl der Ihnen zugeteilten Seriennummer haben Sie keinen Einfluss!!!

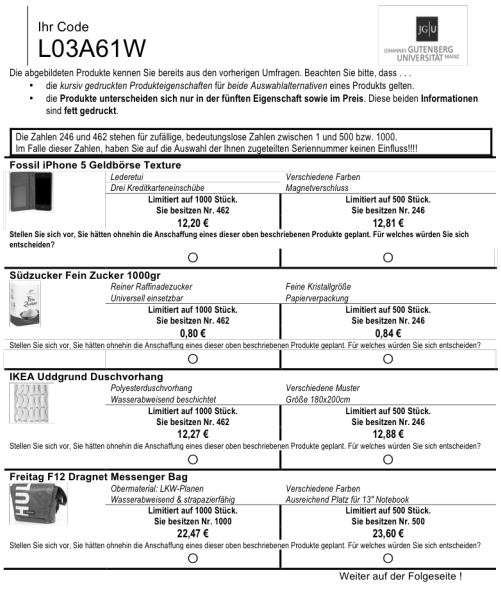
| **Apple iPad Air 2** | *Hochauflösendes Display (Retina)* | *Außenhülle aus Aluminium in gold, silber, spacegrau* | *64 GB Speicherkapazität* | *WiFi und 3G SIM-Kartenslot* |
|---|---|---|---|---|
| | **Limitiert auf 1000 Stück. Sie besitzen Nr. 462.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1000.** | |
| | **€ 300,83** | **€ 315,88** | **€ 315,88** | **€** |
| **Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?** | ○ | ○ | ○ | |

| | | | | |
|---|---|---|---|---|
| | | **€** | **€** | **€** |

| | | | | |
|---|---|---|---|---|
| | | **€** | **€** | **€** |

**Das wars für diese Woche. Vielen Dank für Ihre Mithilfe!**

## Week 6



Ihr Code
L03A61W

Die abgebildeten Produkte kennen Sie bereits aus den vorherigen Umfragen. Beachten Sie bitte, dass . . .
- die *kursiv gedruckten Produkteigenschaften* für *beide Auswahlalternativen* eines Produkts gelten.
- die **Produkte unterscheiden sich nur in der fünften Eigenschaft sowie im Preis**. Diese beiden **Informationen** sind **fett gedruckt**.

Die Zahlen 246 und 462 stehen für zufällige, bedeutungslose Zahlen zwischen 1 und 500 bzw. 1000.
Im Falle dieser Zahlen, haben Sie auf die Auswahl der Ihnen zugeteilten Seriennummer keinen Einfluss!!!!

**Fossil iPhone 5 Geldbörse Texture**

| *Lederetui* | *Verschiedene Farben* |
|---|---|
| *Drei Kreditkarteneinschübe* | *Magnetverschluss* |
| **Limitiert auf 1000 Stück. Sie besitzen Nr. 462** | **Limitiert auf 500 Stück. Sie besitzen Nr. 246** |
| **12,20 €** | **12,81 €** |
| **Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines dieser oben beschriebenen Produkte geplant. Für welches würden Sie sich entscheiden?** | |
| ○ | ○ |

**Südzucker Fein Zucker 1000gr**

| *Reiner Raffinadezucker* | *Feine Kristallgröße* |
|---|---|
| *Universell einsetzbar* | *Papierverpackung* |
| **Limitiert auf 1000 Stück. Sie besitzen Nr. 462** | **Limitiert auf 500 Stück. Sie besitzen Nr. 246** |
| **0,80 €** | **0,84 €** |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines dieser oben beschriebenen Produkte geplant. Für welches würden Sie sich entscheiden? | |
| ○ | ○ |

**IKEA Uddgrund Duschvorhang**

| *Polyesterduschvorhang* | *Verschiedene Muster* |
|---|---|
| *Wasserabweisend beschichtet* | *Größe 180x200cm* |
| **Limitiert auf 1000 Stück. Sie besitzen Nr. 462** | **Limitiert auf 500 Stück. Sie besitzen Nr. 246** |
| **12,27 €** | **12,88 €** |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines dieser oben beschriebenen Produkte geplant. Für welches würden Sie sich entscheiden? | |
| ○ | ○ |

**Freitag F12 Dragnet Messenger Bag**

| *Obermaterial: LKW-Planen* | *Verschiedene Farben* |
|---|---|
| *Wasserabweisend & strapazierfähig* | *Ausreichend Platz für 13" Notebook* |
| **Limitiert auf 1000 Stück. Sie besitzen Nr. 1000** | **Limitiert auf 500 Stück. Sie besitzen Nr. 500** |
| **22,47 €** | **23,60 €** |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines dieser oben beschriebenen Produkte geplant. For welches würden Sie sich entscheiden? | |
| ○ | ○ |

Weiter auf der Folgeseite !

**CENTER FOR LUXURY RESEARCH**
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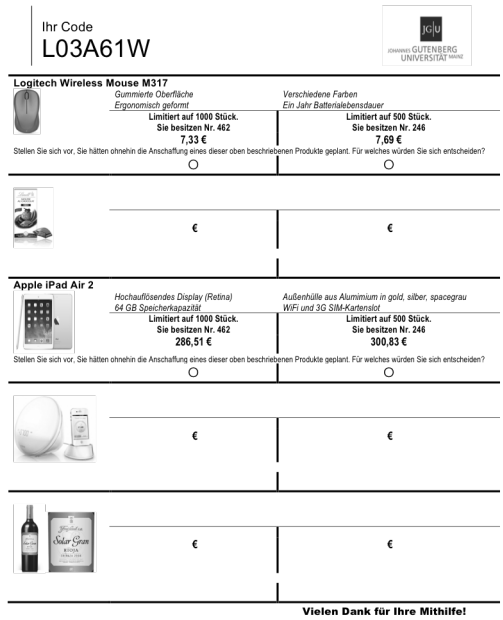

Ihr Code
L03A61W

**Logitech Wireless Mouse M317**

| *Gummierte Oberfläche* | *Verschiedene Farben* |
|---|---|
| *Ergonomisch geformt* | *Ein Jahr Batterielebensdauer* |
| **Limitiert auf 1000 Stück. Sie besitzen Nr. 462** | **Limitiert auf 500 Stück. Sie besitzen Nr. 246** |
| **7,33 €** | **7,69 €** |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines dieser oben beschriebenen Produkte geplant. Für welches würden Sie sich entscheiden? | |
| ○ | ○ |

| | |
|---|---|
| **€** | **€** |

**Apple iPad Air 2**

| *Hochauflösendes Display (Retina)* | *Außenhülle aus Alumimium in gold, silber, spacegrau* |
|---|---|
| *64 GB Speicherkapazität* | *WiFi und 3G SIM-Kartenslot* |
| **Limitiert auf 1000 Stück. Sie besitzen Nr. 462** | **Limitiert auf 500 Stück. Sie besitzen Nr. 246** |
| **286,51 €** | **300,83 €** |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines dieser oben beschriebenen Produkte geplant. Für welches würden Sie sich entscheiden? | |
| ○ | ○ |

| | |
|---|---|
| **€** | **€** |

| | |
|---|---|
| **€** | **€** |

**Vielen Dank für Ihre Mithilfe!**

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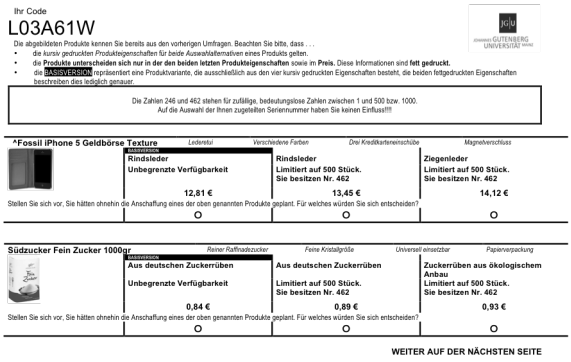
# Appendix III-1:

## 7W questionnaire – Week 7



Ihr Code
L03A61W

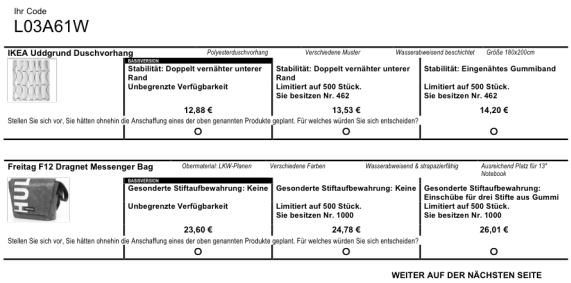
Die abgebildeten Produkte kennen Sie bereits aus den vorherigen Umfragen. Beachten Sie bitte, dass . . .
- die kursiv gedruckten Produkteigenschaften für beide Auswahlalternativen eines Produkts gelten.
- die **Produkte unterscheiden sich nur in der den beiden letzten Produkteigenschaften** sowie im **Preis.** Diese Informationen sind **fett gedruckt.**
- die BASISVERSION repräsentiert eine Produktvariante, die ausschließlich aus den vier kursiv gedruckten Eigenschaften besteht, die beiden fettgedruckten Eigenschaften beschreiben das lediglich genauer.

Die Zahlen 246 und 462 stehen für zufällige, bedeutungslose Zahlen zwischen 1 und 500 bzw. 1000.
Auf die Auswahl der Ihnen zugeteilten Seriennummer haben Sie keinen Einfluss!!!!

| **^Fossil iPhone 5 Geldbörse Texture** | *Lederetui* | *Verschiedene Farben* | *Drei Kreditkartenreinschübe* | *Magnetverschluss* |
|---|---|---|---|---|
| BASISVERSION | **Rindsleder**<br>**Unbegrenzte Verfügbarkeit**<br>**12,81 €** | **Rindsleder**<br>**Limitiert auf 500 Stück.**<br>**Sie besitzen Nr. 462**<br>**13,45 €** | | **Ziegenleder**<br>**Limitiert auf 500 Stück.**<br>**Sie besitzen Nr. 462**<br>**14,12 €** |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines der oben genannten Produkte geplant. Für welches würden Sie sich entscheiden? | O | O | | O |

| **Südzucker Fein Zucker 1000gr** | *Reiner Raffinadezucker* | *Feine Kristallgröße* | *Universell einsetzbar* | *Papierverpackung* |
|---|---|---|---|---|
| BASISVERSION | **Aus deutschen Zuckerrüben**<br>**Unbegrenzte Verfügbarkeit**<br>**0,84 €** | **Aus deutschen Zuckerrüben**<br>**Limitiert auf 500 Stück.**<br>**Sie besitzen Nr. 462**<br>**0,89 €** | | **Zuckerrüben aus ökologischem Anbau**<br>**Limitiert auf 500 Stück.**<br>**Sie besitzen Nr. 462**<br>**0,93 €** |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines der oben genannten Produkte geplant. Für welches würden Sie sich entscheiden? | O | O | | O |

**WEITER AUF DER NÄCHSTEN SEITE**

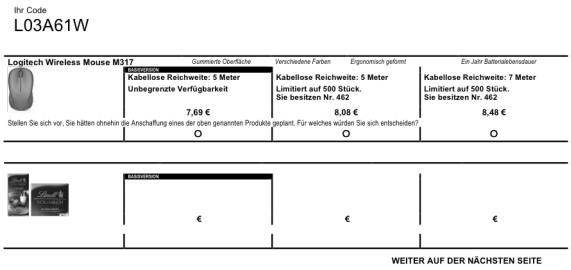


Ihr Code
L03A61W

| **IKEA Uddgrund Duschvorhang** | *Polyesterduschvorhang* | *Verschiedene Muster* | *Wasserabweisend beschichtet* | *Größe 180x200cm* |
|---|---|---|---|---|
| BASISVERSION | **Stabilität: Doppelt vernähter unterer Rand**<br>**Unbegrenzte Verfügbarkeit**<br>**12,88 €** | **Stabilität: Doppelt vernähter unterer Rand**<br>**Limitiert auf 500 Stück.**<br>**Sie besitzen Nr. 462**<br>**13,53 €** | | **Stabilität: Eingenähtes Gummiband**<br>**Limitiert auf 500 Stück.**<br>**Sie besitzen Nr. 462**<br>**14,20 €** |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines der oben genannten Produkte geplant. Für welches würden Sie sich entscheiden? | O | O | | O |

| **Freitag F12 Dragnet Messenger Bag** | *Obermaterial: LKW-Planen* | *Verschiedene Farben* | *Wasserabweisend & strapazierfähig* | *Ausreichend Platz für 13" Notebook* |
|---|---|---|---|---|
| BASISVERSION | **Gesonderte Stiftaufbewahrung: Keine**<br>**Unbegrenzte Verfügbarkeit**<br>**23,60 €** | **Gesonderte Stiftaufbewahrung: Keine**<br>**Limitiert auf 500 Stück.**<br>**Sie besitzen Nr. 1000**<br>**24,78 €** | | **Gesonderte Stiftaufbewahrung: Einschübe für drei Stifte aus Gummi**<br>**Limitiert auf 500 Stück.**<br>**Sie besitzen Nr. 1000**<br>**26,01 €** |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines der oben genannten Produkte geplant. Für welches würden Sie sich entscheiden? | O | O | | O |

**WEITER AUF DER NÄCHSTEN SEITE**

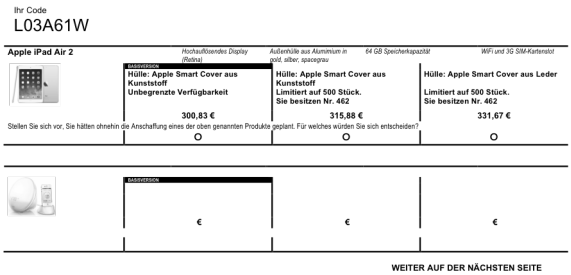


Ihr Code
L03A61W

| **Logitech Wireless Mouse M317** | *Gummierte Oberfläche* | *Verschiedene Farben* | *Ergonomisch geformt* | *Ein Jahr Batterielebensdauer* |
|---|---|---|---|---|
| BASISVERSION | **Kabellose Reichweite: 5 Meter**<br>**Unbegrenzte Verfügbarkeit**<br>**7,69 €** | **Kabellose Reichweite: 5 Meter**<br>**Limitiert auf 500 Stück.**<br>**Sie besitzen Nr. 462**<br>**8,08 €** | | **Kabellose Reichweite: 7 Meter**<br>**Limitiert auf 500 Stück.**<br>**Sie besitzen Nr. 462**<br>**8,48 €** |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines der oben genannten Produkte geplant. Für welches würden Sie sich entscheiden? | O | O | | O |

| | | | | |
|---|---|---|---|---|
| BASISVERSION | **€** | **€** | | **€** |

**WEITER AUF DER NÄCHSTEN SEITE**



Ihr Code
L03A61W

| **Apple iPad Air 2** | *Hochauflösendes Display (Retina)* | *Außenhülle aus Aluminium in gold, silber, spacegrau* | *64 GB Speicherkapazität* | *WiFi und 3G SIM-Kartenslot* |
|---|---|---|---|---|
| BASISVERSION | **Hülle: Apple Smart Cover aus Kunststoff**<br>**Unbegrenzte Verfügbarkeit**<br>**300,83 €** | **Hülle: Apple Smart Cover aus Kunststoff**<br>**Limitiert auf 500 Stück.**<br>**Sie besitzen Nr. 462**<br>**315,88 €** | | **Hülle: Apple Smart Cover aus Leder**<br>**Limitiert auf 500 Stück.**<br>**Sie besitzen Nr. 462**<br>**331,67 €** |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines der oben genannten Produkte geplant. Für welches würden Sie sich entscheiden? | O | O | | O |

| | | | | |
|---|---|---|---|---|
| BASISVERSION | **€** | **€** | | **€** |

**WEITER AUF DER NÄCHSTEN SEITE**

# Appendix III-2:

## Item set of TL-questionnaire

| Table short cut | R-code | Item |
|---|---|---|
| Others like | OL | It is important to me, that others like the products I buy. |
| Lifestyle | LY | There are brands that reflect my lifestyle better than others. |
| Differentiation | DI | I like to differentiate from others, through different products used. |
| Self-expression | SX | I like to express something about myself through the products I buy. |
| Opinion seeking | OS | I value other people's opinion on the products I buy. |
| Decision compliment | DC | It is important to me to get others' compliment for products I buy. |
| Association | AS | It is important to me that people associated with me do like the products I buy. |
| Dissociation | DS | I like to make a difference from people associated with me by the products I use. |

# Appendix III-3:

## Item set of TR-questionnaire

| Table short cut | R-code | Item |
|---|---|---|
| Visibility | VS | This product is often used visible to others. |
| Difference | DF | This product is well serves well to make a difference from others. |
| Compliment | CM | To own this product is rewarded with compliments from others. |
| InVisible | IV | It is unlikely that others see, if and how this product is used. |
| Utility | TY | The product is mainly bought for its utility. |
| LQS | QS | To limit the sold quantity of this product makes it more attractive. |
| Group | AF | This product serves well to show affiliation with a group. |
| Snobbish | SN | This product could be judged as snobbish by others. |
| Scale | SC | In my opinion, this product is mostly bought because of its. . . |

| | |
|---|---|
| Brand | Utility |
| Design | Durability & Reliability |
| Prestige | Performance |

# Appendix III-4:

## Mean value differences between FR, JL and ST sample:

Results computed in R (R-Core Team, 2017)

| **TQ FR vs. ST** | **Price quality inference** | **Buying frenzy** | **Well-known brands** | **Many buy heuristic** | **Demand quality inference** | **Availability quality** | **Missed opportunity** | **Empty shelf** |
|---|---|---|---|---|---|---|---|---|
| Variance Test | $H_0$:$\sigma^2_{FR}$= $\sigma^2_{ST}$<br>$H_1$: $\sigma^2_{FR}$≠ $\sigma^2_{ST}$ | | | | | | | |
| p-value | 0.0014 | 0.1630 | 0.1154 | 0.4168 | 0.4158 | 0.0061 | 0.4714 | 0.0014 |
| Mean Test | $H_0$: $\mu_{FR}$=$\mu_{ST}$<br>$H_1$: $\mu_{FR}$≠$\mu_{ST}$ | | | | | | | |
| Applied Test | Welch Test | T-Test | T-Test | T-Test | T-Test | Welch Test | T-Test | Welch Test |
| p-Value | 0.0007 | 0.0690 | 0.2491 | 0.0156 | 0.1654 | 0.5967 | 0.4104 | 0.1449 |
| t-Value | -3.5368 | 1.8314 | -1.1570 | -2.4446 | -1.3938 | 0.5311 | -0.8255 | -1.4658 |
| Result | $\mu_{FR}$≠$\mu_{ST}$ | $\mu_{FR}$=$\mu_{ST}$ | $\mu_{FR}$=$\mu_{ST}$ | $\mu_{FR}$≠$\mu_{ST}$ | $\mu_{FR}$=$\mu_{ST}$ | $\mu_{FR}$=$\mu_{ST}$ | $\mu_{FR}$=$\mu_{ST}$ | $\mu_{FR}$=$\mu_{ST}$ |
| Applied Test | U-Test | | | | | | | |
| p-Value | 0.0003 | 0.0632 | 0.2391 | 0.0167 | 0.1588 | 0.9272 | 0.3255 | 0.5281 |
| Result | $\mu_{FR}$≠$\mu_{ST}$ | $\mu_{FR}$=$\mu_{ST}$ | $\mu_{FR}$=$\mu_{ST}$ | $\mu_{FR}$≠$\mu_{ST}$ | $\mu_{FR}$=$\mu_{ST}$ | $\mu_{FR}$=$\mu_{ST}$ | $\mu_{FR}$=$\mu_{ST}$ | $\mu_{FR}$=$\mu_{ST}$ |

**TQ questionnaire mean differences FR vs. ST**

| **TQ JL vs. ST** | **Price quality inference** | **Buying frenzy** | **Well-known brands** | **Many buy heuristic** | **Demand quality inference** | **Availability quality** | **Missed opportunity** | **Empty shelf** |
|---|---|---|---|---|---|---|---|---|
| Variance Test | $H_0$:$\sigma^2_{JL}$= $\sigma^2_{ST}$<br>$H_1$: $\sigma^2_{JL}$≠ $\sigma^2_{ST}$ | | | | | | | |
| p-Value | 0.0001 | 0.1815 | 0.0411 | 0.4512 | 0.1249 | 0.4653 | 0.2147 | 0.0366 |
| Mean Test | $H_0$: $\mu_{JL}$=$\mu_{ST}$<br>$H_1$: $\mu_{JL}$≠$\mu_{ST}$ | | | | | | | |
| Applied Test | Welch Test | T-Test | Welch Test | T-Test | T-Test | T-Test | T-Test | Welch Test |
| p-Value | 0.0002 | 0.0010 | 0.2497 | 0.0242 | 0.8350 | 0.5750 | 0.2504 | 0.0829 |
| t-Value | 4.2373 | -3.3665 | 1.1679 | 2.2806 | -0.2088 | 0.5621 | 1.1546 | 1.7623 |
| Result | $\mu_{JL}$≠$\mu_{ST}$ | $\mu_{JL}$≠$\mu_{ST}$ | $\mu_{JL}$=$\mu_{ST}$ | $\mu_{JL}$≠$\mu_{ST}$ | $\mu_{JL}$=$\mu_{ST}$ | $\mu_{JL}$=$\mu_{ST}$ | $\mu_{JL}$=$\mu_{ST}$ | $\mu_{JL}$=$\mu_{ST}$ |
| Applied Test | U-Test | | | | | | | |
| p-Value | <0.0001 | 0.0007 | 0.2798 | 0.0279 | 0.8568 | 0.5518 | 0.0914 | 0.2336 |
| Result | $\mu_{JL}$≠$\mu_{ST}$ | $\mu_{JL}$≠$\mu_{ST}$ | $\mu_{JL}$=$\mu_{ST}$ | $\mu_{JL}$≠$\mu_{ST}$ | $\mu_{JL}$=$\mu_{ST}$ | $\mu_{JL}$=$\mu_{ST}$ | $\mu_{JL}$=$\mu_{ST}$ | $\mu_{JL}$=$\mu_{ST}$ |

**TQ questionnaire mean differences JL vs. ST**

| **TQ FR vs. JL** | **Price quality inference** | **Buying frenzy** | **Well-known brands** | **Many buy heuristic** | **Demand quality inference** | **Availability quality** | **Missed opportunity** | **Empty shelf** |
|---|---|---|---|---|---|---|---|---|
| Variance Test | $H_0$:$\sigma^2_{FR}$= $\sigma^2_{JL}$<br>$H_1$: $\sigma^2_{FR}$≠ $\sigma^2_{JL}$ | | | | | | | |
| p-value | 0.1619 | 0.4607 | 0.2547 | 0.4833 | 0.1155 | 0.0476 | 0.2535 | 0.2829 |
| Mean Test | $H_0$: $\mu_{FR}$=$\mu_{JL}$<br>$H_1$: $\mu_{FR}$≠$\mu_{JL}$ | | | | | | | |
| Applied Test | T-Test | T-Test | T-Test | T-Test | T-Test | Welch Test | T-Test | T-Test |
| p-Value | 0.0986 | 0.1223 | 0.7429 | 0.7973 | 0.2466 | 0.3813 | 0.6479 | 0.5451 |
| t-Value | 1.6708 | -1.5614 | 0.3292 | 0.2577 | -1.1670 | 0.8807 | 0.4584 | 0.6077 |
| Result | $\mu_{FR}$=$\mu_{JL}$ | $\mu_{FR}$=$\mu_{JL}$ | $\mu_{FR}$=$\mu_{JL}$ | $\mu_{FR}$=$\mu_{JL}$ | $\mu_{FR}$=$\mu_{JL}$ | $\mu_{FR}$=$\mu_{JL}$ | $\mu_{FR}$=$\mu_{JL}$ | $\mu_{FR}$=$\mu_{JL}$ |
| Applied Test | U-Test | | | | | | | |
| p-Value | 0.0991 | 0.0991 | 0.8543 | 0.7979 | 0.2863 | 0.6580 | 0.3573 | 0.3968 |
| Result | $\mu_{FR}$=$\mu_{JL}$ | $\mu_{FR}$=$\mu_{JL}$ | $\mu_{FR}$=$\mu_{JL}$ | $\mu_{FR}$=$\mu_{JL}$ | $\mu_{FR}$=$\mu_{JL}$ | $\mu_{FR}$=$\mu_{JL}$ | $\mu_{FR}$=$\mu_{JL}$ | $\mu_{FR}$=$\mu_{JL}$ |

**TQ questionnaire mean differences FR vs. JL**

## Appendix III-5:

### 7 weeks full regression of main effects: Smartphone wallet

Results computed in R (R-Core Team, 2017)

Call:

```
lm(formula = DEC_TOTAL ~ Q7_BAS + Q7_FEA * Q7_LE + Q7_LEFEA +
   Q6_LC + Q5_ID + FR + JL + AGE + SEX + EDU + FY + QL + RG +
   SF + AN + LN + BR + PN, data = S4_FS)
```

Residuals:

| Min | 1Q | Median | 3Q | Max |
|---|---|---|---|---|
| -0,085566 | -0,007103 | 0,002576 | 0,014547 | 0,044118 |

Coefficients: (1 not defined because of singularities)

| | Estimate | Std, Error | t value | Pr(>\|t\|) | |
|---|---|---|---|---|---|
| (Intercept) | 0,8229 | 0,1240 | 6,6370 | 0,0000 | *** |
| Q7_BAS | [-]0,0940[15] | 0,0687 | 1,3670 | 0,1817 | |
| Q7_FEA | \|0,1395\| | 0,0314 | 4,4470 | 0,0001 | *** |
| Q7_LE | 0,4277 | 0,0853 | 5,0160 | 0,0000 | *** |
| Q7_LEFEA | \|0,1427\| | 0,0363 | -3,9320 | 0,0005 | *** |
| Q6_LC | \|0,0166\| | 0,0336 | -0,4930 | 0,6257 | |
| Q5_ID | \|0,0594\| | 0,0301 | -1,9740 | 0,0576 | . |
| FR | -0,0003 | 0,0121 | -0,0220 | 0,9830 | |
| AGE | 0,0005 | 0,0059 | 0,0810 | 0,9361 | |
| SEX | 0,0120 | 0,0113 | 1,0590 | 0,2979 | |
| EDU | -0,0004 | 0,0055 | -0,0770 | 0,9389 | |
| FY | -0,0052 | 0,0061 | -0,8500 | 0,4023 | |
| QL | -0,0009 | 0,0075 | -0,1220 | 0,9040 | |
| RG | 0,0070 | 0,0064 | 1,0970 | 0,2815 | |
| SF | -0,0017 | 0,0067 | -0,2550 | 0,8005 | |
| AN | 0,0000 | 0,0067 | -0,0010 | 0,9996 | |
| LN | 0,0032 | 0,0075 | 0,4220 | 0,6764 | |
| BR | 0,0000 | 0,0054 | 0,0040 | 0,9965 | |
| PN | 0,0059 | 0,0072 | 0,8200 | 0,4185 | |
| Q7_FEA:Q7_LE | \|0,0409\| | 0,0278 | 1,4690 | 0,1523 | |

---

Signif. codes: 0 '***' 0,001 '**' 0,01 '*' 0,05 '.' 0,1 ' ' 1

Residual standard error: 0,03293 on 30 degrees of freedom

Multiple R-squared: 0,9766, Adjusted R-squared: 0,9617

F-statistic: 65,76 on 19 and 30 DF, p-value: < 2,2e-16

[15] Effect according to regression >0; true effect revealed using Kaplan-Meier curves and Cox regression <0.

## Appendix III-6:

### 7 weeks full regression of main effects: Sugar

Results computed in R (R-Core Team, 2017)

Call:
lm(formula = DEC_TOTAL ~ Q7_BAS + Q7_FEA + Q7_LE + Q7_LEFEA +
Q6_LC + Q5_ID + FR + JL + AGE + SEX + EDU + FY + QL + RG +
SF + AN + LN + BR + PN, data = S4_SZ)

Residuals:

| Min | 1Q | Median | 3Q | Max |
|---|---|---|---|---|
| -0,0055844 | -0,0003942 | 0,0002265 | 0,001 | 0,00 |

Coefficient s: (3 not d efined beca use of singularities)

| | **Estimate** | **Std. Error** | **t value** | **Pr(>\|t\|)** | |
|---|---|---|---|---|---|
| (Intercept) | 2,5510 | 0,0143 | 178,2050 | <2e-16 | *** |
| Q7_BAS | -0,8619 | 0,0080 | -107,3040 | <2e-16 | *** |
| Q7_FEA | \|0,2403\| | 0,0030 | -79,4910 | <2e-16 | *** |
| Q7_LE | -0,4198 | 0,0061 | -68,4750 | <2e-16 | *** |
| Q7_LEFEA | | | | | |
| Q6_LC | Option not selected | | | | |
| Q5_ID | Option not selected | | | | |
| FR | 0,0002 | 0,0006 | 0,4130 | 0,6810 | |
| AGE | -0,0002 | 0,0003 | -0,7150 | 0,4780 | |
| SEX | -0,0002 | 0,0005 | -0,4200 | 0,6760 | |
| EDU | 0,0001 | 0,0003 | 0,1640 | 0,8700 | |
| FY | -0,0001 | 0,0003 | -0,2290 | 0,8200 | |
| QL | 0,0004 | 0,0003 | 1,1180 | 0,2690 | |
| RG | 0,0002 | 0,0003 | 0,7090 | 0,4820 | |
| SF | 0,0002 | 0,0003 | 0,6270 | 0,5340 | |
| AN | 0,0001 | 0,0003 | 0,2170 | 0,8290 | |
| LN | -0,0003 | 0,0003 | -0,8460 | 0,4020 | |
| BR | 0,0003 | 0,0003 | 1,1670 | 0,2490 | |
| PN | 0,0000 | 0,0003 | 0,0740 | 0,9410 | |

---

Signif. codes: 0 '***' 0,001 '**' 0,01 '*' 0,05 '.' 0,1 ' ' 1

Residual standard error: 0.001769 on 45 degrees of freedom

Multiple R-squared: 0.9997, Adjusted R-squared: 0.9996

F-statistic: 9711 on 15 and 45 DF, p-value: < 2.2e-16

| | Estimate | Std, Error | t value | Pr(>\|t\|) | Sing var |
|---|---|---|---|---|---|
| Q7_LEFEA | \|0,1202\| | 0,0015 | -79,491 | <2e-16 *** | Alt: FEA |

## Appendix III-7:

### 7 weeks full regression of main effects: Shower curtain

Results computed in R (R-Core Team, 2017)

```
Call:
lm(formula = DEC_TOTAL ~ Q7_BAS + Q7_FEA * Q7_LE + Q7_LEFEA +
   Q6_LC + Q5_ID + FR + JL + AGE + SEX + EDU + FY + QL + RG +
   SF + AN + LN + BR + PN, data = S4_UD)

Residuals:
      Min        1Q    Median        3Q       Max
-0,03165 -0,005503 -0,000944   0,00324  0,039995

Coefficients: (1 not defined because of singularities)
```

,

| | Estimate | Std Error | t value | Pr(>\|t\|) | |
|---|---|---|---|---|---|
| (Intercept) | 0,5713 | 0,0804 | 7,1060 | 0,0000 | *** |
| Q7_BAS | [-]0,2389[16] | 0,0439 | 5,4410 | 0,0000 | *** |
| Q7_FEA | \|0,1967\| | 0,0187 | 10,5120 | 0,0000 | *** |
| Q7_LE | 0,5687 | 0,0486 | 11,7140 | 0,0000 | *** |
| Q7_LEFEA | option not selected | | | | |
| Q6_LC | \|0,1165\| | 0,0255 | -4,5750 | 0,0000 | *** |
| Q5_ID | \|0,0769\| | 0,0155 | -4,9630 | 0,0000 | *** |
| FR | -0,0020 | 0,0060 | -0,3240 | 0,7473 | |
| AGE | -0,0028 | 0,0024 | -1,1970 | 0,2380 | |
| SEX | 0,0051 | 0,0047 | 1,0740 | 0,2891 | |
| EDU | -0,0029 | 0,0023 | -1,2400 | 0,2217 | |
| FY | 0,0006 | 0,0022 | 0,2640 | 0,7928 | |
| QL | 0,0021 | 0,0031 | 0,6750 | 0,5036 | |
| RG | 0,0049 | 0,0023 | 2,1300 | 0,0391 | * |
| SF | -0,0021 | 0,0024 | -0,8820 | 0,3827 | |
| AN | 0,0006 | 0,0023 | 0,2580 | 0,7977 | |
| LN | 0,0000 | 0,0026 | -0,0040 | 0,9970 | |
| BR | 0,0017 | 0,0022 | 0,7760 | 0,4419 | |
| PN | -0,0027 | 0,0026 | -1,0590 | 0,2956 | |
| Q7_FEA:Q7_LE | 0,0801 | 0,0228 | 3,5080 | 0,0011 | ** |

---

Signif. codes: 0 '***' 0,001 '**' 0,01 '*' 0,05 '.' 0,1 ' ' 1

Residual standard error: 0,01436 on 42 degrees of freedom

Multiple R-squared: 0,9876, Adjusted R-squared: 0,9823

F-statistic: 185,6 on 18 and 42 DF, p-value: < 2,2e-16

[16] Effect according to regression >0; true effect revealed using Kaplan-Meier curves and Cox regression <0.

## Appendix III-8:

### 7 weeks full regression of main effects: Messenger bag

Results computed in R (R-Core Team, 2017)

Call:
lm(formula = DEC_TOTAL ~ Q7_BAS + Q7_FEA * Q7_LE + Q7_LEFEA +
Q6_LC + Q5_ID + FR + JL + AGE + SEX + EDU + FY + QL + RG +
SF + AN + LN + BR + PN, data = S4_FT)

Residuals:

| Min | 1Q | Median | 3Q | Max |
|---|---|---|---|---|
| -0,067964 | -0,009247 | 0,000974 | 0,012447 | 0,066355 |

| | Estimate | Std, Error | t value | Pr(>\|t\|) | |
|---|---|---|---|---|---|
| (Intercept) | 1,1018 | 0,1218 | 9,0460 | 0,0000 | *** |
| Q7_BAS | -0,0507 | 0,0663 | -0,7640 | 0,4494 | |
| Q7_FEA | \|0,0773\| | 0,0332 | 2,3260 | 0,0256 | * |
| Q7_LE | 0,2658 | 0,0765 | 3,4720 | 0,0013 | ** |
| Q7_LEFEA | \|0,1580\| | 0,0234 | -6,7380 | 0,0000 | *** |
| Q6_LC | \|0,0063\| | 0,0263 | 0,2400 | 0,8116 | |
| Q5_ID | \|0,0413\| | 0,0262 | -1,5790 | 0,1228 | |
| FR | -0,0122 | 0,0116 | -1,0510 | 0,3000 | |
| AGE | 0,0010 | 0,0055 | 0,1720 | 0,8645 | |
| SEX | 0,0162 | 0,0098 | 1,6530 | 0,1068 | |
| EDU | -0,0106 | 0,0053 | -2,0120 | 0,0515 | . |
| FY | 0,0037 | 0,0060 | 0,6070 | 0,5476 | |
| QL | 0,0020 | 0,0062 | 0,3260 | 0,7466 | |
| RG | -0,0054 | 0,0054 | -1,0010 | 0,3234 | |
| SF | 0,0044 | 0,0057 | 0,7770 | 0,4419 | |
| AN | 0,0028 | 0,0061 | 0,4580 | 0,6496 | |
| LN | -0,0055 | 0,0059 | -0,9290 | 0,3589 | |
| BR | -0,0056 | 0,0049 | -1,1300 | 0,2659 | |
| PN | 0,0085 | 0,0058 | 1,4670 | 0,1509 | |
| Q7_FEA:Q7_LE | 0,0584 | 0,0184 | 3,1830 | 0,0030 | ** |

---

Signif. codes: 0 ‘***’ 0,001 ‘**’ 0,01 ‘*’ 0,05 ‘.’ 0,1 ‘ ’ 1

Residual standard error: 0,03069 on 37 degrees of freedom

Multiple R-squared: 0,9848, Adjusted R-squared: 0,9769

F-statistic: 125,8 on 19 and 37 DF, p-value: < 2,2e-16

## Appendix III-9:

### 7 weeks full regression of main effects: PC-mouse

Results computed in R (R-Core Team, 2017)

Call:
lm(formula = DEC_TOTAL ~ Q7_BAS + Q7_FEA * Q7_LE + Q7_LEFEA +
Q6_LC + Q5_ID + FR + JL + AGE + SEX + EDU + FY + QL + RG +
SF + AN + LN + BR + PN, data = S4_LG)

Residuals:

| Min | 1Q | Median | 3Q | Max |
|---|---|---|---|---|
| -0,0127997 | -0,001061 | 0,0000866 | 0,0017454 | 0,0088514 |

Coefficients: (1 not defined because of singularities)

| | **Estimate** | **Std, Error** | **t value** | **Pr(>\|t\|)** | |
|---|---|---|---|---|---|
| (Intercept) | 1,9280 | 0,0183 | 105,2920 | < 2e-16 | *** |
| Q7_BAS | -0,1858 | 0,0037 | -50,5000 | < 2e-16 | *** |
| Q7_FEA | \|0,0859\| | 0,0037 | -23,1010 | < 2e-16 | *** |
| Q7_LE | -0,0201 | 0,0033 | -6,1690 | 0,0000 | *** |
| Q7_LEFEA | | | | | |
| Q6_LC | \|0,0558\| | 0,0040 | -14,0110 | < 2e-16 | *** |
| Q5_ID | \|0,0689\| | 0,0032 | -21,7200 | < 2e-16 | *** |
| FR | 0,0024 | 0,0012 | 1,9990 | 0,0515 | . |
| AGE | 0,0000 | 0,0006 | -0,0140 | 0,9891 | |
| SEX | 0,0000 | 0,0011 | -0,0290 | 0,9771 | |
| EDU | 0,0005 | 0,0006 | 0,8830 | 0,3819 | |
| FY | -0,0002 | 0,0005 | -0,3140 | 0,7550 | |
| QL | 0,0006 | 0,0007 | 0,8540 | 0,3973 | |
| RG | -0,0005 | 0,0006 | -0,8030 | 0,4260 | |
| SF | -0,0001 | 0,0006 | -0,2420 | 0,8099 | |
| AN | 0,0006 | 0,0005 | 1,1450 | 0,2579 | |
| LN | -0,0002 | 0,0007 | -0,3580 | 0,7216 | |
| BR | -0,0002 | 0,0005 | -0,4000 | 0,6913 | |
| PN | 0,0001 | 0,0007 | 0,1130 | 0,9108 | |
| Q7_FEA:Q7_LE | 0,0197 | 0,0010 | 19,4070 | < 2e-16 | *** |

---

Signif. codes: 0 '***' 0,001 '**' 0,01 '*' 0,05 '.' 0,1 ' ' 1

Residual standard error: 0,003684 on 47 degrees of freedom

Multiple R-squared: 0,9993, Adjusted R-squared: 0,9991

F-statistic: 3987 on 18 and 47 DF, p-value: < 2,2e-16

| | Estimate | Std, Error | t value | Pr(>\|t\|) | Sing var |
|---|---|---|---|---|---|
| Q7_LEFEA | \|0,0459\| | 0,0092 | 0,0000 | 8.23e-06 *** | Alt: FEA |

## Appendix III-10:

### 7 weeks full regression of main effects: Chocolate bar

Results computed in R (R-Core Team, 2017)

Call:
lm(formula = DEC_TOTAL ~ Q7_BAS + Q7_FEA * Q7_LE + Q7_LEFEA +
Q6_LC + Q5_ID + FR + JL + AGE + SEX + EDU + LN_QL + RG_FY_SF +
AN_PN + BR, data = S4_LT)

Residuals:

| Min | 1Q | Median | 3Q | Max |
|---|---|---|---|---|
| -0,077806 | -0,003829 | 0,000994 | 0,005855 | 0,034413 |

Coefficients: (1 not defined because of singularities)

| | **Estimate** | **Std, Error** | **t value** | **Pr(>\|t\|)** | |
|---|---|---|---|---|---|
| (Intercept) | 1,6958 | 0,0647 | 26,2000 | < 2e-16 | *** |
| Q7_BAS | -0,1372 | 0,0132 | -10,3680 | 0,0000 | *** |
| Q7_FEA | \|0,0377\| | 0,0133 | -2,8270 | 0,0069 | ** |
| Q7_LE | 0,0248 | 0,0165 | 1,4970 | 0,1411 | |
| Q7_LEFEA | | | | | |
| Q6_LC | \|0,0140\| | 0,0168 | -0,8350 | 0,4080 | |
| Q5_ID | \|0,0094\| | 0,0165 | -0,5690 | 0,5720 | |
| FR | -0,0048 | 0,0049 | -0,9700 | 0,3369 | |
| AGE | 0,0014 | 0,0022 | 0,6280 | 0,5329 | |
| SEX | -0,0113 | 0,0047 | -2,4090 | 0,0200 | * |
| EDU | -0,0007 | 0,0026 | -0,2610 | 0,7953 | |
| LN_QL | 0,0010 | 0,0027 | 0,3490 | 0,7286 | |
| RG_FY_SF | 0,0014 | 0,0031 | 0,4660 | 0,6431 | |
| AN_PN | -0,0066 | 0,0024 | -2,7130 | 0,0093 | ** |
| BR | -0,0012 | 0,0032 | -0,3630 | 0,7184 | |
| Q7_FEA:Q7_LE | -0,0048 | 0,0083 | -0,5790 | 0,5655 | |

---

Signif. codes: 0 '***' 0,001 '**' 0,01 '*' 0,05 '.' 0,1 ' ' 1

Residual standard error: 0,01526 on 47 degrees of freedom

Multiple R-squared: 0,984, Adjusted R-squared: 0,9793

F-statistic: 206,8 on 14 and 47 DF, p-value: < 2,2e-16

| | Estimate | Std, Error | t value | Pr(>\|t\|) | | Sing var |
|---|---|---|---|---|---|---|
| Q7_LEFEA | \|0,0442\| | 0,0074 | -6 | 4.14e-07 | *** | Alt: FEA |
| Q7_LE | 0,0605 | 0,0087 | 6,961 | 8,43E-09 | *** | Alt: FEA |

## Appendix III-11:

### Limited-Edition stages regression results: Smartphone wallet

Results computed in R (R-Core Team, 2017)

Call:
lm(formula = DEC_LE ~ Q6_BAS + Q6_LE + Q6_LC + Q5_LF + Q5_LL +
Q5_LI + Q4_CL + FR + JL + AGE + SEX + EDU + FY + QL + RG +
SF + AN + LN + BR + PN, data = LM_LE_FS)

Residuals:

| Min | 1Q | Median | 3Q | Max |
|---|---|---|---|---|
| -0,044069 | -0,014919 | -0,006696 | 0,021022 | 0,043056 |

Coefficient s: (2 not defined beca use of singularit ies)

| | **Estimate** | **Std, Error** | **t value** | **Pr(>\|t\|)** | |
|---|---|---|---|---|---|
| (Intercept) | 1,2733 | 0,0557 | 22,8650 | < 2e-16 | *** |
| Q6_BAS | -0,2626 | 0,0541 | -4,8490 | 0,0000 | *** |
| Q6_LE | 0,1575 | 0,0913 | 1,7240 | 0,0943 | . |
| Q6_LC | -0,0306 | 0,0236 | -1,2970 | 0,2040 | |
| Q5_LF | 0,0116 | 0,0200 | 0,5810 | 0,5653 | |
| Q5_LL | -0,0044 | 0,0213 | -0,2080 | 0,8363 | |
| Q5_LI | | | | | |
| Q4_CL | | | | | |
| FR | 0,0004 | 0,0101 | 0,0440 | 0,9655 | |
| AGE | -0,0003 | 0,0050 | -0,0530 | 0,9584 | |
| SEX | -0,0011 | 0,0097 | -0,1150 | 0,9094 | |
| EDU | 0,0030 | 0,0046 | 0,6520 | 0,5188 | |
| FY | 0,0018 | 0,0049 | 0,3740 | 0,7108 | |
| QL | 0,0036 | 0,0062 | 0,5880 | 0,5609 | |
| RG | -0,0018 | 0,0052 | -0,3470 | 0,7306 | |
| SF | 0,0061 | 0,0054 | 1,1280 | 0,2678 | |
| AN | 0,0037 | 0,0056 | 0,6640 | 0,5115 | |
| LN | -0,0053 | 0,0060 | -0,8900 | 0,3802 | |
| BR | -0,0040 | 0,0046 | -0,8810 | 0,3848 | |
| PN | -0,0006 | 0,0061 | -0,0930 | 0,9268 | |

---

Signif. codes: 0 ‘***’ 0,001 ‘**’ 0,01 ‘*’ 0,05 ‘.’ 0,1 ‘ ’ 1

Residual standard error: 0,02806 on 32 degrees of freedom

Multiple R-squared: 0,9662, Adjusted R-squared: 0,9483

F-statistic: 53,85 on 17 and 32 DF, p-value: < 2,2e-16

| | Estimate | Std, Error | t value | Pr(>\|t\|) | Sing var |
|---|---|---|---|---|---|
| Q5_LI | 0,0591 | 0,0343 | 1,724 | 0,0943 . | Alt: LE |
| Q4_CL | -0.0626 | 0.0376 | -1,666 | 0,1050 | Alt: LE, LF |

## Appendix III-12:

### Limited-Edition stages regression results: Sugar

Results computed in R (R-Core Team, 2017)

Call:
lm(formula = DEC_LE ~ Q6_BAS + Q6_LE + Q6_LC + Q5_LF + Q5_LL +
Q5_LI + Q4_CL + FR + JL + AGE + SEX + EDU + FY + QL + RG +
SF + AN + LN + BR + PN, data = LM_LE_SZ)

Residuals:

| Min | 1Q | Median | 3Q | Max |
|---|---|---|---|---|
| -0,044686 | -0,014782 | -0,002669 | 0,01849 | 0,038716 |

Coefficient s: (6 not defined because of singularities)

| | Estimate | Std, Error | t value | Pr(>\|t\|) | |
|---|---|---|---|---|---|
| (Intercept) | 1,3870 | 0,0287 | 48,2750 | <2e-16 | *** |
| Q6_BAS | -0,3689 | 0,0298 | -12,3960 | <2e-16 | *** |
| Q6_LE | NA | NA | NA | NA | |
| Q6_LC | NA | NA | NA | NA | |
| Q5_LF | NA | NA | NA | NA | |
| Q5_LL | NA | NA | NA | NA | |
| Q5_LI | NA | NA | NA | NA | |
| Q4_CL | NA | NA | NA | NA | |
| FR | 0,0006 | 0,0070 | 0,0870 | 0,9310 | |
| AGE | 0,0055 | 0,0033 | 1,6590 | 0,1037 | |
| SEX | -0,0059 | 0,0066 | -0,9020 | 0,3719 | |
| EDU | -0,0086 | 0,0037 | -2,3150 | 0,0250 | * |
| FY | -0,0005 | 0,0032 | -0,1560 | 0,8770 | |
| QL | -0,0013 | 0,0043 | -0,3080 | 0,7598 | |
| RG | -0,0075 | 0,0037 | -1,9940 | 0,0519 | . |
| SF | 0,0054 | 0,0036 | 1,5050 | 0,1390 | |
| AN | -0,0041 | 0,0035 | -1,1580 | 0,2526 | |
| LN | 0,0005 | 0,0039 | 0,1310 | 0,8962 | |
| BR | -0,0032 | 0,0032 | -0,9910 | 0,3266 | |
| PN | -0,0031 | 0,0038 | -0,8150 | 0,4193 | |

---

Signif. codes: 0 ‘***’ 0,001 ‘**’ 0,01 ‘*’ 0,05 ‘.’ 0,1 ‘ ’ 1

Residual standard error: 0,02229 on 47 degrees of freedom

Multiple R-squared: 0,824, Adjusted R-squared: 0,7754

F-statistic: 16,93 on 13 and 47 DF, p-value: 1,631e-13

# Appendix III-13:

## Limited-Edition stages regression results: Shower curtain

Results computed in R (R-Core Team, 2017)

Call:
lm(formula = DEC_LE ~ Q6_BAS + Q6_LE + Q6_LC + Q5_LF + Q5_LL +
Q5_LI + Q4_CL + FR + JL + AGE + SEX + EDU + LN_QL + RG_FY_SF +
AN_PN + BR, data = LM_LE_UD)

Residuals:

| Min | 1Q | Median | 3Q | Max |
|---|---|---|---|---|
| -0,028159 | -0,010773 | -0,005644 | 0,000199 | 0,048149 |

Coefficients: (2 not defined because of singularities)

| | **Estimate** | **Std, Error** | **t value** | **Pr(>\|t\|)** | |
|---|---|---|---|---|---|
| (Intercept) | 1,2813 | 0,0562 | 22,8190 | < 2e-16 | *** |
| Q6_BAS | -0,2684 | 0,0564 | -4,7580 | 0,0000 | *** |
| Q6_LE | 0,1895 | 0,0946 | 2,0030 | 0,0509 | . |
| Q6_LC | -0,0659 | 0,0324 | -2,0340 | 0,0477 | * |
| Q5_LF | -0,0031 | 0,0184 | -0,1690 | 0,8666 | |
| Q5_LL | -0,0118 | 0,0200 | -0,5900 | 0,5578 | |
| Q5_LI | | | | | |
| Q4_CL | | | | | |
| FR | -0,0030 | 0,0081 | -0,3740 | 0,7103 | |
| AGE | -0,0023 | 0,0035 | -0,6520 | 0,5174 | |
| SEX | -0,0074 | 0,0061 | -1,2070 | 0,2334 | |
| EDU | 0,0030 | 0,0034 | 0,8980 | 0,3736 | |
| LN_QL | -0,0036 | 0,0040 | -0,9110 | 0,3671 | |
| RG_FY_SF | 0,0026 | 0,0045 | 0,5770 | 0,5664 | |
| AN_PN | -0,0001 | 0,0034 | -0,0360 | 0,9713 | |
| BR | -0,0023 | 0,0051 | -0,4450 | 0,6583 | |

---

Signif. codes: 0 ‘***’ 0,001 ‘**’ 0,01 ‘*’ 0,05 ‘.’ 0,1 ‘ ’ 1

Residual standard error: 0,0207 on 47 degrees of freedom

Multiple R-squared: 0,9583, Adjusted R-squared: 0,9468

F-statistic: 83,13 on 13 and 47 DF, p-value: < 2,2e-16

| | Estimate | Std, Error | t value | Pr(>\|t\|) | Sing var |
|---|---|---|---|---|---|
| Q5_LI | 0,0711 | 0,0355 | 2,003 | 0,0509 . | Alt: LE, CL |
| Q4_CL | -0,1421 | 0,0709 | -2,003 | 0,0509 . | Alt: LE, LI |

## Appendix III-14:

### Limited-Edition stages regression results: Messenger bag

Results computed in R (R-Core Team, 2017)

Call:
lm(formula = DEC_LE ~ Q6_BAS + Q6_LE + Q6_LC + Q5_LF + Q5_LL +
Q5_LI + Q4_CL + FR * AGE + SEX + EDU + LN_QL + RG_FY_SF +
AN_PN + BR, data = LM_LE_FT)

Residuals:

| Min | 1Q | Median | 3Q | Max |
|---|---|---|---|---|
| -0,054828 | -0,009659 | 0,00476 | 0,014268 | 0,048098 |

Coefficients: (2 not defined because of singularities)

| | **Estimate** | **Std, Error** | **t value** | **Pr(>\|t\|)** | |
|---|---|---|---|---|---|
| (Intercept) | 1,2572 | 0,0390 | 32,2140 | < 2e-16 | *** |
| Q6_BAS | -0,2314 | 0,0398 | -5,8150 | 0,0000 | *** |
| Q6_LE | 0,2552 | 0,0556 | 4,5910 | 0,0000 | *** |
| Q6_LC | -0,0450 | 0,0178 | -2,5260 | 0,0154 | * |
| Q5_LF | -0,0219 | 0,0125 | -1,7490 | 0,0876 | . |
| Q5_LL | -0,0167 | 0,0188 | -0,8890 | 0,3791 | |
| Q5_LI | | | | | |
| Q4_CL | | | | | |
| FR | 0,0180 | 0,0086 | 2,0950 | 0,0423 | * |
| AGE | -0,0093 | 0,0079 | -1,1820 | 0,2440 | |
| SEX | -0,0097 | 0,0073 | -1,3250 | 0,1923 | |
| EDU | -0,0021 | 0,0040 | -0,5120 | 0,6115 | |
| LN_QL | -0,0051 | 0,0044 | -1,1640 | 0,2511 | |
| RG_FY_SF | 0,0103 | 0,0058 | 1,7560 | 0,0863 | . |
| AN_PN | 0,0014 | 0,0043 | 0,3140 | 0,7550 | |
| BR | -0,0085 | 0,0059 | -1,4550 | 0,1532 | |
| FR:AGE | 0,0136 | 0,0089 | 1,5280 | 0,1340 | |

---

Signif. codes: 0 '***' 0,001 '**' 0,01 '*' 0,05 '.' 0,1 ' ' 1

Residual standard error: 0,02489 on 42 degrees of freedom

Multiple R-squared: 0,9729, Adjusted R-squared: 0,9639

F-statistic: 107,8 on 14 and 42 DF, p-value: < 2,2e-16

| | Estimate | Std, Error | t value | Pr(>\|t\|) | | Sing var |
|---|---|---|---|---|---|---|
| Q5_LI | 0,0957 | 0,0208 | 4,5910 | 0,0000 | *** | Alt: LE |
| Q4_CL | -0,1914 | 0,0417 | -4,5910 | 0,0000 | *** | Alt: LE, LI |

## Appendix III-15:

### Limited-Edition stages regression results: PC-mouse

Results computed in R (R-Core Team, 2017)

Call:
lm(formula = DEC_LE ~ Q6_BAS + Q6_LE + Q6_LC + Q5_LF + Q5_LL +
Q5_LI + Q4_CL + FR * AGE * SEX + EDU + FY + QL + RG + SF +
AN + LN + BR + PN, data = LM_LE_LG)

Residuals:

| Min | 1Q | Median | 3Q | Max |
|---|---|---|---|---|
| -0,050956 | -0,013983 | -0,002987 | 0,01134 | 0,041503 |

Coefficient s: (3 not defined because of singularities)

| | **Estimate** | **Std, Error** | **t value** | **Pr(>\|t\|)** | |
|---|---|---|---|---|---|
| (Intercept) | 1,1822 | 0,0787 | 15,0180 | <2e-16 | *** |
| Q6_BAS | -0,1889 | 0,0801 | -2,3590 | 0,0227 | * |
| Q6_LE | 0,3000 | 0,1347 | 2,2270 | 0,0310 | * |
| Q6_LC | -0,0280 | 0,0249 | -1,1250 | 0,2667 | |
| Q5_LF | 0,0240 | 0,0305 | 0,7860 | 0,4357 | |
| Q5_LL | | | | | |
| Q5_LI | Option not chosen | | | | |
| Q4_CL | | | | | |
| FR | 0,0194 | 0,0104 | 1,8690 | 0,0681 | . |
| AGE | 0,0029 | 0,0098 | 0,2970 | 0,7682 | |
| SEX | 0,0209 | 0,0130 | 1,6020 | 0,1162 | |
| EDU | 0,0041 | 0,0038 | 1,0930 | 0,2802 | |
| FY | -0,0013 | 0,0034 | -0,3930 | 0,6960 | |
| QL | 0,0025 | 0,0042 | 0,6060 | 0,5478 | |
| RG | -0,0029 | 0,0040 | -0,7190 | 0,4759 | |
| SF | -0,0027 | 0,0038 | -0,6970 | 0,4892 | |
| AN | -0,0007 | 0,0038 | -0,1930 | 0,8474 | |
| LN | -0,0022 | 0,0048 | -0,4660 | 0,6436 | |
| BR | 0,0002 | 0,0033 | 0,0530 | 0,9579 | * |
| PN | 0,0104 | 0,0046 | 2,2370 | 0,0303 | |

---

Signif. codes: 0 ‘***’ 0,001 ‘**’ 0,01 ‘*’ 0,05 ‘.’ 0,1 ‘ ’ 1

Residual standard error: 0,02364 on 45 degrees of freedom

Multiple R-squared: 0,9417, Adjusted R-squared: 0,9158

F-statistic: 36,34 on 20 and 45 DF, p-value: < 2,2e-16

| | Estimate | Std, Error | t value | Pr(>\|t\|) | | Sing var |
|---|---|---|---|---|---|---|
| Q5_LL | 0,0375 | 0,0168 | 2,227 | 0,031 | * | Alt: LE |
| Q4_CL | -0,1231 | 0,0533 | -2,308 | 0,0257 | * | Alt: LE, LF |

## Appendix III-15:

### Limited-Edition stages regression results: PC-mouse table of interaction terms

Results computed in R (R-Core Team, 2017)

| | Estimate | Std, Error | t value | Pr(>\|t\|) |
|---|---|---|---|---|
| FR:AGE | 0,0043 | 0,0238 | 0,1800 | 0,8584 |
| FR:SEX | -0,0085 | 0,0210 | -0,4060 | 0,6869 |
| AGE:SEX | 0,0229 | 0,0322 | 0,7120 | 0,4810 |
| FR:EDU | 0,0038 | 0,0142 | 0,2670 | 0,7906 |
| AGE:EDU | -0,0056 | 0,0195 | -0,2870 | 0,7753 |
| SEX:EDU | 0,0088 | 0,0217 | 0,4070 | 0,6861 |
| FR:AGE:SEX | -0,0334 | 0,0332 | -1,0050 | 0,3214 |
| FR:AGE:EDU | 0,0101 | 0,0205 | 0,4920 | 0,6253 |
| FR:SEX:EDU | -0,0109 | 0,0237 | -0,4610 | 0,6476 |
| AGE:SEX:EDU | -0,0224 | 0,0304 | -0,7360 | 0,4664 |
| FR:AGE:SEX:EDU | 0,0161 | 0,0323 | 0,4970 | 0,6219 |
| FR:AGE | 0,0043 | 0,0238 | 0,1800 | 0,8584 |

## Appendix III-16:

### Limited-Edition stages regression results: Chocolate bar

Results computed in R (R-Core Team, 2017)

Call:
lm(formula = DEC_LE ~ Q6_BAS + Q6_LE + Q6_LC + Q5_LF + Q5_LL +
Q5_LI + Q4_CL + FR + JL + AGE + SEX + EDU + FY + QL + RG +
SF + AN + LN + BR + PN, data = LM_LE_LT)

Residuals:

| Min | 1Q | Median | 3Q | Max |
|---|---|---|---|---|
| -0,045337 | -0,006267 | 0,001709 | 0,011769 | 0,032225 |

Coefficients: (4 not defined because of singularities)

| | **Estimate** | **Std, Error** | **t value** | **Pr(>\|t\|)** | |
|---|---|---|---|---|---|
| (Intercept) | 1,1126 | 0,0764 | 14,5600 | < 2e-16 | *** |
| Q6_BAS | -0,0729 | 0,0768 | -0,9490 | 0,3476 | |
| Q6_LE | 0,5037 | 0,1360 | 3,7020 | 0,0006 | *** |
| Q6_LC | -0,0890 | 0,0276 | -3,2260 | 0,0023 | ** |
| Q5_LF | | | | | |
| Q5_LL | Option not chosen | | | | |
| Q5_LI | Option not chosen | | | | |
| Q4_CL | | | | | |
| FR | 0,0061 | 0,0057 | 1,0690 | 0,2906 | |
| AGE | -0,0008 | 0,0027 | -0,2870 | 0,7752 | |
| SEX | -0,0064 | 0,0055 | -1,1510 | 0,2556 | |
| EDU | -0,0067 | 0,0029 | -2,3440 | 0,0234 | * |
| FY | 0,0023 | 0,0026 | 0,8740 | 0,3865 | |
| QL | -0,0018 | 0,0035 | -0,5260 | 0,6014 | |
| RG | -0,0043 | 0,0029 | -1,5050 | 0,1391 | |
| SF | -0,0010 | 0,0028 | -0,3560 | 0,7236 | |
| AN | 0,0037 | 0,0029 | 1,2740 | 0,2089 | |
| LN | -0,0059 | 0,0034 | -1,7300 | 0,0903 | . |
| BR | -0,0008 | 0,0025 | -0,3230 | 0,7484 | |
| PN | 0,0011 | 0,0032 | 0,3380 | 0,7372 | |

---

Signif. codes: 0 ‘***’ 0,001 ‘**’ 0,01 ‘*’ 0,05 ‘.’ 0,1 ‘ ’ 1

Residual standard error: 0,01824 on 46 degrees of freedom

Multiple R-squared: 0,9446, Adjusted R-squared: 0,9266

F-statistic: 52,33 on 15 and 46 DF, p-value: < 2,2e-16

| | Estimate | Std, Error | t value | Pr(>\|t\|) | | Sing var |
|---|---|---|---|---|---|---|
| Q5_LF | 0,0630 | 0,0170 | 3,702 | 0,0006 | *** | Alt:LE |
| Q4_CL | -0,1260 | 0,0340 | -3,702 | 0,0006 | *** | Alt: LE, LF |

## Appendix III-17:

### Explorative results of 7 weeks full regression of main effects: Tablet-PC

Results computed in R (R-Core Team, 2017)

```
Call:
lm(formula = DEC_TOTAL ~ Q7_BAS + Q7_FEA * Q7_LE + Q7_LEFEA +
   Q6_LC + Q5_ID + FR + JL + AGE + SEX + EDU + FY + QL + RG +
   SF + AN + LN + BR + PN, data = S4_AP)
```

Residuals:

| Min | 1Q | Median | 3Q | Max |
|---|---|---|---|---|
| -0,051211 | -0,007257 | 0,002231 | 0,005761 | 0,086582 |

Coefficients: (1 not defined because of singularities)

| | Estimate | Std, Error | t value | Pr(>\|t\|) | |
|---|---|---|---|---|---|
| (Intercept) | 1,8091 | 0,2036 | 8,8870 | 0,0000 | *** |
| Q7_BAS | -0,1653 | 0,0409 | -4,0400 | 0,0009 | *** |
| Q7_FEA | \|0,0762\| | 0,0375 | -2,0330 | 0,0580 | . |
| Q7_LE | -0,0671 | 0,0480 | -1,3980 | 0,1801 | |
| Q7_LEFEA | | | | | |
| Q6_LC | \|0,0065\| | 0,0465 | -0,1400 | 0,8903 | |
| Q5_ID | \|0,0307\| | 0,0272 | 1,1290 | 0,2746 | |
| FR | 0,0074 | 0,0186 | 0,4010 | 0,6936 | |
| AGE | -0,0071 | 0,0114 | -0,6270 | 0,5387 | |
| SEX | 0,0281 | 0,0156 | 1,8000 | 0,0896 | . |
| EDU | 0,0045 | 0,0086 | 0,5240 | 0,6070 | |
| FY | 0,0057 | 0,0094 | 0,6100 | 0,5501 | |
| QL | 0,0045 | 0,0093 | 0,4810 | 0,6368 | |
| RG | 0,0076 | 0,0108 | 0,6980 | 0,4945 | |
| SF | -0,0016 | 0,0076 | -0,2050 | 0,8400 | |
| AN | -0,0033 | 0,0081 | -0,4050 | 0,6907 | |
| LN | 0,0096 | 0,0091 | 1,0540 | 0,3068 | |
| BR | 0,0130 | 0,0087 | 1,5060 | 0,1504 | |
| PN | -0,0018 | 0,0085 | -0,2180 | 0,8302 | |
| Q7_FEA:Q7_LE | 0,0389 | 0,0138 | 2,8060 | 0,0122 | * |

---

Signif, codes: 0 '***' 0,001 '**' 0,01 '*' 0,05 '.' 0,1 ' ' 1

Residual standard error: 0,03232 on 17 degrees of freedom

Multiple R-squared: 0,9888, Adjusted R-squared: 0,9769

F-statistic: 83,29 on 18 and 17 DF, p-value: 4,343e-13

| | Estimate | Std, Error | t value | Pr(>\|t\|) | Sing var |
|---|---|---|---|---|---|
| Q7_LEFEA | 0,0100 | 0,0253 | 0,3960 | 0,6966 | Alt: FEA |

## Appendix III-18:

### Explorative results of 7 weeks full regression of main effects: Red wine

Results computed in R (R-Core Team, 2017)

```
Call:
lm(formula = DEC_TOTAL ~ Q7_BAS + Q7_FEA * Q7_LE + Q7_LEFEA +
   Q6_LC + Q5_ID + FR + JL + AGE + SEX + EDU + LN_QL + RG_FY_SF +
   AN_PN + BR, data = S4_FX)
```

Residuals:

| Min | 1Q | Median | 3Q | Max |
|---|---|---|---|---|
| -0,0306013 | -0,006077 | 0,0001207 | 0,0090932 | 0,0180052 |

Coefficients: (1 not defined because of singularities)

| | Estimate | Std, Error | t value | Pr(>\|t\|) | |
|---|---|---|---|---|---|
| (Intercept) | 2,135918 | 0,143187 | 14,917 | 2,10E-10 | *** |
| Q7_BAS | -0,226812 | 0,028773 | -7,883 | 1,03E-06 | *** |
| Q7_FEA | \|0,120064\| | 0,03106 | -3,866 | 0,00152 | ** |
| Q7_LE | -0,093577 | 0,033549 | -2,789 | 0,01375 | * |
| Q7_LEFEA | | | | | |
| Q6_LC | \|0,169039\| | 0,044425 | 3,805 | 0,00173 | ** |
| Q5_ID | \|0,069061\| | 0,035069 | -1,969 | 0,06767 | . |
| FR | 0,002858 | 0,009907 | 0,288 | 0,77697 | |
| AGE | -0,002374 | 0,003436 | -0,691 | 0,50021 | |
| SEX | 0,003086 | 0,007881 | 0,392 | 0,70091 | |
| EDU | 0,004807 | 0,00386 | 1,245 | 0,23214 | |
| LN_QL | -0,009775 | 0,004332 | -2,256 | 0,0394 | * |
| RG_FY_SF | -0,005383 | 0,005869 | -0,917 | 0,37357 | |
| AN_PN | 0,005 | 0,004227 | 1,183 | 0,25526 | |
| BR | 0,003614 | 0,005624 | 0,643 | 0,53019 | |
| Q7_FEA:Q7_LE | 0,003551 | 0,017164 | 0,207 | 0,83887 | |

---

Signif. codes: 0 '***' 0,001 '**' 0,01 '*' 0,05 '.' 0,1 ' ' 1

Residual standard error: 0,01597 on 15 degrees of freedom

Multiple R-squared: 0,9959, Adjusted R-squared: 0,992

F-statistic: 257,8 on 14 and 15 DF, p-value: 2,989e-15

| | Estimate | Std, Error | t value | Pr(>\|t\|) | Sing var |
|---|---|---|---|---|---|
| Q7_LEFEA | -0,1170 | 0,0326 | -3,594 | 0,0037 ** | Alt: FEA |

## Appendix III-19:

### Explorative results of Limited-Edition stages regression: Tablet-PC

Results computed in R (R-Core Team, 2017)

Call:
lm(formula = DEC_LE ~ Q6_BAS + Q6_LE + Q6_LC + Q5_LF + Q5_LL +
Q5_LI + Q4_CL + FR + JL + AGE + SEX + EDU + LN_QL + RG_FY_SF +
AN_PN + BR, data = LM_LE_AP)

Residuals:

| Min | 1Q | Median | 3Q | Max |
|---|---|---|---|---|
| -0,032396 | -0,00824 | 0,000309 | 0,011703 | 0,035619 |

Coefficients: (2 not defined because of singularities)

| | **Estimate** | **Std, Error** | **t value** | | **Pr(>\|t\|)** |
|---|---|---|---|---|---|
| (Intercept) | 1,2013 | 0,0490 | 24,5270 | < 2e-16 | *** |
| Q6_BAS | -0,1911 | 0,0467 | -4,0950 | 0,0005 | *** |
| Q6_LE | 0,2779 | 0,0525 | 5,2910 | 0,0000 | *** |
| Q6_LC | -0,0022 | 0,0197 | -0,1090 | 0,9138 | |
| Q5_LF | -0,0109 | 0,0154 | -0,7080 | 0,4864 | |
| Q5_LL | 0,0366 | 0,0317 | 1,1530 | 0,2613 | |
| Q5_LI | | | | | |
| Q4_CL | | | | | |
| FR | 0,0032 | 0,0109 | 0,2930 | 0,7724 | |
| AGE | 0,0011 | 0,0061 | 0,1800 | 0,8588 | |
| SEX | 0,0124 | 0,0090 | 1,3740 | 0,1832 | |
| EDU | 0,0020 | 0,0050 | 0,4040 | 0,6904 | |
| LN_QL | 0,0135 | 0,0072 | 1,8730 | 0,0744 | . |
| RG_FY_SF | -0,0026 | 0,0060 | -0,4300 | 0,6715 | |
| AN_PN | 0,0139 | 0,0044 | 3,1960 | 0,0042 | ** |
| BR | 0,0172 | 0,0067 | 2,5850 | 0,0169 | * |

---

Signif. codes: 0 '***' 0,001 '**' 0,01 '*' 0,05 '.' 0,1 ' ' 1

Residual standard error: 0,02108 on 22 degrees of freedom

Multiple R-squared: 0,986, Adjusted R-squared: 0,9778

F-statistic: 119,6 on 13 and 22 DF, p-value: < 2,2e-16

| | Estimate | Std, Error | t value | Pr(>\|t\|) | | Sing var |
|---|---|---|---|---|---|---|
| Q5_LI | 0,1042 | 0,0197 | 5,2910 | 0,0000 | *** | Alt: LE |
| Q4_CL | -0,2084 | 0,0394 | -5,2910 | 0,0000 | *** | Alt: LE, LI |

## Appendix III-20:

### Explorative results of Limited-Edition stages regression: Red wine

Results computed in R (R-Core Team, 2017)

Call:
lm(formula = DEC_LE ~ Q6_BAS + Q6_LE + Q6_LC + Q5_LF + Q5_LL +
Q5_LI + Q4_CL + FR + JL + AGE + SEX + EDU + FY + QL + RG +
SF + AN + LN + BR + PN, data = LM_LE_FX)

Residuals:

| Min | 1Q | Median | 3Q | Max |
|---|---|---|---|---|
| -0,024687 | -0,013339 | -0,002992 | 0,0107 | 0,039862 |

Coefficients: (3 not defined because of singularities)

| | **Estimate** | **Std, Error** | **t value** | **Pr(>\|t\|)** | |
|---|---|---|---|---|---|
| (Intercept) | 1,2300 | 0,0777 | 15,8320 | 0,0000 | *** |
| Q6_BAS | -0,2275 | 0,0752 | -3,0270 | 0,0097 | ** |
| Q6_LE | 0,3304 | 0,1085 | 3,0450 | 0,0094 | ** |
| Q6_LC | -0,0757 | 0,0489 | -1,5490 | 0,1455 | |
| Q5_LF | -0,0415 | 0,0216 | -1,9230 | 0,0767 | . |
| Q5_LL | Option not chosen | | | | |
| Q5_LI | | | | | |
| Q4_CL | | | | | |
| FR | 0,0124 | 0,0151 | 0,8210 | 0,4265 | |
| AGE | -0,0019 | 0,0062 | -0,3090 | 0,7624 | |
| SEX | 0,0066 | 0,0132 | 0,4970 | 0,6276 | |
| EDU | -0,0071 | 0,0066 | -1,0700 | 0,3040 | |
| FY | -0,0008 | 0,0065 | -0,1250 | 0,9025 | |
| QL | 0,0002 | 0,0089 | 0,0230 | 0,9824 | |
| RG | 0,0152 | 0,0066 | 2,3040 | 0,0384 | * |
| SF | -0,0143 | 0,0086 | -1,6720 | 0,1184 | |
| AN | 0,0061 | 0,0075 | 0,8140 | 0,4303 | |
| LN | 0,0031 | 0,0070 | 0,4380 | 0,6682 | |
| BR | 0,0025 | 0,0050 | 0,4890 | 0,6331 | |
| PN | 0,0000 | 0,0077 | 0,0010 | 0,9993 | |

---

Signif. codes: 0 ‘***’ 0,001 ‘**’ 0,01 ‘*’ 0,05 ‘.’ 0,1 ‘ ’ 1

Residual standard error: 0,02495 on 13 degrees of freedom

Multiple R-squared: 0,9807, Adjusted R-squared: 0,9569

F-statistic: 41,22 on 16 and 13 DF, p-value: 1,578e-08

| | Estimate | Std, Error | t value | Pr(>\|t\|) | Sing var |
|---|---|---|---|---|---|
| Q5_LI | 0,1239 | 0,0407 | 3,0450 | 0,0094 ** | Alt: LE |
| Q4_CL | 0,0004 | 0,0462 | 0,0080 | 0,9940 | Alt: LE, LF |

## Appendix III-21:

### Survival analysis results for all products

Results computed in R (R-Core Team, 2017)

| Comparison condition | N | Observed | Expected | (O-E)^2/E | (O-E)^2/V |
|---|---|---|---|---|---|
| KM_T7_FX$PROD=1 | 10000 | 2204 | 1825 | 78,50 | 164,00 |
| KM_T7_FX$PROD=2 | 10000 | 1513 | 1892 | 75,80 | 164,00 |
| KM_T7_PL$PROD=1 | 10000 | 2204 | 1599 | 229,00 | 474,00 |
| KM_T7_PL$PROD=2 | 10000 | 1072 | 1677 | 218,00 | 474,00 |
| KM_T7_AP$PROD=1 | 10000 | 2204 | 1530 | 297,00 | 610,00 |
| KM_T7_AP$PROD=2 | 10000 | 941 | 1615 | 281,00 | 610,00 |
| KM_T7_LT$PROD=1 | 10000 | 2204 | 1749 | 118,00 | 247,00 |
| KM_T7_LT$PROD=2 | 10000 | 1372 | 1827 | 113,00 | 247,00 |
| KM_T7_LG$PROD=1 | 10000 | 2204 | 1936 | 37,00 | 77,80 |
| KM_T7_LG$PROD=2 | 10000 | 1723 | 1991 | 36,00 | 77,80 |
| KM_T7_FT$PROD=1 | 10000 | 2204 | 1519 | 309,00 | 634,00 |
| KM_T7_FT$PROD=2 | 10000 | 923 | 1608 | 292,00 | 634,00 |
| KM_T7_UD$PROD=1 | 10000 | 2204 | 1993 | 43212,00 | 47,20 |
| KM_T7_UD$PROD=2 | 10000 | 1825 | 2036 | 43364,00 | 47,20 |
| KM_T7_SZ$PROD=1 | 10000 | 2204 | 2024 | 16,00 | 34,00 |
| KM_T7_SZ$PROD=2 | 10000 | 1880 | 2060 | 43327,00 | 34,00 |
| KM_T7_FS$PROD=1 | 10000 | 2204 | 1677 | 166,00 | 343,00 |
| KM_T7_FS$PROD=2 | 10000 | 1224 | 1751 | 159,00 | 343,00 |

PROD 1 = Benchmark

PROD 2 = Product

### Cox regression results for tablet-PC, wake-up light and red wine

R-output

| | coef | exp(coef) | se(coef) | z | p |
|---|---|---|---|---|---|
| Tablet-PC | -0,9237 | 0,397 | 0,0389 | -23,7 | <2e-16 |
| Wake-up light | -0,7829 | 0,4571 | 0,0372 | -21 < | 2,00E-16 |
| Red wine | -0,4229 | 0,6551 | 0,0334 | -12,7 | <2e-16 |

Part IV

# IV. For some eyes only – On the importance of knowing primary customer types when selling Limited-Editions

## IV. Abstract

A special mystique emanates from the combination of visibly used goods, conspicuous consumption and Limited-Edition scarcity messages. Reference group effects with snobs aiming to differentiate from the crowd while conformists eagerly seeking to affiliate with snobs may only work profitably for suppliers in the presence of supply quantity restrictions as shown by Amaldoss and Jain (2010). Different forms of supply limits have been researched for their influence on consumers' perceived desirability, attractiveness, purchase intentions and product valuations. It is known that scarcity messages for conspicuous goods should rather contain quantity than time restrictions (Aggrawal, Jun & Huh, 2011; Jang, Ko, Morris & Chang, 2015). This study seeks to consolidate all these valuable results under a sales-prime, applying a price-based choice experiment. This study finds that not only conspicuous products may profit from Limited-Edition scarcity messages. Limited-Editions are for example capable of satisfying consumers' needs for variety or may even trigger buying frenzies for non-conspicuous goods. For conspicuous goods on the other hand, consistent and recognisable Limited-Edition strategies are needed. Additionally, for these strategies to become effective it is essential to know if a specific product is primarily desired by snobs or conformists.

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# IV.-1 Introduction

The 2008 Mondial Paris Motor Show commenced on 4th of October and curtains closed two weeks later (MPMS, 2018). Aston Martin announced only six days after opening and presentation that all 77 units of its Limited-Edition super sports car One-77 had been sold (Aston Martin, 2018; Wojdyla, 2008). This instant success was possible despite a sales price of €1,5mio and the fact that the presentation of the vehicle was restricted to a small part around the right wing and head lamp (Wittich, 2013). Somehow, this sales achievement can be seen as a late reminiscence of the experiments which yielded commodity theory, as buyers did not only increase their effort to obtain the scarce product (Brock, 1968, pp. 254). In the words of Timothy C. Brock, they were even trying to obtain the message, regardless of its full content. As a result of the consequences of commodity theory for value change, ideas of the theory were widely adapted for commercial purposes. Recently, consumer behaviour, especially in relation to different types of scarcity messages, is researched. Latest results show that product attitudes for conspicuous products can better be influenced using supply side scarcity messages (Gierl & Huettl, 2010, pp. 232). Purchase intentions (Aggrawal, Jun & Huh, 2011, pp. 21), brand attitude and perceived value for the same type of product can be improved by Limited Quantity Scarcity signals (Jang, Ko, Morris & Chang, 2015, pp. 994-995). Among the most popular – and presumably also most credible – types of supply side-oriented messages of restricted quantity are Limited-Editions, which are researched here. For this study a Limited-Edition is defined as a binding commitment of finite quantity individually documented by a personal serial number.

However, the strict definition of Limited-Edition is not the only differentiation between former studies and this. Consumers' choice behaviour is researched using a sales-oriented framing by applying a price-based choice experiment with participants from a clearly distinguishable sample in order to capitalise on sociocultural visibility as an important pre-condition for conspicuous consumption. To elicit purchase behaviour, the choice study is accompanied by three distinct constructs which represent one dimension of a three-membered framework each. Dimensions include general inferences on product quality and frenzy creation from price, bandwagon aspects and supply limitations, individual attitudes towards consumption-based self-expression and products' suitability for self-expression and reference group effects. The remainder of the study is organised as follows: in the following chapter a brief literature overview forms the base for framework development. The resulting framework consists of three sub-hypotheses which provide product type specific assumptions, while the underlying main-hypothesis consolidates the framework. In chapter IV.-3 study

design and regression model are described and the sample is introduced. From chapter IV.-4 on results of the binary regression model are presented and discussed. While these remain on a product type specific level in chapter IV.-4, results are generally discussed in chapter IV.-5. Managerial implications, limitations of study and proposals for future research are also provided in chapter IV.-5.

# IV.-2 Literature overview and development of hypotheses

Contesting the role of scarcity messages by comparing two products for which the only difference is a scarcity message attached to one of the two, scarcity messages have shown their potential to advantage attitudes towards a good: given that consumers are sufficiently interested in a product in general (Verhallen, 1982, pp. 312), a majority of consumers finds a relatively scarcer product at least more popular or desirable (ibid.; Szybillo, 1973, pp. 38/pp. 40; Lynn, 1989, pp. 260; Lynn, 1991, pp. 50). According to Lynn (1989, pp. 262/265), these desirability effects are mediated by a higher perceived expensiveness of scarce goods which in turn propel positive value effects for these goods. Higher perceived valuations for scarce goods in general were for example found by Becker (1991, pp. 1113), deGraba (1995, pp. 337) and Balachander, Liu and Stock (2009, pp. 1635).

However, for disclosure of reasons why consumers prefer scarce goods over non-scarce ones, it may be interesting to throw a second glance at the results of Worchel, Lee and Adewole (1975): in their experiment they retrieved ratings about cookies, which were either non-scarce, scarce due to failed planning by the researcher or scarce because of unexpectedly high appetite of former participants (ibid, pp. 908). Besides a higher product valuation resulting in higher assumed costs of acquisition under the latter condition, this market scarcity condition also produced higher ratings for attraction and liking than under non-scarcity or accidental reasons. Participants' ratings have been retrieved even before they were allowed to taste the cookies (ibid, pp. 909). Hence, scarcity was able to increase consumers' expectations about the product. These expectations either intensified their ratings concerning quality or increased their willingness to obtain the product. While the latter represents one of the central assumptions of commodity theory (Brock, 1968, pp. 254), the former is more recently discussed under the term quality signalling. The rationale of this theory is that under normal cost for Limited-Edition introduction – neither extremely low, nor excessively high – a high quality supplier can signal superiority of his goods better by limiting supply. Compared to underlining product quality using price premiums instead, low quality suppliers always have an incentive to mimic pricing strategies as profits will rise with price increases, while a mimicking of a Limited-Edition strategy would always result in profit losses for them (Stock &

Balachander, 2005, pp. 1185-1187). High quality suppliers can successfully utilise Limited-Edition strategies as long as sufficiently enough customers are uninformed about the true quality of purchase alternatives. The higher the consensus among consumers about distribution of quality in the market, the more attractive it becomes to signal quality with price premiums (ibid., pp. 1190). This is one reason why quality signalling is more frequently discussed in the context of introductory scarcity than with permanently offered Limited-Editions. For introductory scarcity this strategy found empirical support, using data from the US-car market by Balachander, Liu and Stock (2009, pp. 1634). In their study they showed that supply limitations in early periods can increase consumers' intrinsic preference for the product during introduction and even thereafter.

While quality signalling already deals with consumers' higher expectations on the products' utility, buying frenzy theory deals mostly with the time aspect of scarcity: consumers are assumed to be differentiable along at least two reservation price levels for the same product with reservation prices of early buyers strictly above those of the later (DeGraba, 1995, pp. 335). In the beginning, members of the late buyer segment falsely expect prices to decline with time, which will not happen as supply is determined by the firm not to match demand and hence forces late buyers to buy earlier for higher prices, if they do not want to miss an important shopping opportunity otherwise (ibid, pp. 336-337). Low product valuation consumers, thus, simultaneously increase both their effort to obtain the product and sacrifice, while the product's true quality plays a subordinate role in this case. Hence, buying frenzy theory is comparatively more related to the attraction variable from Worchel, Lee and Adewole (1975) and to commodity theory. Both theories have been discussed as alternative explanations for motivational aspects of Limited-Editions' success. Quality signalling theory found support for expensive and technologically complex goods (Balachander, Liu & Stock, 2009, pp. 1635), while buying frenzy theory found at least anecdotal support in the success of time limited collaborations of Swedish mass fashion brand H&M with several designers from higher fashion segments (Süddeutsche Zeitung, 2010; Lorenzo, 2015). Discussing both theories alternatively neglected both the process-related aspect brought-up by Worchel, Lee and Adewole (1975, pp.908-909) mentioning the difference between attraction and liking and the difference in product characteristics. Consequently, it can be assumed that both increases in attraction and signalling of higher product quality are equally important motivational aspects in triggering consumers' purchase intentions for scarce goods above their non-scarce counterparts. Aggrawal, Jun and Huh (2011, pp. 22/24) for example showed, that any type of scarcity message outperforms a non-existent scarcity message when purchase intentions are

the dependent variable. In sum, the first dimension to be fulfilled for all successful Limited-Editions can be hypothesised as follows:

**For successful Limited-Editions, consumers must infer either higher quality or an important shopping opportunity from that offer.**

**Sub-hypothesis 1: Framework dimension 1 – general inferences**

Individuals engage in comparisons to each other basically for reasons of self-evaluation (Lucas, Diener & Suh, 1996, pp. 616-617). Self-esteem and subjective well-being are for example strengthened in social interactions, especially in conjunction with successful goal achievement (Fournier, 2009, pp.1167-1168; Huo, Binning & Molina, 2010, pp. 206). Social status in general and sociometric status in particular can only be estimated in relation to others, mostly the immediate peers of an individual. Anderson, Hildreth and Howland (2015, pp. 575) for example describe status as a positive function of admiration and respect from peers. For Lucas, Diener and Suh (1996, pp. 616-617) social status is deeply connected to an individuals' expectations on belongingness or rejection by others. As individuals are steadily committed to self-improvement in order to climb the social ladder according to Escalas and Bettman (2003, pp. 341), successful goal achievement is at least an important component of social ascent and goals to achieve are often income goals. Individuals thus often equalise social status and socioeconomic status. As income is invisible to others, the income's outcome is often used as a proxy (Veblen, 1912, pp. 76-77). Thus, social comparisons are usually made on the base of consumption comparisons and means of self-expression through consumption (Belk, 1988, pp. 160). Since consumption is only the proxy for income, individuals have ever engaged in status games by emulating consumption habits of higher status individuals in order to signal affiliation. Those to be emulated on the other hand, seek to differentiate from their copyists by means of consumption as well (Veblen, 1912, 74-75; Heffetz, 2011, pp. 1103). Veblen (1912) subsumed this behaviour under the term conspicuous consumption. Especially the interplay of differentiation and assimilation often depends not only on the goals to be achieved with either behaviour, but also on the time frame taken as the base: if the time frame for example represents an individual's life time, it is natural according to Belk (1988, pp. 157-159) to define the self in affiliation to a group in early ages and to have an increasingly egocentric definition of self when caring about one's own heritage in later ages. Escalas and Bettman (2003, pp. 341) focus on shorter time frames. Their social ladder theory proposes life as a steady interplay of becoming a group member and gaining status in a group by affiliating to a current group, yet in search of social ascent individuals always have to differentiate from the current group in order to access and be respected in the group they desire to belong to. However, both ideas have in common, that individuals utilise either strategy in a manner,

that maximises their perceived probability of social goal achievement. In the second-dimension individuals' motivations in the context of comparisons to others for the means of self-evaluation and self-expression are thus characterised. As self-expression in the context of conspicuous consumption is used to either differentiate or affiliate, especially the consumers of conspicuous Limited-Editions can be characterised as follows:

**Successful Limited-Editions should fulfil the needs of individuals, who have a tendency to engage in comparisons with others, use comparisons with others to express themselves and use self-expression to either differentiate or affiliate. This effect is restricted to conspicuous Limited-Edition offers.**

**Sub-hypothesis 2: Framework dimension 2 – social effects**

As there are individuals more or less prone to conspicuous consumption, there are also products especially suitable for social positional purposes (Hirsch, 1977, pp. 28). Conspicuous products are different from their non-conspicuous counterparts especially in terms of visibility. To be suitable for public consumption they must be physically and socially visible (Jang, Ko, Morris & Chang, 2015; Gierl & Huettl, 2010, pp. 228; Bagwell & Bernheim, 1996, pp. 355; Bearden & Etzel, 1982, pp. 190-191). While physical visibility is only a pre-condition in the context of total visibility, social visibility is an intra-group convention which can be mostly explained by the product's capability to express exclusivity and uniqueness (Bearden & Etzel, 1982, pp. 190-191; Bourne, 1957, pp.218). This capability to visibly express status, uniqueness and exclusivity is called signalling value and represents an important proportion of a conspicuous good's total utility. As opposed to normal goods where usage value is either equal to total utility (e.g. pure commodities) or marks the vast majority of it, the signalling value of a conspicuous good even increases with its price (Veblen, 1912, pp. 74). To which extent a good's signalling value can be subject to intra-group agreements, was shown by Leibenstein (1950, pp. 189), characterising snobs and conformists. Both groups display antithetic utility judgements of the same good's signalling value: snobs' utility is a negative function of the number of co-owners, while conformists' utility positively depends on the same variable (ibid). For the snobs, differentiation is the prime purchase motivation for conspicuous goods, while the conformists purchase the same category of goods in order to affiliate. Amaldoss and Jain (2005b, pp. 40) have shown that these prime motivations are so decisive for either group's respective shopping behaviour, that snobs even start buying inexpensive low-quality products, if the number of co-owners for the high quality good has risen beyond their tolerance threshold. The same authors (Amaldoss & Jain, 2010, pp. 634) have shown that Limited-Editions on the other hand provide a credible insurance against too many co-owners. With a good's conspicuousness being expressed by its signalling value and the signalling value being

capable of expressing consumers' motivations concerning differentiation and affiliation, it seems strait forward to hypothesise, that:

**A successful Limited-Edition must be capable to express its owner's prime shopping motivation in shape of its signalling value. Compared to non-conspicuous goods, this effect will be stronger for conspicuous goods.**

**Sub-hypothesis 3: Framework dimension 3 – product fit**

To consolidate all three sub-hypotheses, it can be assumed, that:

**Choice behaviour of a conspicuous Limited-Edition offer is thus explainable with traits from all three dimensions, while a non-conspicuous Limited-Edition offer will not score in all categories simultaneously.**

**Main-hypothesis: Framework consolidation**

# IV.-3 Study design, model description and sample

## IV.-3.1 Study design and factor analyses results

The study was part of a larger price-based choice experiment running over seven weeks. In the beginning participants were asked for their willingness to pay for products offered in the first two weeks. While in the first week they were simply asked for their willingness to pay. In the second week this question was framed with lower and upper price bounds for the respective product category. Products offered were either conspicuous or non-conspicuous durables from two different price levels and are shown in table IV-1. As long as willingness to pay statements stayed largely within category price bounds, participants started into the choice game part using the lower of the two. This was done in order to capitalise on the idea of willingness to pay as an interval (Schlereth, Eckert & Skiera 2012, pp. 763-764), rather than a rigid point estimate. At every stage of the choice game part they were asked whether to pick an improved or a non-improved version of a product or to opt out for this specific product, by making no statement. This non-option was available at every stage, as participants were also instructed to either forgo the price statement or set price statement equalling €0,-, if not interested in the specific product during the first two stages. As participants were incentivised by improvements for the higher priced products, they got incentivised accordingly for the lower priced products. This was done using a predetermined mark-down scheme akin to the one proposed by Heching, Gallego and van Ryzin (2002, pp. 152), which was offering them lower prices every time they opted for a non-improved product in the stage before. Correspondingly, opting for improved products, higher prices were offered in next stage.

| Product category | Example product | Unchanged features | Variable feature Base | Enhanced |
|---|---|---|---|---|
| Smartphone wallet | Fossil iPhone wallet | • Real leather<br>• Varying colours<br>• 3 credit card slots<br>• Magnetic latch | Cow leather | Goat leather |
| Shower curtain | Ikea Uddgrund | • Polyester curtain<br>• Varying textures<br>• Water repellent<br>• Size 200x180cm<br>• | Vertical stability: Edge double sewed | Vertical stability: Rubber enforced edge |
| Messenger bag | Freitag F12 Dragnet | • Made from truck canvas<br>• Varying colours<br>• Sturdy<br>• Sufficient space for 13" notebook<br>• | No pencil storage | Rubber belt for 3 pencils |
| PC Mouse | Logitech M317 Wireless Mouse | • Rubberised surface<br>• Varying colours<br>• Ergonomically shaped<br>• 1-year battery life span | Cordless range 5 m | Cordless range 7m |

**Table IV-1: Product and feature specifications**

Improvements offered included a usage value-based change in the physical product (enhanced feature) in round 3 or several Limited-Edition offers and improvements in rounds 4 to 6. In round 7 Limited-Edition and feature were offered in a combination as shown in table IV-2. To simulate real shopping decisions, every product was presented using five different product characteristics of which the first four were modelled to characterise base product, while the fifth was altered. In round 3 the feature was offered against a non-improved product for which the fifth trait was offered in lower choice level. Stage 4 was the first stage to offer a Limited-Edition product improvement to respondents. In line with the Limited-Edition definition given in chapter IV.-1 the product was offered as serial number 462 of a Limited-Edition of 1000 units. This serial number is the result of expert discussions. Requirements resulting from them included picking a meaningless 3-digits number somewhere halfway between first and last without being a round number. Another requirement was not to include cyphers like 1,3,7 or 9 which are common lucky numbers or parts of them according to pretest results. Additionally, respondents were informed that 462 is a serial number on a take it or leave it-base. In the subsequent round participants had the chance to personalise their serial number with three different choice options including an individual serial number. During round 6, participants had the opportunity to increase competition for the product as the improvement was to half the supply limit – 500 instead of 1000[17]. In the last round a simple Limited-Edition was the lower of the two improvement options, while a combination of

[17] If the specific participant has not opted for an individual serial number so far, the take it or leave it-serial number was reduced to 246 in case of the 500 units supply limit.

feature and Limited-Edition was the highest. From round 5 on Limited-Edition choices like serial number personalisation or supply limitation have been recorded for each product and each participant and were repeated in subsequent rounds. Non-improved products in Limited-Edition rounds were usually offered using an *'As long as stock lasts'*-framing, which represent a neutral position as opposed to *'Abundantly many available'* or likewise (Lynn, 1989, pp. 264) as offered in round 7.

| Choice ID | Stage 3 | Stage 4 | Stage 5 | Stage 6 | Stage 7 |
|---|---|---|---|---|---|
| 1 | Utilitarian base | As long as stock lasts | Limited-Edition No 462 of 1000 | Limited-Edition Serial No (Ind-S5) of 1000 | Abundantly many |
| 2 | Utilitarian enhanced | Limited-Edition No 462 of 1000 | Limited-Edition No1 of 1000 | Limited-Edition Serial No (Ind-S5) of 500 | Limited-Edition Serial No (Ind-S5) of (Ind-S6) units |
| 3 | N/A | N/A | Limited-Edition No 1000 of 1000 | N/A | Limited-Edition Serial No (Ind-S5) of (Ind-S6) units |
| 4 | N/A | N/A | Limited-Edition Individual Lucky Number of 1000 | N/A | Utilitarian enhanced N/A |

**Table IV-2: Variable product feature changes by stage**

Although product descriptions were imitating online shopping product presentations, the study was organised as a paper-pencil experiment. This was done for two reasons: firstly, product presentations from online stores have increasingly defunded into offline shopping arrangements subject to fully integrated store concepts like bricks-and-clicks[18] which set standards even for offline-only shops (Kacen, Hess & Chiang, 2013, pp. 19). Secondly, in pre-talks held before the experiment commenced participants queried fatigue about a myriad of half-heartedly made online questionnaires. Some were even explicitly mentioning, that if somebody means business, he or she should either ask in person or send a letter, as in both cases the higher investment necessary significantly underlines the meaning of purpose. Consequently, they found their personal questionnaire in their letter box every Friday afternoon. Filled-in questionnaires were collected every Sunday night from the same letter box after the participant signalled accomplishment using a mobile instant messenger chat-group which was also established in case of comprehension questions. Delivery of questionnaires was also signalled by the researcher to the respondents using the same mobile instant messenger chat-group. In that way one questionnaire was answered every week, stretching the total duration

[18] In the bricks-and-clicks concept a retailer sells the same assortment both online and offline. As shoppers switch between different channels for different purposes (e.g. research online, purchase offline), presentations of assortment are identical across arrangements in order to secure a consistent shopping experience (cp Kacen, Hess & Chiang, 2013).

of the experiment to a minimum period of 7 weeks, as respondents could also file subsequently.

At the start of the questionnaire respondents got the first WTP-questionnaire, as mentioned above, combined with an organisational part, a sociodemographic questionnaire (SD) and an opinionnaire on quality inferences from scarcity and price or possible attraction increases from limiting supply (TQ-questionnaire). The organisational part was used to secure data from one person to be grouped correctly at the end of the experiment: they were instructed to generate a personal code consisting of initials from first name, place of birth and sex as well as first and last two digits of birth date. To secure grasp for this procedure, it was repeated in the second week. After the second week the chat-group was explicitly checked for replies on identification issues. As there were no issues found, codes were printed in each questionnaire's headline from week 3 on. In the SD-questionnaire participants' information were collected on their educational status and their state and short to mid-term certainty of subsistence. As age and sex were already – and in case of age more precisely – asked by generating the code, these two questions served as a confirmation for sincerity of these answers.

Purpose of the TQ-questionnaire was to elicit participants' attitudes towards supply limits of any kind as well as to understand the way they generally draw inferences from a product's quality. This is in line with the two contrary theories on Limited-Editions resulting in the first sub-hypothesis in chapter IV.-2. Quality signalling assumes supply shortages in early stages of product life cycle to increase consumers' quality perceptions leading to higher levels of product preference even after introductory phase (Balachander, Liu & Stock, 2009, pp. 1634). For buying frenzies introductory scarcity is also the main trigger howbeit, it is used in this case to sell-off the goods as early as possible. The original theory by DeGraba (1995, pp. 335) is based on information disparity between customers with different reference prices for the good as detailed during hypothesis development in chapter IV.-2. An alternative theory by Amaldoss and Jain (2008a, pp. 938) justifies buying frenzies as a result of strong reference group effects in general and strong willingness to assimilate by conformists in particular. Questions FY, AN, QL, RG and SF from table IV-3 deal especially with the ideas of DeGraba (1995) and Balachander et al. (2009), while the ideas of Amaldoss and Jain (2008a) can only be tackled in a combination with the TL-questionnaire, which will be introduced later in this chapter. Questions AN and SF take-on the notions about general tendency towards conformity in the absence reference group effects and uniqueness. These ideas were first brought up by Asch (1955, pp. 34), showing that people conform with a majority's belief even in the knowledge of a high probability of giving a wrong answer. For shopping decisions these

bandwagon effects were recently shown in experiments by van Herpen, Pieters and Zeelenberg (2009, pp. 307/ 310). The RG-question is also partly based on these ideas, but also connects them to DeGraba's (1995) definition of a buying frenzy. Question LN partly links this definition of bandwagon effects to the quality signalling theory of Balachander, Liu and Stock (2009), but also improves the understanding of quality inferences akin to questions PN and BR. While PN is based on consumers' direct inferences between price and product quality (Leavitt, 1954, pp. 208; Gabor & Granger, 1966, pp. 51-52), BR is based on quality inferences from brand strength as suggested by Jacoby, Olson and Haddock (1971, pp. 573). Reasons to include this question not only date back to further results from McConnell (1968, pp. 301) and Allison and Uhl (1964, pp. 37), it also became necessary, because capitalising on quality signalling needs strong brands as a signal of quality (Balachander & Stock, 2009, pp. 346; Aggrawal, Jun & Huh, 2011, pp. 21).

| Table short cut | R-code | Item |
|---|---|---|
| Price quality inference | PN | A high product price is an indicator of high product quality to me. |
| Buying Frenzy | FY | Advertising containing limited quantity availability of a product is panic mongering to me. |
| Well-known brands | BR | Seeking high quality products, I usually rely on well-known brands. |
| Many buy heuristic | AN | If many others buy a product, this poses a reason to buy to me. |
| Demand Quality inference | LN | From a high demand, I usually infer a high product quality. |
| Availability quality | QL | If a company promotes a limited product quantity, I usually infer higher product quality compared to unlimited availability. |
| Missed opportunity | RG | If I buy high demand products, I – among other arguments – fear to miss something otherwise. |
| Empty shelf | SF | If I am indifferent between several products, I tend to buy the one from the relatively emptier shelf space. |

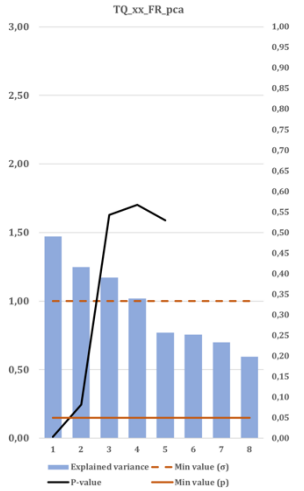
**Table IV-3: Item set of TQ-questionnaire**

In an attempt to increase explanatory strength of the items retrieved in the TQ-questionnaire, several factor analyses were conducted using maximum of p-value as the first indicator for factor determination. If factors generated were meaningful with regard to their content, their respective items have been weighted by their factor loadings and divided by the sum of factor loadings of all items assigned to the factor as shown in equation IV-1 and then standardised. Procedure shown in equation IV-1 was adopted for all factor analyses in part IV.

$$weight\ of item^{k} = \frac{factor\ loading^{k}}{\sum_{k=1}^{n} factor\ loading^{k}}$$

**Equation IV-1: Calculation of item weights**

P-value of the TQ-items' factor analysis implies a three-factor structure, yet, primary component analysis suggests an elbow after the fourth factor (see table IV-4). Both models were ran and compared for meaningfulness with regards to content of item with the better result for the four-factor structure: quality inference is reproduced by a combination of brand and price cues, shopping opportunities are covered by items of supply side scarcity and high demand scarcity describes factor three. While the maverick position for frenzy creation even persisted under a three-factor structure. Overall performance of PCA was acceptable according to Bartlett-test with a p-value well below 0,05, though KMO-criterion is below 0,60, which indicates a miserable performance according to Kaiser and Rice (1974, pp. 122). However, as always two models – the factor model shown in table IV-4 and the single items model – were run for analysis in chapter IV.-4, the weak performance of the KMO is expected to be of minor influence.




TQ

| Item | Uniqueness | Quality inference | | Supply side scarcity | | Demand side scarcity | | Frenzies | |
|---|---|---|---|---|---|---|---|---|---|
| FY | 0,005 | BR | 0,873 | QL | 0,674 | AN | 0,780 | FY | 0,985 |
| BR | 0,235 | PN | 0,553 | SF | 0,664 | LN | 0,618 | QL | -0,200 |
| AN | 0,282 | AN | 0,312 | RG | 0,521 | RG | 0,226 | AN | -0,108 |
| QL | 0,445 | RG | 0,183 | PN | 0,148 | PN | 0,148 | PN | -0,102 |
| SF | 0,541 | FY | | LN | 0,101 | SF | 0,112 | BR | |
| LN | 0,599 | LN | | FY | | QL | -0,227 | LN | |
| RG | 0,638 | QL | | BR | | FY | -0,130 | RG | |
| PN | 0,64 | SF | | AN | | BR | | SF | |

| Bartlett-test | KMO-criterion |
|---|---|
| X2 = 65,085 | 0,5394667 |
| df = 28 | |
| p-value = 0,0009 | |

**Table IV-4: Factor analysis result of TQ-questionnaire** (Results computed in R: R-Core Team, 2017; Maier, 2015)

The experiment remained a purely price-based choice study in weeks 2 to 6 with a maximum of nine decisions to be made in each round. While participants were asked about their general opinions on shortage of product choice and quality perceptions in the beginning (TQ), the idea was to have an easy to answer questionnaire on the one hand, which makes participants think about individual attitudes towards products unconsciously, simply by thinking about whether to opt in favour or against an offered product improvement. Average total time to fill-in in these weeks of less than three minutes according to pre-tests for the entire questionnaire confirmed the first idea, while the latter case is covered by a questionnaire on their propensity to self-express (TL-questionnaire) and the fit between self-expression and each product (TR-questionnaire) in week 7.

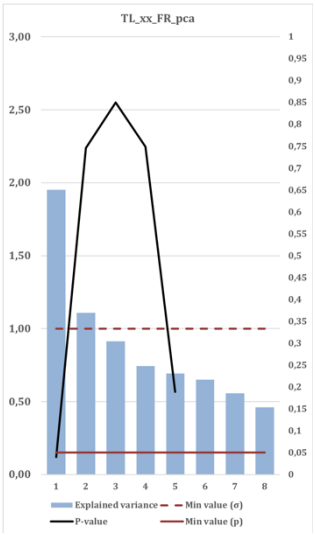
Lifestyle opinions of importance in the context of Limited-Editions are based on the idea of reference group effects which mainly consist of differentiation and assimilation effects as mentioned in chapter IV.-2. As public consumption has ever been seen as a proxy of a person's disposable income (Belk, 1988, pp. 160; Heffetz 2011, pp. 1103), lower income individuals capitalise on that idea by assimilating their purchase behaviour to that of higher income individuals (Veblen, 1912, pp. 74-76). In order to still make a difference, higher income individuals again seek to differentiate from the masses by means of consumption. These patterns of behaviour bear antithetic consequences for utility perceptions: for those who seek to differentiate, a product's utility decreases with the number of people owning the same good. Hence, for those who seek to assimilate utility is a positive function of the number of co-owners (Leibenstein, 1950, pp. 189). As these patterns only become effective in the case of public consumption, conspicuous consumption can be assumed a necessary condition for reference group effects. The opinion seeking question (OS) in table IV-5 deals with the basics formulated by Veblen (1912) and Belk (1988) and can thus be seen as a pre-condition for questions DI, AS and DS. These questions explicitly deal with differentiation and assimilation respectively in reference to Leibenstein (1950). To be able to either differentiate or assimilate, an individual needs to interact with others. Admiration, respect and voluntary deference are expected to be educed from these interactions by the individual (Anderson, Hildreth & Howland, 2015, pp. 575), the outcome may be self-esteem (Fournier, 2009, pp. 1167-1168), subjective well-being (Tay & Diener, 2011, pp. 358-359) or even status (Weber, 1946, pp. 159-160; Leary & Baumeister, 2000, pp. 9-10). As shopping decisions presented to peers by public consumption represent a means of peer-interaction, this form of interaction is an important pre-condition for all kinds of social effects in the context of purchase decisions. Questions OS, DC and OL thus, cover this context, while questions LY and SX extend it to ideas of self-concept formation and self-expression. While the former is a more general expression of lifestyle which may also be expressed by a particular brand (Sirgy, 1982, pp. 289), the latter relies more on situational aspects (Aaker, 1999, pp. 54) which may be better reproduced in a specific purchase decision.

Akin to the procedure described above, a factor analysis was conducted also for the TL-questionnaire (see table IV-6) in order to evaluate strengthening explanation of purchase behaviour. Compared to the TQ-case, both p-value and KMO-criterion are more promising, showing an at best theoretic probability of error and a KMO-value in between middling and meritorious according to Kaiser and Rice (1974, pp. 112). Primary component analysis of TL-items also shows a match between the maximum of p-value and elbow, although, the last component is already weakly below 1,00. The resulting three factor structure shows a grouping of susceptibility to others, reflecting entry level of social comparison and a split between

association with peers, which is needed to access peer groups (Huo, Binning & Molina, 2010, pp. 206) and the necessity to develop and differentiate from peers needed for ascent according to sociometer hypothesis (Escalas & Bettman, 2003, pp. 341).

| Table short cut | R-code | Item |
|---|---|---|
| Others like | OL | It is important to me, that others like the products I buy. |
| Lifestyle | LY | There are brands that reflect my lifestyle better than others. |
| Differentiation | DI | I like to differentiate from others, through different products used. |
| Self-expression | SX | I like to express something about myself through the products I buy. |
| Opinion seeking | OS | I value other people's opinion on the products I buy. |
| Decision compliment | DC | It is important to me to get others' compliment for products I buy. |
| Association | AS | It is important to me that people associated with me do like the products I buy. |
| Dissociation | DS | I like to make a difference from people associated with me by the products I use. |

**Table IV-5: Item set of TL-questionnaire**




TL

| Item | Uniqueness | Development of self | | Susceptibility to others | | Association with peers | |
|---|---|---|---|---|---|---|---|
| DC | 0,005 | DI | 0,815 | DC | 0,851 | OL | 0,566 |
| DI | 0,298 | SX | 0,694 | OS | 0,667 | DC | 0,497 |
| DS | 0,328 | DS | 0,683 | LY | 0,367 | AS | 0,497 |
| LY | 0,439 | LY | 0,624 | OL | 0,293 | DS | 0,448 |
| SX | 0,469 | AS | 0,419 | DI | 0,171 | LY | 0,191 |
| OS | 0,508 | OS | 0,196 | AS | 0,138 | SX | 0,177 |
| AS | 0,558 | DC | 0,155 | SX | 0,136 | DI | |
| OL | 0,576 | OL | 0,132 | DS | | OS | |

| Bartlett-test | KMO-criterion |
|---|---|
| X2 = 157,748 | 0,7912142 |
| df = 28 | |
| p-value < 2,22e-16 | |

**Table IV-6: Factor analysis result of TL-questionnaire** (Results computed in R: R-Core Team, 2017; Maier, 2015)

Items of the TR-questionnaire aim to mirror the structure of lifestyle traits on a product level. For non-conspicuous products the valuation and thus individual reservation price judgements depend on the usage value of a good (Zeithaml, 1988, pp. 13-14; Wertenbroch & Skiera, 2002, pp. 228): items TY and SC in table IV-7 retrieve participants' usage value judgements. For conspicuous products, usage value gets supplemented by signalling value for which the good's visibility is a necessary condition (Jang, Ko, Morris & Chang, 2015; Gierl & Huettl, 2010, pp. 228; Bearden & Etzel, 1982, pp. 190-191). This type of visibility is a social agreement between peers (Bagwell & Bernheim, 1996, pp. 355; see chapter IV.-2) and

represents a part of the good's utility in the shape of its signalling value. Visibility is captured by items VS, IV and the definition of sample as shown in chapter IV.-3.2.

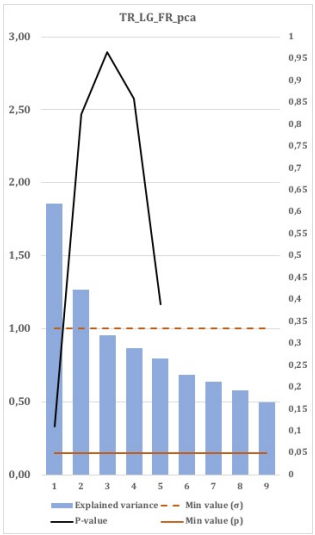
As mentioned introducing the TL-questionnaire, entry level of social comparison is reflected by valuing opinions of others. Although, this has a much higher importance at an individual level, it is also implemented on the product level using the CM-item. Items DF and SN represent the differentiation or snobbism branch of reference group effects, while the AF-item mirrors assimilation. To explicitly address the Limited-Edition aspect of this experiment, the QS-item was added.

Product rankings per item of the TR-questionnaire are shown in appendix IV-3. They do not only support prior expectations on visibility and their capabilities for affiliation and differentiation, but they show a remarkable overlap with pre-test rankings shown in appendix IV-2. Akin to the procedure of the other two questionnaires, factor analyses were also conducted for the TR-results of the two non-conspicuous and the two conspicuous products. PC-mouse's factor analysis displays the comparatively best overall performance of estimation following KMO-test (0,761). As shown in table IV-8, the first factor groups snobbism and differentiation. It further suggests that respect from peers (CM) is more linked to differentiation than to affiliation and visibility grouped in the second factor. Limiting supply quantity is not grouped with either of the two main motivations for reference group effects, suggesting that supply restrictions for non-conspicuous technology products may fulfil other purposes than to trigger reference group effects. Usage value-oriented items are negatively offset and spread across all three factors. Magnitudes of these effects are large enough to fully compensate at least one of the social effects from each factor, suggesting that usage value is an important trigger of purchase behaviour.

| Table short cut | R-code | Item |
|---|---|---|
| Visibility | VS | This product is often used visible to others. |
| Difference | DF | This product is well serves well to make a difference from others. |
| Compliment | CM | To own this product is rewarded with compliments from others. |
| InVisible | IV | It is unlikely that others see, if and how this product is used. |
| Utility | TY | The product is mainly bought for its utility. |
| LQS | QS | To limit the sold quantity of this product makes it more attractive. |
| Group | AF | This product serves well to show affiliation with a group. |
| Snobbish | SN | This product could be judged as snobbish by others. |
| Scale | SC | In my opinion, this product is mostly bought because of its. . . |

| | |
|---|---|
| Brand | Utility |
| Design | Durability & Reliability |
| Prestige | Performance |

**Table IV-7: Item set of TR-questionnaire**




PC mouse

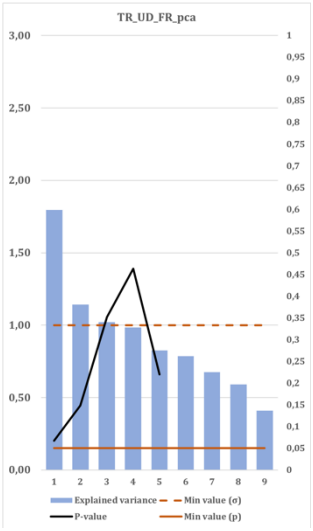
| Item | Unique-ness | Factor 1 | | Factor 2 | | Factor 3 | |
|---|---|---|---|---|---|---|---|
| VS | 0,005 | DF | 0,785 | VS | 0,994 | QS | 0,963 |
| QS | 0,005 | SN | 0,723 | AF | 0,416 | CM | 0,274 |
| DF | 0,274 | CM | 0,626 | DF | 0,308 | SN | 0,217 |
| SN | 0,424 | AF | 0,361 | CM | 0,305 | DF | 0,123 |
| CM | 0,441 | QS | 0,204 | SC | 0,237 | TY | -0,150 |
| TY | 0,449 | IV | -0,117 | QS | 0,161 | SC | -0,408 |
| AF | 0,697 | SC | -0,239 | IV | -0,434 | VS | |
| SC | 0,72 | TY | -0,726 | TY | | IV | |
| IV | 0,798 | VS | | SN | | AF | |

| Bartlett-test | KMO-criterion |
|---|---|
| X2 = 130,214 | 0,761006 |
| df = 36 | |
| p-value < 2,22e-16 | |

**Table IV-8: TR factor analysis result for PC-mouse** (Results computed in R: R-Core Team, 2017; Maier, 2015)

Overall performance of the shower curtain hardly suffices requirements of a good estimate (KMO=0,649). Although the factor structure is fragmented, it shows that compared to the other non-conspicuous product above (PC-mouse), usage value-oriented items either hardly justify allocation to a factor (see IV and SC in uniqueness ranking in table IV-9) or represent a factor of their own (TY). The remaining factors dealing with social effects reflect the poor overall performance, as affiliation and snobbism are in practice very unlikely to be siblings (factor 2). Also, the combination of the merely differentiation-oriented supply limitation item with the likelihood for compliments from peers seems idiosyncratic. Differentiation and visibility to be combined on the other hand seems plausible but marks the only plausible factor

besides the utility maverick (factor 3). In sum, purchases of this product may be driven by social effects, but these social effects are different from reference group effects.



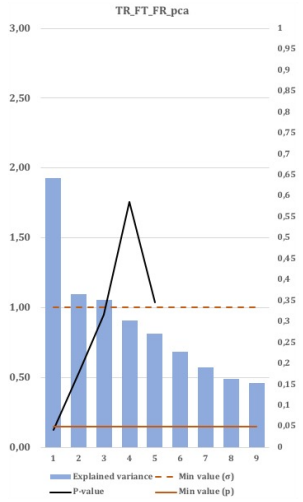

Shower curtain

| Item | Unique-ness | Factor 1 | | Factor 2 | | Factor 3 | | Factor 4 | |
|---|---|---|---|---|---|---|---|---|---|
| DF | 0,005 | DF | 0,935 | AF | 0,962 | TY | 0,974 | CM | 0,677 |
| TY | 0,005 | VS | 0,547 | SN | 0,443 | SC | -0,117 | QS | 0,448 |
| AF | 0,005 | CM | 0,527 | VS | 0,350 | CM | -0,138 | DF | 0,219 |
| CM | 0,193 | SN | 0,205 | QS | 0,284 | SN | -0,156 | VS | 0,213 |
| VS | 0,53 | AF | 0,168 | CM | 0,229 | DF | -0,199 | AF | 0,178 |
| QS | 0,623 | TY | -0,107 | DF | 0,183 | QS | -0,296 | IV | -0,420 |
| SN | 0,734 | IV | -0,143 | TY | -0,188 | VS | | SC | -0,422 |
| IV | 0,791 | QS | | IV | | IV | | TY | |
| SC | 0,803 | SC | | SC | | AF | | SN | |

| Bartlett-test | KMO-criterion |
|---|---|
| X2 = 123,04 | 0,6485713 |
| df = 36 | |
| p-value < 2,22e-16 | |

**Table IV-9: TR factor analysis result for shower curtain** (Results computed in R: R-Core Team, 2017; Maier, 2015)

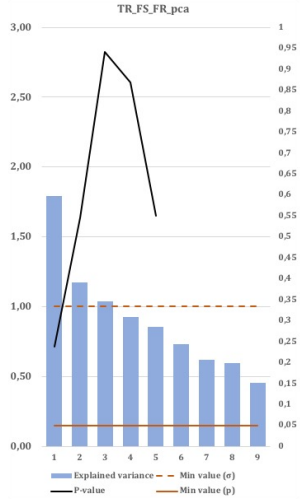
Messenger bag (KMO=0,734) and smartphone wallet (0,705) are close in overall performance of factor analyses, indicating an almost acceptable performance. As elbow and p-value do not match in case of the messenger bag, an alternative three factor structure was also tested which resulted in an addition of the last two factors, while the other remained unchanged. Public usage of product is mostly done to seek compliments and at the same time differentiate from the crowd (factor 1, top of table IV-10). While the sole linkage of affiliation and snobbism (factor 2) was idiosyncratic for an inexpensive non-conspicuous product like the shower curtain, in a combination with a conspicuous product and attractiveness gains from supply limits, it calls for an affiliation to a small group of expert buyers in this case (Han, Nunes & Drèze, 2010, pp. 17). Interestingly usage value is not completely separated as the scale item is almost capable to offset one of the other effects from factor 2 in its magnitude. Visibility (factor 3, bottom of table IV-10) in case of the smartphone wallet seems neither to trigger affiliation, nor does it trigger differentiation. As in case of the messenger bag, compliments are rather used to make a difference, than to show belongingness (factor 1). Affiliation on the other hand gets more than nullified in magnitude by items of usage value, which makes factor 2 primarily usage value-driven.




Messenger bag

| Item | Unique-ness | Factor 1 | | Factor 2 | | Factor 3 | | Factor 4 | |
|---|---|---|---|---|---|---|---|---|---|
| IV | 0.005 | VS | 0,840 | SN | 0,76 | IV | 0,960 | TY | 0,745 |
| VS | 0.222 | CM | 0,688 | AF | 0,584 | TY | 0,198 | IV | 0,214 |
| AF | 0.234 | DF | 0,603 | QS | 0,576 | VS | -0,163 | SC | 0,105 |
| CM | 0.237 | AF | 0,422 | DF | 0,375 | DF | -0,330 | CM | -0,459 |
| DF | 0.386 | QS | 0,317 | CM | 0,264 | CM | | AF | -0,494 |
| TY | 0.395 | IV | -0,164 | VS | 0,193 | QS | | VS | |
| SN | 0.414 | SC | -0,236 | TY | -0,102 | AF | | DF | |
| QS | 0.559 | TY | | SC | -0,501 | SN | | QS | |
| SC | 0.680 | SN | | IV | | SC | | SN | |

| Bartlett-test | KMO-criterion |
|---|---|
| X2 = 127,214 | 0,7344519 |
| df = 36 | |
| p-value < 2,22e-16 | |




Smartphone wallet

| Item | Unique-ness | Factor 1 | | Factor 2 | | Factor 3 | |
|---|---|---|---|---|---|---|---|
| DF | 0,005 | DF | 0,931 | AF | 0,702 | VS | 0,736 |
| AF | 0,343 | CM | 0,657 | QS | 0,400 | DF | 0,316 |
| VS | 0,351 | VS | 0,319 | CM | 0,254 | AF | 0,261 |
| IV | 0,397 | AF | 0,31 | SN | 0,171 | SC | 0,204 |
| CM | 0,498 | SN | 0,281 | DF | 0,166 | IV | -0,713 |
| TY | 0,544 | TY | -0,239 | TY | -0,598 | TY | -0,202 |
| SC | 0,627 | SC | -0,228 | SC | -0,528 | CM | |
| QS | 0,834 | IV | | IV | -0,297 | QS | |
| SN | 0,888 | QS | | VS | | SN | |

| Bartlett-test | KMO-criterion |
|---|---|
| X2 = 88,343 | 0,7045595 |
| df = 36 | |
| p-value < 2,22e-16 | |

**Table IV-10: TR factor analysis result for conspicuous products** (Results computed in R: R-Core Team,2017; Maier, 2015)

## IV.-3.2 Pre-test results and sample description

Study design was pre-tested in two steps using student samples from two different, but immediately consecutive cohorts of a marketing and strategy lecture at entry level of master studies. For both pre-tests students were introduced to study purpose with the aim of generating meaningful samples for their own market research foundation course in the following semester. In the first step the suitability of products was elicited using a student version of the SD-questionnaire and the TL- and TR-questionnaires designed for the main study. In sum 85 students took place in that study of which 54,12% were female. Four questionnaires had to be rejected from that sample due to peculiar answer conduct. While the TR-questionnaire confirmed researcher's expectations in particular concerning visibility, utility and suitability

to reference group effects, the factor structure of the TL-questionnaire resulted in the expected trinomial groupings for comparison, differentiation and affiliation.

After successfully pretesting suitability of product and individual lifestyle traits, the 7-weeks choice game was designed and pretested. In the first stage 100 students were handed the first WTP-questionnaire. After seven weeks the sample has reduced to 46 students having taken all stages of the questionnaire. Questionnaires were passed around in boxes on the beginning of every lecture and lecture did not start before all questionnaires were collected again and potential comprehension questions were answered. It was found that neither the identification procedure by personal code, nor the choice game itself resulted in problems that would have necessitated a major redesign of the final study. As planned for the final study, the TQ-questionnaire was handed out in stage 1. Factor analysis of the TQ-questionnaire displayed a four-factor structure in groupings of bandwagon, price-quality inferences, missed shopping opportunities and proneness to buying frenzies. Moreover, comparing all results (TQ, TL and TR) gained during pre-test with results gained using the same questionnaires in the main study resulted in only minor deviations for the TL- and TR-questionnaires and an identical result for the TQ-questionnaire (see appendices IV-1, IV-2, IV-3).

The main study sample consists of parishioners from a suburb of a city with less than 200.000 inhabitants in south-west Germany. Sampling method applied was snowball sampling to assure voluntariness of participation. Respondents were asked about their general interest to take part in a study with the aim of improving market research instruments using a mobile instant messenger chat group. If they knew other interested individuals they were encouraged to add them to the group. After gathering 54 potential participants, they were asked for their postal address and found the first questionnaire in their letter box the Friday night after. The remainder of procedure was already explained in chapter IV.-3.1. Of these 54 participants none were excluded subject to SD-sincerity check from chapter IV.-3.1 and only two were rejected, because they interrupted the study. Another two data sets were excluded from sample due to peculiarities in answer conduct in the choice game part. None were excluded subject to sincerity checks for the attached questionnaires (TQ, TL, TR). The remaining 50 participants had an average age of 39,96 years and were 47,06% female. However, as the true sample size is on the one hand dependent on the interest for particular products and subject to observation count of analysis procedure on the other, the number of observations per product are given in the following chapter IV.-3.3.

## IV.-3.3 Description of regression model

To analyse if either individual or product specific traits have an influence on individual choice behaviour, product choices are modelled as the dependent variable, resulting in a discrete regression model. Independent variables are thus product specific choice traits, the product's fit for reference group effects (TR) and individual specific variables (SD, TQ, TL). Choice levels representing the dependent variable amounted to two in the majority of stages of the experiment. Only stages 5 (four alternatives) and 7 (three) deviate from this setting. For analysis, choice levels above two have been folded into one improvement level, which is possible because choices were mutually exclusive and did not overlap. The newly created improvement level took the value of the chosen improvement if a respondent opted for a choice level >1 or equalised to the lowest improvement level (2) if the choice level chosen equalled 1.

Within multinomial regression models a pivotal decision to be made is between logit and probit specification. According to Croissant (2011, pp. 52), this basically boils down to a question on the violation of the hypothesis of identically distributed errors (ibid, pp. 12), as the logit model does not allow for correlations of error terms between individuals. Hausman and Wise (1978, pp. 404) mention especially hardly distinguishable choice alternatives as a source of such heteroscedasticity. As the questionnaire was already designed with this in mind, chances should be already minimised, yet especially models for conspicuous products were also run as probit-models with virtually no deviation in significance or direction of effects. A panel specification for the resulting binary logit model was also checked but rejected as the number of looped repeated choice alternatives was limited and interrupted by other choice alternatives. In sum, the binary logit models computed represent the most parsimonious form of binary regression models which allow for uncomplicated handling especially in terms of interpretation. The computing took part using the mlogit-package in the R-environment which computes approximately instantly interpretable coefficients (Croissant, 2013; Croissant, 2011, pp. 22-23; R-Core Team, 2017). In the final specification, as binary choice model, each participant accounted for two observations per stage over 5 stages, resulting in a factor of ten for the original sample for each product (Ben-Akiva & Lerman, 1985, pp. 262-263). Table IV-11 shows the resulting observations for each product and the number of estimated independent variables, as the rule of thumb requires 10 observations per variable, which is fulfilled for all four products.

| | PC-mouse | Shower curtain | Smartphone wallet | Messenger bag |
|---|---|---|---|---|
| Sample | 47 | 48 | 36 | 40 |
| Choices x Stages | | 2 x 5 | | |
| Observations | 470 | 480 | 360 | 400 |
| Number of variables | 38 | 26 | 34 | 37 |

**Table IV-11: Number of observations per product**

# IV.-4 Product specific results of regression model

## IV.-4.1 Non-conspicuous products: results and discussion

Visibility is an important pre-condition for conspicuousness. Among the least visible products in study are sugar, shower curtain and PC-mouse. Being the three least capable products for either differentiation or affiliation also limits suitability of these products for reference group effects. At the same time, these products score highest in utility and scale which means their signalling value is low. In sum, these products are least suitable for conspicuous consumption. Sugar was introduced into the study as a pure commodity and is consequently expected to produce low effects in all three contexts. It performs as expected with the only significant effects to be price and intercept, which explain 53,2% of variance. Not even socio-demographic effects significantly predict choice behaviour in the context of this product. Although, sugar produces no effects, this is valuable to the study as it provides a reference point for the study and shows participants act rationally in valuing alternatives and their consequences (Dhar & Wertenbroch, 2000, pp. 61/68; Kochen & Galanter, 1958, pp. 270).

As shown on the left in table IV-12, consumers of the PC-mouse are interested in product improvements in general, which is indicated by the highly significant intercept. Yet, the negative estimate indicates that most of them are rather hard to convince to spend additional money on the offered improvements. If buyers opt for improvements, they prefer the utilitarian (UT) improvement over the simple Limited-Edition (LQ) which is indicated by comparatively higher significance and magnitude for UT. This behaviour is not surprising given a PC-mouse is a usage value-oriented product according to respondents' TR-ratings for Scale and Utility shown in appendix IV-3. However, while there are no TQ- or TR-traits explaining utilitarian choice behaviour, Limited-Edition choice behaviour is well explained by both: offering the product as a Limited-Edition makes choices of improved products more likely (LQ) which is further underlined by positive attitudes towards frenzy behaviour (FY). Choices for LE-improvements get more likely, if the respondents infer frenzy creation behind a supplier's motivation of LE-offer. Although, the PC-mouse is not among the most visible products according to TR-rankings, the negative and significant estimate for invisibility indicates, that buyers of improved products are inclined to use their product in a visibly manner. Different from

especially conspicuous products, where a good's public usage can be clearly related to Limited-Edition choices, it is less clear in case of the non-conspicuous PC-mouse. Especially for technology products, overt show-offs of technological superiority seem as plausible as uniqueness accentuation by Limited-Editions. While show-offs with technology products call for early stages of the product life-cycle in line with quality signalling theory by Balachander, Liu and Stock (2009, pp. 1623), participants' proneness to frenzies show that both theories may not be as antipodal as suggested in discussions.

| | **PC-mouse** | | | | **Shower curtain** | | | |
|---|---|---|---|---|---|---|---|---|
| **Category** | **Variable** | **Estimate** | **p-value** | **Sig** | **Variable** | **Estimate** | **p-value** | **Sig** |
| | 2:(intercept) | -19,5095 | 0,0022 | ** | 2:(intercept) | -3,5900 | 0,3161 | |
| Product | P | 301,2420 | 0,0007 | *** | P | 20,7926 | 0,7112 | |
| specific | UT | 5,9710 | 0,0058 | ** | | | | |
| | LQ | 3,7810 | 0,0530 | . | | | | |
| | | | | | 2:TQ_BR_PN | 0,5488 | 0,0944 | . |
| TQ | 2:TQ_FY | 1,5966 | 0,0529 | . | 2:TQ_FY | -0,7824 | 0,0411 | * |
| | | | | | 2:TQ_AN_LN | -0,8134 | 0,0520 | . |
| TL | | N/A | | | | N/A | | |
| | | | | | 2:TR_TY | -0,8461 | 0,0917 | . |
| TR | 2:TR_IV | -0,9227 | 0,0484 | * | | | | |
| | 2:TR_QS | 1,2658 | 0,0204 | * | | | | |

**Table IV-12: Regression results for non-conspicuous products** (Results computed in R: R-Core Team, 2017; Croissant, 2013)

Contrary to the PC-mouse, the shower curtain (table IV-12, right side) displays no significant effects for both price and improvement. While the former is typical for products requiring low monetary sacrifice from customers, the latter seems paradox at first glance, given the relatively high number of TQ- and TR-traits of significance which explain improvement choice motivations. Therefore, improvements are chosen, because of positive quality inferences from both price and brand (BR_PN), while triggering buying frenzies has a negative effect on improvement choices (FY), which is also true for bandwagon motives (AN_LN). Usage value (TY) of product further negatively predicts improvement choices, indicating that chosen improvements may not be of utilitarian kind either. Consumers' general lack of interest in improvements, indicated by the insignificant intercept combined with clearly voiced motives for improvement choices may thus rather point to a demand for variety than for improvements tailored to specific customer needs. The low price is tantamount to a low risk of failed investments, for consumers it thus becomes easier to switch between different products from the same category. Consequently, they do not spend any search cost on doing research about the product that may suit them best. Hence, their involvement in the product class is low, but perceived choice is higher than for pure commodities for example, which in turn triggers the demand for variety. Variety however, is any event that helps consumers to avoid sameness or

boredom (Zuckerman, 1971, pp. 48), thus the supplier can add any feature that is new or has not been utilised for a long time.

Comparing both products, the PC-mouse's consumer behaviour basically follows the direction of the notions being made about supply restrictions for non-conspicuous products. Consumers may feel forced to buy early (DeGraba, 1995, pp. 333), underlining the time aspect of scarcity assumed for many usage value-oriented goods (Aggrawal, Jun & Huh, 2011, pp. 25). That not all non-conspicuous products follow this path is, however, signified by the shower curtain. In search of making a difference at low risk of failed investment, consumers pick any feature added to make that difference. Differences made are not limited to differences from others, as consumers also seek to make differing choices from their last purchase in the same category, while brand and price – albeit, the latter is low – guides their choices quality wise moving this type of buying decision comparatively closer to quality signalling as proposed by Stock and Balachander (2005, pp. 1182-1183). In sum, non-conspicuous Limited-Editions showed their potential to score in terms of general inferences drawn from supply restrictions in line with dimension 1 (TQ), hence, supporting the underlying sub-hypothesis. They partially showed their potential to score in product related lifestyle traits, but mostly in essential items such as visibility or utility which signifies accordance with framework hypothesis as well.

## IV.-4.2 Conspicuous products: results and discussion

Smartphone wallet and messenger bag were not only assumed to fulfil requirements in terms of visibility and suitability for self-expression as confirmed by pre-test results. Their brands were also assumed to play a role: while the smartphone wallet is offered by a globally known brand with sales in approximately 600 stores worldwide worth US-$1,4bio (Fossil, 2017, pp. 7/13), the manufacturer of the messenger bag has a total assortment of 40 products sold in 20 flagship stores, mostly in Europe and is well-known only in subcultural environments (Freitag, 2018; Bergmann, 2013). Hence, the smartphone wallet can be assumed to be well-known, which makes it more suitable for affiliation, whilst the messenger bag has more potential to be still below mass ownership thresholds and thus seems more suitable for differentiation.

Consumers of the smartphone wallet (table IV-13, left side) are rather reluctant to improve their product choice, as shown by the negative and highly significant intercept. If improvements are chosen, they seem satisfied with base level Limited-Edition (LQ) without further personalisation. Increased competition in the sense further spending in an exchange for lower supply even has a significant negative effect (LC). Motives to improve product choice, which

is akin to Limited-Edition choices in this case, are more on the quality signalling side (PN; LN; QL) than on the frenzy side (FY; SF) as the net effect for the former is weakly positive, while the latter is strictly negative. The weakly significant, but positive effect for self-expression (SX), indicates a general suitability of the offered improvement for conspicuous consumption. While the product itself may be suitable, brand is clearly not, which is indicated by the significant and strictly negative estimate for brand-based lifestyle expression (LY). Brand does also clearly not support the quality effect of offered improvements (BR). At first glance, positive effects for willingness to differentiate (DI) and snobbism (SN) indicate the improved product may be more appealing to snobs. On the other hand, the combined choice judgement on differentiation and compliment seeking (DF_AM) mitigates the net effect, while the bandwagon motivated aspects for Limited-Edition choice (RG; AN) finally fully reverse the total effect. In sum, Limited-Edition options generally increase the product's attractiveness, yet the palpable Limited-Edition choice is triggered by the desire to affiliate to a larger group, rather than to make a difference. This is supported by the negative effect for increased consumer competition, mentioned above, as amplifications of supply restrictions would further reduce chances of obtainment and thus chances to affiliate. As affiliation usually means gathering larger groups (Amaldoss & Jain, 2005b, pp. 40), the price becomes irrelevant as the goal is to become a part of that group, which is typical for follower behaviour as their utility increases with the number of co-owners (Leibenstein, 1950, pp. 189).

Improvements are also generally attractive to consumers of the messenger bag (table IV-13, right side), which is indicated by the significant intercept. In comparison to the smartphone wallet, there is less extrinsic motivation needed to convince them towards improvement choice. Improvements chosen are twofold with a strongly significant and positive in magnitude effect for utilitarian improvements (UT), indicating the majority of consumers may go that way. However, there are also significant effects for base level Limited-Edition (LQ) and personalisation of serial number (LI). The comparatively higher significance of the latter indicates customers seek to differentiate, as base level may pose a too weak statement of uniqueness. Improvement choices are clearly quality driven (PN; LN) and there are no indications for frenzy behaviour at all. While improvement choices for the utilitarian feature are driven by positive judgements for usage value (TY), the product seems on the other hand well suited for self-expression as indicated by the significant and negative estimate for invisibility and the highly significant positive estimate for self-expression (SX). The significant, but negative effect for lifestyle expression by brand (LY) may pose a negative judgement for the brand at first glance. However, compared to the magnitude of the same negative effect for the smartphone, it rather points to a tentative state of the sample: snobs may be sure about the

brand's capabilities to express their lifestyle goals, while followers are still reluctant. As mentioned above, snobs usually represent the lower proportion in most populations and thus their positive judgements may be strong in magnitude but still not strong enough to outweigh followers' scepticism.

| | Smartphone wallet | | | | Messenger bag | | | |
|---|---|---|---|---|---|---|---|---|
| **Category** | **Variable** | **Estimate** | **p-value** | **Sig** | **Variable** | **Estimate** | **p-value** | **Sig** |
| Product specific | 2:(intercept) | -17,5907 | 0,0046 | ** | 2:(intercept) | -9,71097 | 0,005056 | ** |
| | P | 43,2034 | 0,1953 | | P | 135,23877 | 0,001685 | ** |
| | | | | | UT | 6,61799 | 0,000141 | *** |
| | LQ | 1,9353 | 0,0729 | . | LQ | 2,37335 | 0,079482 | . |
| | LC | -2,7768 | 0,0375 | * | | | | |
| | | | | | LI | 1,63669 | 0,023315 | * |
| TQ | 2:TQ_PN | 8,9633 | 0,0138 | * | 2:TQ_PN | 1,44707 | 0,009 | ** |
| | 2:TQ_FY | -7,2391 | 0,0410 | * | | | | |
| | 2:TQ_BR | -26,3308 | 0,0252 | * | | | | |
| | 2:TQ_AN | 17,6761 | 0,0258 | * | | | | |
| | 2:TQ_LN | 4,2349 | 0,0667 | . | 2:TQ_LN | 1,22669 | 0,059258 | . |
| | 2:TQ_QL | -6,4054 | 0,0087 | ** | | | | |
| | 2:TQ_RG | 11,9771 | 0,0110 | * | | | | |
| | 2:TQ_SF | -8,8694 | 0,0518 | . | | | | |
| TL | 2:TL_LY | -16,0382 | 0,0219 | * | 2:TL_LY | -2,02344 | 0,018818 | * |
| | 2:TL_DI | 13,2114 | 0,0883 | . | | | | |
| | 2:TL_SX | 2,3396 | 0,0512 | . | 2:TL_SX | 2,40851 | 0,0012 | ** |
| TR | 2:TR_DF_CM | -9,0642 | 0,0349 | * | | | | |
| | 2:TR_AF_TY_SC | -2,6011 | 0,0259 | * | 2:TR_TY | 1,61844 | 0,02534 | * |
| | 2:TR_IV | 7,9032 | 0,0076 | ** | 2:TR_IV | -2,10215 | 0,010322 | * |
| | 2:TR_QS | 1,7797 | 0,0460 | * | | | | |
| | 2:TR_SN | 15,8774 | 0,0200 | * | | | | |

**Table IV-13: Regression results for conspicuous products** (Results computed in R: R-Core Team, 2017; Croissant, 2013)

In sum, the assumptions about the different capabilities of brands to either attract followers (smartphone wallet) or leaders (messenger bag) have been supported. Conspicuous products in general seem to entirely capitalise on quality signalling as indicated by Balachander, Liu and Stock (2009, pp. 1635). Furthermore, especially consumer conduct in case of the messenger bag has shown that Limited-Edition offers are capable of attracting snobs as they provide a credible opportunity to insure against too many co-owners in support of the experimental results by Amaldoss and Jain (2010, pp. 628). As only conspicuous Limited-Editions were able to score in all three dimensions of the proposed motivational framework, the framework hypothesis and the ancillary sub-hypotheses are finally supported.

# IV.-5 General discussion and implications

## IV.-5.1 General discussion

Shopping motives for scarce goods have been widely discussed in research. Till date it was known, that any kind of scarcity message may be capable of improving suppliers' bottom-line for different reasons. Especially limited quantity scarcity messages have proven their potential to trigger social effects and consumer competition. This study was aimed to consolidate all these without any doubt valuable results into a sales related assessment of Limited-Editions which represent the most promising scarcity message mostly due their high credibility. Consequently, the Limited-Edition specification of this study included options for personalisation of serial number and intensification of supply restrictions by lowering supply limit. Relationship with sales was established by the implementation of a price-based choice experiment. Consumers shopping motives for Limited-Editions have been grouped into a three-dimensional framework. Entry level represented general inferences consumers make from supply restricted offers following the two main theories that are namely triggering buying frenzies and signalling quality. For a successful Limited-Edition, regardless of product category, every supply limited product in the study was assumed to score in this category. This was true for all products in the study. Albeit, there is no clear distinction for either frenzy-based or quality-based sales along the conspicuous-non-conspicuous separation. While consumers of more complex non-conspicuous products seem to seek the thrill of time pressure triggered by buying frenzies, consumers of low priced goods are more prone to signals of quality. This is plausible as their purchase decisions are not driven by a deep involvement with the product category. Limited-Editions of these products, thus, fulfil two goals at the same time: a product related advice on durability and an avoidance of boredom.

The second dimension inquired on the fit between the customer and typical social effects triggered by Limited-Edition offers ranging from the proneness to social comparison in general to the urge of engagement in reference group games. As expected these effects do only appear on surface as long as conspicuous products are offered as a Limited-Edition. Self-expression and lifestyle expression through brand use were the most frequently observed effects.

Third dimension was aimed at the product's capability to aid consumers in achieving their lifestyle and status goals. Howbeit, the strongest overall performance was observed for conspicuous goods as expected and thus in support of sub-hypothesis 3, non-conspicuous goods also scored in this category, but at a lower level. In sum, the underlying hypothesis of the entire framework was supported. Each of the dimensions was retrieved in separate

questionnaires either attached in the last round (Dimension 2 and 3) or retrieved in conjunction with first round's questionnaire (Dimension 1). Questionnaire for the first dimension was also combined with a sociodemographic questionnaire, which yielded no result in case of non-conspicuous products. In case of the conspicuous affiliation-oriented product, Limited-Edition choice was further fostered by a higher than average age, higher levels of subsistence and higher short to midterm security of state of subsistence and slightly lower than average education. This may point to people having reached their current sociometric status later than expected, but as they feel comfortable with the life goals achieved and the probability of losing achievements is relatively low, they seek to stabilise their position within society by increased consumption for the means of affiliation.

## IV.-5.2 Managerial implications

As this experiment was designed as a choice study and choices were directly linked to different price levels, Limited-Editions have not only shown their potential to increase considerations about products made before consumers spend their money. Limited-Editions have shown their potential to increase customers' willingness to pay, hence, Limited-Editions sell at price premiums. This is especially true for conspicuous products. While effort to design successful Limited-Editions can be kept at relatively low levels for products suitable for affiliation, the additional effort for increased personalisation options for differentiation-oriented products can be easily outweighed by additional willingness to pay of leaders and snobs.

Anyhow, decision makers for conspicuous products need to have a precise knowledge to which kind of customers either their brand or particular products in their line-up do cater to. Especially the affiliation-based product in this study has shown that wrong assumptions about the prime customer type ex-ante trigger undesired deviations in customers' perception about brand and meaning of product which in turn may lead to misspecifications of products. If a product for example is managed to primary solute snobs and caters to conformists instead, features, which are often implemented at considerable cost to the supplier (Amaldoss & Jain, 2008a, pp. 937), and combined with particular [mostly too low] Limited-Edition settings (Balachander & Stock, 2009, pp. 348), may become irrelevant to the true target group as price is meant to offset costs, but, hence, gets out of reach for conformists. Additionally, the too low supply limit set to insure snobs against too many co-owners exerts an obverse effect as supply is too low to generate sales needed for positive signalling value effects subject to conformist's positive relationship between public appearance of product and signalling value generated (Leibenstein, 1950, pp. 189).

Another problem especially arisen in the case of conspicuous products is at least partly related to a precise knowledge of customer type: although brands were deemed an important source of quality inferences and lifestyle-expressions, they performed poor, whenever inferences between brand choice and choice of Limited-Edition were drawn. Hence, the brand's credibility for Limited-Edition offers was at least questioned by participants: if a brand thus opts for Limited-Edition offers, these offers should have a recognisable connection to the brand's strategy for the consumer. This totally rules-out sporadic and idiosyncratic Limited-Edition offers for conspicuous products or positively framed: some products should only be available at restricted supply, there should be an easily understandable relation between product price, supply limit and added features or used materials and there should be a regularly revived assortment of Limited-Edition products.

In past studies, quantity limitations and non-conspicuous products were mostly classified as mismatches. If the supplier's aim is mostly to profit from reference group effects, this remains true. However, supply restrictions can either foster buying frenzies or cater to variety seeking demands voiced by consumers in some categories of inexpensive low involvement products. In both cases of non-conspicuous products, low involvement-low priced goods and more complex – more expensive goods, consumers are assumed to seek some kind of thrill. May it be the thrill to pocket a technology product before supply runs out or the thrill released by the perceived difference between current and former choice. The difference in both cases is that in former Limited-Edition options are restricted to particular periods of product life-cycle. For the less advanced technology product from the main study, this is true for introductory scarcity. In an explorative study on a more technologically advanced wake-up light, a combination of Limited-Edition and a usage value-oriented feature for an otherwise obsolescent product displayed positive effects at the end of product life cycle. In both cases another curiosity of technology products came to surface: both products are usually destined for private usage, however, positive indicators for visibility underlined the show-off behaviour from the main study. This innovator behaviour synonymous with positive word of mouth for the product can be further strengthened especially by introductory scarcity.

For variety seeking consumers, non-conspicuous Limited-Editions represent another means of sameness and boredom avoidance without cost for the usual product adaptions. Not only in that particular trait, they are somewhat antipodal to conspicuous products as regular Limited-Editions or even a Limited-Edition strategy is tantamount to sameness again. Moreover, consumers' choice behaviour indicates that the specific choice is only of interest purely for the sake of difference from what was offered immediately before. Hence, market research

spending on tailored product improvements may be obsolescent for inexpensive home improvement products for example and investments in creative and new to the world combinations of feature and product should be fostered instead.

## IV.-5.3 Limitations and future research

The aim of the study was to develop a basic framework to elicit choice-based fits between respondents' lifestyle opinions and products' capabilities to aid them in consumption-based goal achievement. For that sake the main part of the study was the price-based choice experiment, while surrounding opinionnaires provided indicators to explain their choice behaviour. Hence, this study was not aimed at in depth psychological or sociological insights. Future research may for example take the surrounding opinionnaires as a base for item and construct development to develop an extended framework.

Although, the framework generally performed as predicted, the indicators reaching significance, especially in terms of consumers' lifestyle traits (second dimension), were mostly from base level. This was even true for conspicuous products, where for example self-expression was significant for both products, while reference group-based traits such as differentiation or affiliation were clearly emphasised only for one of the two. Although, reference group effects were still clearly inferable matching them with product-based lifestyle traits (dimension three), improving personal lifestyle trait performance may pose another opportunity for future research. More expensive and more conspicuous products such as wrist watches and hand bags from upper premium and luxury segment in a combination with relevant customers are expected to produce clearer effects, especially for reference group effects.

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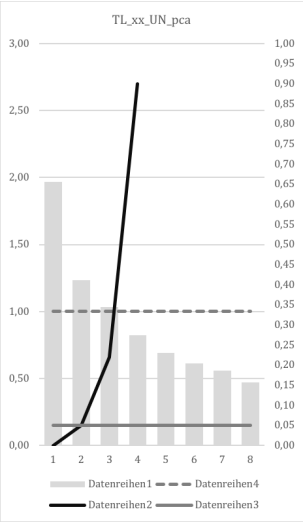
# Appendix IV

## Appendix IV-1:

### Pre-test results: Factor analyses of TQ and TL questionnaires

(Results computed in R: R-Core Team, 2017)

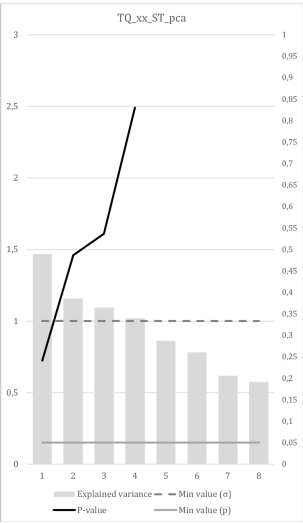
### Pre-test results from UN sample




TL

| | | Factor1 | | Factor2 | | Factor3 | |
|---|---|---|---|---|---|---|---|
| SX | 0,621 | OL | 0,692 | DS | 0,794 | LY | 0,85 |
| AS | 0,508 | OS | 0,895 | DF | 0,651 | DF | 0,477 |
| OL | 0,497 | DC | 0,741 | SX | 0,47 | SX | 0,343 |
| DS | 0,349 | AS | 0,668 | DC | 0,297 | DC | 0,159 |
| DC | 0,337 | DF | 0,226 | OS | 0,181 | OL | 0,152 |
| DF | 0,298 | SX | 0,201 | AS | 0,178 | AS | 0,12 |
| LY | 0,234 | LY | 0,152 | LY | 0,146 | OS | |
| OS | 0,164 | DS | 0,141 | OL | | DS | |

### Pre-test results from ST sample




TQ

| | | Factor1 | | Factor2 | | Factor3 | | Factor4 | |
|---|---|---|---|---|---|---|---|---|---|
| PN | 0,772 | QL | 0,878 | AN | 0,969 | FY | 0,986 | BR | 0,799 |
| LN | 0,679 | RG | 0,831 | LN | 0,526 | PN | -0,14 | PN | 0,406 |
| SF | 0,253 | SF | 0,82 | RG | 0,231 | BR | | AN | 0,212 |
| BR | 0,247 | LN | 0,186 | PN | 0,193 | AN | | RG | -0,141 |
| RG | 0,236 | AN | 0,107 | SF | 0,155 | LN | | QL | -0,178 |
| QL | 0,188 | FY | -0,11 | BR | -0,142 | QL | | SF | -0,2 |
| AN | 0,005 | BR | -0,301 | FY | | RG | | FY | |
| FY | 0,005 | PN | | QL | | SF | | LN | |

# Appendix IV-2:

## Pre-test results from TR-questionnaires: UN-sample

**VS**

| Product | Mean |
|---|---|
| Tablet PC | 4,459 |
| Messenger bag | 4,353 |
| Smartphone wallet | 3,729 |
| Red wine | 3,259 |
| Chocolate bar | 2,482 |
| Shower curtain | 2,141 |
| PC Mouse | 2,141 |
| Wake-up light | 1,882 |
| Sugar | 1,212 |
| MEAN | 2,851 |
| STD DEV | 1,148 |

**DF**

| Product | Mean |
|---|---|
| Tablet PC | 3,835 |
| Messenger bag | 3,600 |
| Red wine | 3,318 |
| Smartphone wallet | 2,800 |
| Wake-up light | 2,788 |
| Chocolate bar | 2,576 |
| PC Mouse | 1,824 |
| Shower curtain | 1,706 |
| Sugar | 1,165 |
| MEAN | 2,851 |
| STD DEV | 0,907 |

**AF**

| Product | Mean |
|---|---|
| Tablet PC | 4,271 |
| Messenger bag | 3,424 |
| Red wine | 3,376 |
| Chocolate bar | 2,459 |
| Smartphone wallet | 2,365 |
| Wake-up light | 2,271 |
| PC Mouse | 1,894 |
| Shower curtain | 1,694 |
| Sugar | 1,141 |
| MEAN | 2,544 |
| STD DEV | 0,979 |

**CM**

| Product | Mean |
|---|---|
| Tablet PC | 4,271 |
| Red wine | 3,129 |
| Messenger bag | 3,035 |
| Chocolate bar | 2,788 |
| Wake-up light | 2,718 |
| Smartphone wallet | 2,694 |
| PC Mouse | 1,871 |
| Shower curtain | 1,576 |
| Sugar | 1,224 |
| MEAN | 2,590 |
| STD DEV | 0,921 |

**SN**

| Product | Mean |
|---|---|
| Tablet PC | 4,165 |
| Red wine | 3,035 |
| Wake-up light | 2,588 |
| Smartphone wallet | 2,518 |
| Messenger bag | 2,318 |
| Chocolate bar | 2,306 |
| PC Mouse | 1,553 |
| Shower curtain | 1,235 |
| Sugar | 1,153 |
| MEAN | 2,590 |
| STD DEV | 0,921 |

**TY**

| Product | Mean |
|---|---|
| Sugar | 4,694 |
| Shower curtain | 4,412 |
| PC Mouse | 4,400 |
| Wake-up light | 3,682 |
| Smartphone wallet | 3,671 |
| Chocolate bar | 3,376 |
| Messenger bag | 3,259 |
| Red wine | 2,918 |
| Tablet PC | 2,729 |
| MEAN | 3,682 |
| STD DEV | 0,693 |

**QS**

| Product | Mean |
|---|---|
| Tablet PC | 4,024 |
| Red wine | 3,847 |
| Messenger bag | 3,200 |
| Chocolate bar | 2,847 |
| Smartphone wallet | 2,718 |
| Wake-up light | 2,259 |
| PC Mouse | 1,812 |
| Shower curtain | 1,729 |
| Sugar | 1,494 |
| MEAN | 2,659 |
| STD DEV | 0,915 |

**SC**

| Product | Mean |
|---|---|
| Sugar | 4,624 |
| PC Mouse | 4,082 |
| Shower curtain | 4,012 |
| Wake-up light | 3,306 |
| Smartphone wallet | 3,012 |
| Chocolate bar | 2,918 |
| Messenger bag | 2,671 |
| Red wine | 2,671 |
| Tablet PC | 1,506 |
| MEAN | 3,200 |
| STD DEV | 0,937 |

# Appendix IV-3:

## TR product rankings of main study

**VS**

| Product | Mean |
|---|---|
| Messenger bag | 4,32 |
| Tablet PC | 4,20 |
| Smartphone wallet | 3,73 |
| Red wine | 3,00 |
| PC mouse | 2,31 |
| Shower curtain | 2,24 |
| Chocolate bar | 2,22 |
| Wake-up light | 1,85 |
| Sugar | 1,55 |
| MEAN | 2,824 |
| STD DEV | 1,032 |

**DF**

| Product | Mean |
|---|---|
| Tablet PC | 4,11 |
| Messenger bag | 3,80 |
| Red wine | 2,67 |
| Smartphone wallet | 2,65 |
| Chocolate bar | 2,33 |
| Wake-up light | 2,13 |
| Shower curtain | 1,86 |
| PC mouse | 1,76 |
| Sugar | 1,35 |
| MEAN | 2,352 |
| STD DEV | 0,920 |

**AF**

| Product | Mean |
|---|---|
| Tablet PC | 3,82 |
| Messenger bag | 3,15 |
| Red wine | 2,48 |
| Smartphone wallet | 2,27 |
| Chocolate bar | 1,92 |
| Wake-up light | 1,77 |
| Shower curtain | 1,55 |
| PC mouse | 1,47 |
| Sugar | 1,22 |
| MEAN | 2,182 |
| STD DEV | 0,851 |

**CM**

| Product | Mean |
|---|---|
| Tablet PC | 3,82 |
| Messenger bag | 3,04 |
| Red wine | 2,71 |
| Chocolate bar | 2,60 |
| Wake-up light | 2,44 |
| Smartphone wallet | 2,29 |
| PC mouse | 1,67 |
| Shower curtain | 1,61 |
| Sugar | 1,41 |
| MEAN | 2,340 |
| STD DEV | 0,769 |

**SN**

| Product | Mean |
|---|---|
| Tablet PC | 4,63 |
| Smartphone wallet | 4,31 |
| Messenger bag | 4,28 |
| Red wine | 3,68 |
| Wake-up light | 3,43 |
| Chocolate bar | 3,31 |
| PC mouse | 3,29 |
| Shower curtain | 2,87 |
| Sugar | 2,11 |
| MEAN | 2,136 |
| STD DEV | 0,910 |

**TY**

| Product | Mean |
|---|---|
| Shower curtain | 4,51 |
| PC mouse | 4,49 |
| Sugar | 4,41 |
| Smartphone wallet | 3,98 |
| Wake-up light | 3,95 |
| Chocolate bar | 3,84 |
| Red wine | 3,81 |
| Messenger bag | 3,74 |
| Tablet PC | 3,11 |
| MEAN | 3,982 |
| STD DEV | 0,446 |

**QS**

| Product | Mean |
|---|---|
| Tablet PC | 3,29 |
| Messenger bag | 2,89 |
| Red wine | 2,81 |
| Smartphone wallet | 2,16 |
| Wake-up light | 2,05 |
| Chocolate bar | 1,92 |
| PC mouse | 1,69 |
| Shower curtain | 1,65 |
| Sugar | 1,22 |
| MEAN | 2,186 |
| STD DEV | 0,678 |

**SC**

| Product | Mean |
|---|---|
| Sugar | 4,63 |
| Shower curtain | 4,31 |
| PC mouse | 4,28 |
| Wake-up light | 3,68 |
| Red wine | 3,43 |
| Smartphone wallet | 3,31 |
| Chocolate bar | 3,29 |
| Messenger bag | 2,87 |
| Tablet PC | 2,11 |
| MEAN | 3,546 |
| STD DEV | 0,788 |

## Appendix IV-4:

### Binomial logit regression results from pure commodity reference product (sugar)

Results computed in R (R-Core Team, 2017; Croissant, 2013)

```
Call:
mlogit(formula = CHOICE ~ P + ST | AGE + SEX + EDUC + OCCU +
    TERM + TQ_BR_PN + TQ_QL_SF_RG + TQ_AN_LN + TQ_FY + TL_DI_SX_DS_LY +
    TL_DC_OS + TL_OL_AS + TR_VS + TR_DF + TR_CM + TR_IV + TR_TY +
    TR_QS + TR_AF + TR_SN + TR_SC, data = SZ_mlg_FRc_FR, reflevel = 1,
    method = "nr", print.level = 0)

Frequencies of alternatives:
    1     2
0.88837 0.11163

nr method
12 iterations, 0h:0m:0s
g'(-H)^-1g = 7.04E-07
gradient close to zero

Coefficients :
                Estimate Std. Error t-value  Pr(>|t|)
2:(intercept)  -20,6851     6,5467  -3,1596  0,0016  **
P              320,6441    92,4971   3,4665  0,0005  ***
ST              -1,1127     2,0827  -0,5343  0,5932
2:AGE            2,8636     2,2826   1,2545  0,2097
2:SEX           -0,4056     1,7403  -0,2331  0,8157
2:EDUC          -3,2738     2,5982  -1,2601  0,2076
2:OCCU           2,8810     2,5363   1,1359  0,2560
2:TERM          -5,1249     3,9563  -1,2954  0,1952
2:TQ_BR_PN       0,5272     0,9659   0,5458  0,5852
2:TQ_QL_SF_RG   -3,2524     3,3077  -0,9833  0,3255
2:TQ_AN_LN       0,4255     0,9592   0,4436  0,6573
2:TQ_FY         -4,8501     4,1849  -1,1590  0,2465
2:TL_DI_SX_DS_LY 0,9939     1,2099   0,8215  0,4114
2:TL_DC_OS       1,1229     1,1353   0,9891  0,3226
2:TL_OL_AS       3,2570     2,9835   1,0917  0,2750
2:TR_VS          6,2791     5,1514   1,2189  0,2229
2:TR_DF          5,5690     5,2716   1,0564  0,2908
2:TR_CM          0,0659     1,0915   0,0604  0,9519
2:TR_IV         10,6941     9,3748   1,1407  0,2540
2:TR_TY          1,5223     1,3106   1,1615  0,2454
2:TR_QS         -1,5406     1,5033  -1,0248  0,3054
2:TR_AF          0,1672     1,1956   0,1398  0,8888
2:TR_SN         -5,3214     4,4526  -1,1951  0,2320
2:TR_SC          8,8932     8,0576   1,1037  0,2697
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Log-Likelihood: -35.238
McFadden R^2:  0.53159
Likelihood ratio test : chisq = 79.983 (p.value = 3.1957e-
08)
```

## Appendix IV-5: Binomial logit regression; non-conspicuous products: PC-mouse

Results computed in R (R-Core Team, 2017; Croissant, 2013)

```
Call:
mlogit(formula = CHOICE ~ P + ST + AB + UT + LQ + LI + LC | AGE +
    SEX + EDUC + OCCU + TERM + TQ_PN + TQ_FY + TQ_BR + TQ_AN +
    TQ_LN + TQ_QL + TQ_RG + TQ_SF + TL_OL + TL_LY + TL_DI + TL_SX +
    TL_OS + TL_DS + TL_AS + TL_DS + TR_VS + TR_DF + TR_CM + TR_IV +
    TR_TY + TR_QS + TR_AF + TR_SN + TR_SC, data = LG_mlg_FRc_FR,
    reflevel = 1, method = "nr", print.level = 0)
Frequencies of alternatives:
      1       2
0.85106 0.14894
nr method
8 iterations, 0h:0m:0s
g'(-H)^-1g = 0.000155
successive function values within tolerance limits
Coefficients :
```

| | Estimate | Std, Error | t-value | Pr(>\|t\|) | |
|---|---|---|---|---|---|
| 2:(intercept) | -19,5095 | 6,3584 | -3,0683 | 0,0022 | ** |
| P | 301,2420 | 88,4024 | 3,4076 | 0,0007 | *** |
| ST | 2,3055 | 3,8106 | 0,6050 | 0,5452 | |
| AB | 4,6230 | 4,1359 | 1,1178 | 0,2637 | |
| UT | 5,9710 | 2,1662 | 2,7564 | 0,0058 | ** |
| LQ | 3,7810 | 1,9538 | 1,9352 | 0,0530 | . |
| LI | 0,7364 | 1,0414 | 0,7071 | 0,4795 | |
| LC | 0,1852 | 1,0665 | 0,1737 | 0,8621 | |
| 2:AGE | -0,6878 | 0,7058 | -0,9744 | 0,3299 | |
| 2:SEX | 0,7144 | 0,7056 | 1,0125 | 0,3113 | |
| 2:EDUC | -0,3066 | 0,4271 | -0,7177 | 0,4729 | |
| 2:OCCU | 1,3871 | 0,8214 | 1,6887 | 0,0913 | . |
| 2:TERM | -0,1582 | 0,9610 | -0,1646 | 0,8693 | |
| 2:TQ_PN | 0,4389 | 0,4039 | 1,0866 | 0,2772 | |
| 2:TQ_FY | 1,5966 | 0,8249 | 1,9355 | 0,0529 | . |
| 2:TQ_BR | -0,8105 | 0,5747 | -1,4104 | 0,1584 | |
| 2:TQ_AN | 0,9518 | 0,7873 | 1,2089 | 0,2267 | |
| 2:TQ_LN | -0,6060 | 0,4699 | -1,2896 | 0,1972 | |
| 2:TQ_QL | 0,7090 | 0,5579 | 1,2709 | 0,2038 | |
| 2:TQ_RG | -0,6272 | 0,5317 | -1,1795 | 0,2382 | |
| 2:TQ_SF | 0,0052 | 0,4422 | 0,0118 | 0,9906 | |
| 2:TL_OL | -0,1317 | 0,5010 | -0,2629 | 0,7927 | |
| 2:TL_LY | -0,7562 | 0,7027 | -1,0761 | 0,2819 | |
| 2:TL_DI | -0,6385 | 0,6684 | -0,9552 | 0,3395 | |
| 2:TL_SX | -0,1544 | 0,5880 | -0,2626 | 0,7929 | |
| 2:TL_OS | -0,3304 | 0,5121 | -0,6451 | 0,5189 | |
| 2:TL_DS | 1,3079 | 0,8401 | 1,5569 | 0,1195 | |
| 2:TL_AS | -0,1800 | 0,5600 | -0,3214 | 0,7479 | |
| 2:TR_VS | -0,0037 | 0,4950 | -0,0075 | 0,9940 | |
| 2:TR_DF | 0,7865 | 0,5654 | 1,3912 | 0,1642 | |
| 2:TR_CM | 0,0282 | 0,7646 | 0,0369 | 0,9706 | |
| 2:TR_IV | -0,9227 | 0,4675 | -1,9737 | 0,0484 | * |
| 2:TR_TY | 0,9534 | 0,7191 | 1,3259 | 0,1849 | |
| 2:TR_QS | 1,2658 | 0,5459 | 2,3187 | 0,0204 | * |
| 2:TR_AF | 0,1917 | 0,6480 | 0,2959 | 0,7673 | |
| 2:TR_SN | -0,9633 | 0,6471 | -1,4887 | 0,1366 | |
| 2:TR_SC | 0,4833 | 0,4306 | 1,1224 | 0,2617 | |

```
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1
Log-Likelihood: -53.673
McFadden R^2:  0.45731
Likelihood ratio test : chisq = 90.458 (p.value = 1.3955e-06)
```

## Appendix IV-6: Binomial logit regression; non-conspicuous products: Shower curtain

Results computed in R (R-Core Team, 2017; Croissant, 2013)

```
Call:
mlogit(formula = CHOICE ~ P + ST + AB + UT + LQ + LI + LC | AGE +
    SEX + EDUC + OCCU + TERM + TQ_BR_PN + TQ_QL_SF_RG + TQ_AN_LN +
    TQ_FY + TL_DI_SX_DS_LY + TL_DC_OS + TL_OL_AS + TR_DF_VS +
    TR_AF_SN + TR_CM_QS_IV + TR_TY + TR_SC, data = UD_mlg_FRc_FR,
    reflevel = 1, method = "nr", print.level = 0)

Frequencies of alternatives:
     1      2
0.916667 0.083333

nr method
7 iterations, 0h:0m:0s
g'(-H)^-1g = 2.73E-08
gradient close to zero

Coefficients :
              Estimate Std. Error t-value Pr(>|t|)
2:(intercept) -3,5900     3,5813 -1,0024   0,3161
P             20,7926    56,1543  0,3703   0,7112
ST             1,2842     2,2054  0,5823   0,5604
AB             2,9850     2,4670  1,2100   0,2263
UT             1,2196     1,5657  0,7789   0,4360
LQ             0,5232     1,4880  0,3516   0,7251
LI             0,6148     0,6691  0,9188   0,3582
LC            -1,3172     1,1352 -1,1603   0,2459
2:AGE         -1,1709     0,7807 -1,4998   0,1337
2:SEX          0,1438     0,5994  0,2399   0,8104
2:EDUC        -0,3235     0,3951 -0,8188   0,4129
2:OCCU         0,6386     0,7698  0,8296   0,4068
2:TERM         0,1230     0,8947  0,1374   0,8907
2:TQ_BR_PN     0,5488     0,3281  1,6727   0,0944 .
2:TQ_QL_SF_RG  0,4193     0,3067  1,3670   0,1716
2:TQ_AN_LN    -0,8134     0,4185 -1,9436   0,0520 .
2:TQ_FY       -0,7824     0,3830 -2,0427   0,0411 *
2:TL_DI_SX_DS_LY -0,2913  0,4615 -0,6310   0,5280
2:TL_DC_OS    -0,3778     0,5254 -0,7190   0,4722
2:TL_OL_AS    -0,3344     0,4497 -0,7436   0,4571
2:TR_DF_VS     0,3353     0,4206  0,7974   0,4252
2:TR_AF_SN    -0,5347     0,4261 -1,2551   0,2094
2:TR_CM_QS_IV  0,6821     0,4633  1,4721   0,1410
2:TR_TY       -0,8461     0,5016 -1,6868   0,0917 .
2:TR_SC       -0,1722     0,4356 -0,3954   0,6926
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Log-Likelihood: -49.974
McFadden R^2:  0.27406
Likelihood ratio test : chisq = 37.733 (p.value =
0.036916)
```

## Appendix IV-7: Binomial logit regression; conspicuous products: Smartphone wallet

Results computed in R (R-Core Team, 2017; Croissant, 2013)

```
Call:
mlogit(formula = CHOICE ~ P + ST + AB + UT + LQ + LI + LC | AGE +
    SEX + EDUC + OCCU + TERM + TQ_PN + TQ_FY + TQ_BR + TQ_AN +
    TQ_LN + TQ_QL + TQ_RG + TQ_SF + TL_OL + TL_LY + TL_DI + TL_SX +
    TL_OS + TL_DS + TL_AS + TL_DS + TR_DF_CM + TR_AF_TY_SC +
    TR_VS + TR_IV + TR_QS + TR_SN, data = FS_mlg_FRc_FR, reflevel = 1,
    method = "nr", print.level = 0)

Frequencies of alternatives:
1       2
0.75556 0.24444
nr method
10 iterations, 0h:0m:0s
g'(-H)^-1g = 7.9E-07
gradient close to zero
Coefficients :
                Estimate Std, Error t-value Pr(>|t|)
2:(intercept)  -17,5907    6,2089   -2,8332  0,0046 **
P               43,2034   33,3573    1,2952  0,1953
ST               0,8798    2,0283    0,4338  0,6644
AB               2,4864    2,2366    1,1117  0,2663
UT               1,5112    1,2191    1,2396  0,2151
LQ               1,9353    1,0790    1,7936  0,0729 .
LI               0,8697    0,6972    1,2475  0,2122
LC              -2,7768    1,3345   -2,0808  0,0375 *
2:AGE           12,4239    6,7221    1,8482  0,0646 .
2:SEX           -4,0324    2,5390   -1,5882  0,1122
2:EDUC           4,0204    1,5144    2,6547  0,0079 **
2:OCCU         -14,8735    6,7269   -2,2110  0,0270 *
2:TERM           7,0046    3,2017    2,1878  0,0287 *
2:TQ_PN          8,9633    3,6386    2,4634  0,0138 *
2:TQ_FY         -7,2391    3,5432   -2,0431  0,0410 *
2:TQ_BR        -26,3308   11,7614   -2,2387  0,0252 *
2:TQ_AN         17,6761    7,9319    2,2285  0,0258 *
2:TQ_LN          4,2349    2,3092    1,8339  0,0667 .
2:TQ_QL         -6,4054    2,4407   -2,6244  0,0087 **
2:TQ_RG         11,9771    4,7100    2,5429  0,0110 *
2:TQ_SF         -8,8694    4,5599   -1,9451  0,0518 .
2:TL_OL         -1,7192    1,0814   -1,5898  0,1119
2:TL_LY        -16,0382    6,9991   -2,2915  0,0219 *
2:TL_DI         13,2114    7,7507    1,7045  0,0883 .
2:TL_SX          2,3396    1,2001    1,9495  0,0512 .
2:TL_OS         -1,7944    1,3130   -1,3666  0,1717
2:TL_DS          4,6619    2,8343    1,6448  0,1000
2:TL_AS          2,3091    1,4844    1,5556  0,1198
2:TR_DF_CM      -9,0642    4,2972   -2,1093  0,0349 *
2:TR_AF_TY_SC   -2,6011    1,1679   -2,2273  0,0259 *
2:TR_VS         -0,4330    1,6954   -0,2554  0,7984
2:TR_IV          7,9032    2,9586    2,6713  0,0076 **
2:TR_QS          1,7797    0,8917    1,9958  0,0460 *
2:TR_SN         15,8774    6,8263    2,3259  0,0200 *
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1
Log-Likelihood: -51.045
McFadden R^2:  0.4901
Likelihood ratio test : chisq = 98.124 (p.value = 2.2049e-08)
```

## Appendix IV-8: Binomial logit regression; conspicuous products: Messenger bag

Results computed in R (R-Core Team, 2017; Croissant, 2013)

```
Call:
mlogit(formula = CHOICE ~ P + ST + AB + UT + LQ + LI + LC | AGE +
    SEX + EDUC + OCCU + TERM + TQ_PN + TQ_FY + TQ_BR + TQ_AN +
    TQ_LN + TQ_QL + TQ_RG + TQ_SF + TL_OL + TL_LY + TL_DI + TL_SX +
    TL_OS + TL_DS + TL_AS + TL_DS + TR_VS + TR_DF + TR_CM + TR_IV +
    TR_TY + TR_QS + TR_AF + TR_SN + TR_SC, data = FT_mlg_FRc_FR,
    reflevel = 1, method = "nr", print.level = 0)
Frequencies of alternatives:
  1   2
0.61 0.39
nr method
7 iterations, 0h:0m:0s
g'(-H)^-1g = 7.5E-07
gradient close to zero
Coefficients :
```

| | Estimate | Std, Error | t-value | Pr(>\|t\|) | |
|---|---|---|---|---|---|
| 2:(intercept) | -9,71097 | 3,46396 | -2,8034 | 0,005056 | ** |
| P | 135,23877 | 43,05874 | 3,1408 | 0,001685 | ** |
| ST | 2,78377 | 2,29599 | 1,2124 | 0,225341 | |
| AB | 3,46288 | 2,4853 | 1,3933 | 0,163516 | |
| UT | 6,61799 | 1,73867 | 3,8063 | 0,000141 | *** |
| LQ | 2,37335 | 1,35334 | 1,7537 | 0,079482 | . |
| LI | 1,63669 | 0,72157 | 2,2682 | 0,023315 | * |
| LC | -2,51435 | 1,64963 | -1,5242 | 0,127461 | |
| 2:AGE | 0,62189 | 1,34304 | 0,463 | 0,643331 | |
| 2:SEX | 0,4434 | 0,91911 | 0,4824 | 0,629505 | |
| 2:EDUC | 1,04983 | 0,63289 | 1,6588 | 0,097157 | . |
| 2:OCCU | -1,56735 | 0,95621 | -1,6391 | 0,101187 | |
| 2:TERM | 0,57178 | 0,96815 | 0,5906 | 0,554795 | |
| 2:TQ_PN | 1,44707 | 0,554 | 2,6121 | 0,009 | ** |
| 2:TQ_FY | -0,15538 | 0,67218 | -0,2312 | 0,817195 | |
| 2:TQ_BR | -0,66014 | 0,9112 | -0,7245 | 0,468773 | |
| 2:TQ_AN | 0,35235 | 0,76375 | 0,4613 | 0,644556 | |
| 2:TQ_LN | 1,22669 | 0,65032 | 1,8863 | 0,059258 | . |
| 2:TQ_QL | -0,35979 | 0,48306 | -0,7448 | 0,456394 | |
| 2:TQ_RG | 0,95676 | 0,59649 | 1,604 | 0,108719 | |
| 2:TQ_SF | -0,37989 | 0,48172 | -0,7886 | 0,430339 | |
| 2:TL_OL | 0,29419 | 0,57732 | 0,5096 | 0,610345 | |
| 2:TL_LY | -2,02344 | 0,86136 | -2,3491 | 0,018818 | * |
| 2:TL_DI | 0,36157 | 0,95007 | 0,3806 | 0,703522 | |
| 2:TL_SX | 2,40851 | 0,74363 | 3,2389 | 0,0012 | ** |
| 2:TL_OS | -0,11153 | 0,53575 | -0,2082 | 0,835092 | |
| 2:TL_DS | -0,10488 | 0,68533 | -0,153 | 0,878376 | |
| 2:TL_AS | -0,1485 | 0,53671 | -0,2767 | 0,782022 | |
| 2:TR_VS | -0,88976 | 0,83999 | -1,0592 | 0,289488 | |
| 2:TR_DF | -1,03184 | 0,6965 | -1,4815 | 0,13848 | |
| 2:TR_CM | 1,18919 | 0,77223 | 1,5399 | 0,123575 | |
| 2:TR_IV | -2,10215 | 0,8196 | -2,5649 | 0,010322 | * |
| 2:TR_TY | 1,61844 | 0,72375 | 2,2362 | 0,02534 | * |
| 2:TR_QS | 0,77266 | 0,85667 | 0,9019 | 0,367093 | |
| 2:TR_AF | 0,48399 | 0,76903 | 0,6293 | 0,529125 | |
| 2:TR_SN | 0,1005 | 0,57866 | 0,1737 | 0,862122 | |
| 2:TR_SC | 0,46732 | 0,48723 | 0,9591 | 0,337493 | |

```
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1
Log-Likelihood: -55.818
McFadden R^2:  0.58267
Likelihood ratio test : chisq = 155.86 (p.value = < 2.22e-16)
```

# Appendix IV-9:

## 7W questionnaire – Week 1 (part 1/2)

Univ.-Prof. Dr. Oliver P. Heil (Ph.D.)

Lehrstuhl für Marketing und Allg. Betriebswirtschaftslehre
Center for Luxury Research

### Conjoint Measurement Test

Conjoint Umfragen finden üblicherweise computerbasiert statt. Auf Basis der letzten gegebenen Antwort errechnet die Software jeweils die Frage, die aus Sicht der Gesamtfragestellung eine schnellstmögliche Errechnung des Gesamturteils erlaubt. Dies setzt Probanden künstlich unter Zeitdruck. Im Rahmen dieser Umfrage wollen wir herausfinden, ob das Antwortverhalten unter Stress von einem reflektierten Antwortverhalten wesentlich abweicht. Zudem möchten wir Ihnen die Gelegenheit bieten das Conjoint Verfahren kennenzulernen, indem Sie Schritt für Schritt nachvollziehen können.

In der heutigen Veranstaltung erhalten Sie alle den gleichen Fragebogen. Schon in den kommenden Wochen werden Sie individuelle Fragebögen erhalten, bei denen die Fragen inhaltlich auf Ihre Antworten in der Vorwoche abgestimmt sind. Damit dies möglich ist, möchten wir bitten zunächst einen Code zu generieren an dem Sie für uns wiedererkennbar sind, gleichzeitig aber anonym bleiben.

| Bitte tragen Sie hier den ersten Buchstaben Ihres ersten Vornamens ein. | Bitte tragen Sie hier die ersten Ziffern Ihres Geburtstags ein. | Bitte tragen Sie hier den ersten Buchstaben Ihres Geburtsorts ein. | Bitte tragen Sie hier die letzten beiden Ziffern Ihres Geburtsjahres ein. | Bitte tragen Sie hier Ihr Geschlecht ein. |
|---|---|---|---|---|
| | | | | |
| Beispiel: Tragen Sie ein **P** ein, wenn Sie **P**etra mit erstem Vornamen heißen. | Beispiel: Angenommen Sie sind am **05**.04.1988 geboren. Dann tragen Sie an dieser Stelle bitte 05 ein. | Beispiel: Tragen Sie hier ein **B** ein, wenn Sie in **B**uxtehude geboren wurden. | Beispiel: Angenommen Sie sind am 05.04.19**88** geboren. Dann tragen Sie an dieser Stelle bitte 88 ein. | Zulässige Zeichen: W Weiblich; M Männlich; S Sonstige |



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### Zahlungsbereitschaft

Bitte geben Sie an, wie viel Sie maximal für die unten angegebenen Produkte zu zahlen bereit wären. Sofern Produkte in verschiedenen Farben lieferbar sind, gehen Sie der Einfachheit halber davon aus, dass das Produkt in Ihrer Wunschfarbe lieferbar ist.

**FOSSIL iPhone 5s Geldbörse Texture**

Smartphoneetui

- Echtes Leder
- Verschiedene Farben
- 3 Kreditkarteneinschübe
- Magnetverschluss

€ _ _ _ ,_ _


**Südzucker Fein Zucker 1000gr**

Küchenraffinadezucker

- Reiner Raffinadezucker
- Feine Kristallgröße
- Universell einsetzbar
- Papierverpackung

€ _ _ _ ,_ _

**IKEA UDDGRUND**

Duschvorhang

- Polyesterduschvorhang
- Verschiedene Muster
- Wasserabweisend beschichtet
- Größe: 200x 180cm

€ _ _ _ ,_ _

**CENTER FOR LUXURY RESEARCH**
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Center for Luxury Research

**Freitag F12 Dragnet**

Messenger Bag mit Hüftgurt

- Obermaterial: LKW-Planen
- Verschiedene Farben
- Wasserabweisend & strapazierfähig
- Ausreichend Platz für 13" Notebook

€ _ _ _ ,_ _

**Logitech Wireless Mouse M317**

Kabellose, optische Maus mit Trackwheel

- Gummierte Oberfläche
- Verschiedene Farben
- Ergonomisch geformt
- 1 Jahr Batterielebensdauer

€ _ _ _ ,_ _


**Lindt Mousse au Chocolat**

100gr Schokoladentafel aus Vollmilchschokolade

- Alpenvollmilchschokolade
- Verschiedene Geschmacksrichtungen
- Gefüllt mit geschlagenem Schokoladenmousse
- Aromaschutzverpackung

€ _ _ _ ,_ _

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Center for Luxury Research

**Apple iPad Air 2**

Tabletcomputer mit 9,7" Display

- Hochauflösendes Display (Retina)
- Aluminiumhülle in Gold, Silber und Spacegrau
- 64 GB Speicherkapazität
- WiFi und 3G-SIM-Kartenslot

€ _ _ _ ,_ _

**Philips Wake-up Light HF3550/01**

Lichtwecker

- Wecker mit Sonnenaufgangssimulation
- Verschiedene Weckmodi wählbar
- Smartphone Dockingstation (Smartphone nicht Bestandteil des Lieferumfangs)
- Steuerung über Sleep-App des Smartphones

€ _ _ _ ,_ _


**Freixenet Solar Gran Rioja Crianza 2008**

0,75l spanischer Rotwein

- Rotwein aus der Tempranillo-Traube
- 2008 gilt als sehr guter Rioja Jahrgang
- Mindestens 2 Jahre im Eichenholzfass gereift
- Trockener, kraftvoller Geschmack

€ _ _ _ ,_ _

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# Appendix IV-9:

## 7W questionnaire – Week 1 (part 2/2)

Univ.-Prof. Dr. Oliver P. Heil (Ph.D.)

Lehrstuhl für Marketing und Allg. Betriebswirtschaftslehre
Center for Luxury Research

**Apple iPad Air 2**

Tabletcomputer mit hochauflösendem 9,7" Display

- Hochauflösendes Display (Retina)
- Aluminiumhülle in Gold, Silber und Spacegrau
- 64 GB Speicherkapazität
- WiFi und SIM-Kartenslot

€_ _ _, _ _

**Philips Wake-up Light HF3550/01**

- Wecker mit Sonnenaufgangssimulation
- Verschiedene Weckmodi wählbar
- iPhone/iPod Dockingstation (iPhone/iPod nicht Bestandteil des Lieferumfangs)
- Steuerung über Sleep-App des iPhones

€_ _ _, _ _


**Freixenet Solar Gran Rioja Crianza 2008**

- Rotwein aus der Tempranillo-Traube
- 2008 gilt als sehr guter Rioja Jahrgang
- Mindestens 2 Jahre im Eichenholzfass gereift
- Trockener, kraftvoller Geschmack

€_ _ _, _ _

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# Appendix IV-9:

## 7W questionnaire – Week 2

Univ.-Prof. Dr. Oliver P. Heil (Ph.D.)

Lehrstuhl für Marketing und Allg. Betriebswirtschaftslehre
Center for Luxury Research

Liebe Teilnehmerin,
lieber Teilnehmer,

vielen Dank für Deine Teilnahme an meiner Umfrage. Wie bereits angekündigt gibt es ab der kommenden Runde endlich individualisierte Fragebögen. Diese basieren auf Deinen Angaben aus der ersten Runde und dem nun vor Dir liegenden Fragebogen. Auf den ersten Blick ist der Fragebogen identisch zu dem aus der ersten Runde. Allerdings steht Dir diesmal links neben dem Preisfeld eine Zusatzinformation zur Verfügung, die Dir üblicherweise auch als Kunde durch entsprechende Produktrecherchen zur Verfügung steht. Auf diese Weise bilden wir den realen Kaufprozess Schritt für Schritt ab, der im Umfang an Informationen über Produkt und Preis mit der Zeit zunimmt.

Da immer jeweils ca. eine Woche zwischen zwei Runden liegt und einige Fragebögen an Haushalte mit mehreren Teilnehmern gehen, findest Du unten nochmals eine kurze Erinnerung an Deinen persönlichen Code.

Gerne kannst Du diese Seite des Fragebogens abtrennen und behalten.

| Erster Buchstabe, Deines Geburtsorts. | Die ersten beiden Ziffern Deines Geburtsdatums/ Geburtstags. | Erster Buchstabe Deines Vornamens | Die letzten beiden Ziffern Deines Geburtstags/ Geburtsdatums. | W | Weiblich |
|---|---|---|---|---|---|
| | | | | M | Männlich |
| | | | | S | Sonstige |
| F | 02 | A | 90 | W | |

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Univ.-Prof. Dr. Oliver P. Heil (Ph.D.)

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### Zahlungsbereitschaft

Neben den Produkten sehen Sie nun die Ergebnisse einer kategorieweiten Internetpreisrecherche, die wir gestern und vorgestern durchgeführt haben. Geben Sie bitte erneut Ihre maximale Zahlungsbereitschaft für die unten abgebildeten Produkte an.

**FOSSIL iPhone 5s Geldbörse Texture**

Smartphoneetui

- Echtes Leder
- Verschiedene Farben
- 3 Kreditkarteneinschübe
- Magnetverschluss

| Untere Grenze | Obere Grenze |
|---|---|
| €12,90 | €499,00 |

€ _ _ _ ,_ _


**Südzucker Fein Zucker 1000gr**

Küchenrafinadezucker

- Reiner Raffinadezucker
- Feine Kristallgröße
- Universell einsetzbar
- Papierverpackung

| Untere Grenze | Obere Grenze |
|---|---|
| €0,65 | €1,29 |

€ _ _ _ ,_ _

**IKEA UDDGRUND**

Duschvorhang

- Polyesterduschvorhang
- Verschiedene Muster
- Wasserabweisend beschichtet
- Größe: 200x 180cm

| Untere Grenze | Obere Grenze |
|---|---|
| €1,99 | €2490,00 |

€ _ _ _ ,_ _

Weiter auf der Folgeseite!

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Univ.-Prof. Dr. Oliver P. Heil (Ph.D.)

Lehrstuhl für Marketing und Allg. Betriebswirtschaftslehre
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**Freitag F12 Dragnet**

Messenger Bag mit Schultergurt

- Obermaterial: LKW-Planen
- Verschiedene Farben
- Wasserabweisend & strapazierfähig
- Ausreichend Platz für 13" Notebook

| Untere Grenze | Obere Grenze |
|---|---|
| €8,79 | €346,50 |

€ _ _ _ ,_ _

**Logitech Wireless Mouse M317**

Kabellose, optische Maus mit Trackwheel

- Gummierte Oberfläche
- Verschiedene Farben
- Ergonomisch geformt
- 1 Jahr Batterielebensdauer

| Untere Grenze | Obere Grenze |
|---|---|
| €1,95 | €204,30 |

€ _ _ _ ,_ _


**Lindt Mousse au Chocolat**

100gr Schokoladentafel aus Vollmilchschokolade

- Alpenvollmilchschokolade
- Verschiedene Geschmacksrichtungen
- Gefüllt mit geschlagenem Schokoladenmousse
- Aromaschutzverpackung

| Untere Grenze | Obere Grenze |
|---|---|
| €0,59 | €2,14 |

€ _ _ _ ,_ _

Weiter auf der Folgeseite!

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**Apple iPad Air 2**

Tabletcomputer mit 9,7" Display

- Hochauflösendes Display (Retina)
- Aluminiumhülle in Gold, Silber und Spacegrau
- 64 GB Speicherkapazität
- WiFi und 3G-SIM-Kartenslot

| Untere Grenze | Obere Grenze |
|---|---|
| €279,90 | €709,00 |

€ _ _ _ ,_ _

**Philips Wake-up Light HF3550/01**

Lichtwecker

- Wecker mit Sonnenaufgangssimulation
- Verschiedene Weckmodi wählbar
- Smartphone Dockingstation (Smartphone nicht Bestandteil des Lieferumfangs)
- Steuerung über Sleep-App des Smartphones

| Untere Grenze | Obere Grenze |
|---|---|
| €79,90 | €302,85 |

€ _ _ _ ,_ _


**Freixenet Solar Gran Rioja Crianza 2008**

0,75l spanischer Rotwein

- Rotwein aus der Tempranillo-Traube
- 2008 gilt als sehr guter Rioja Jahrgang
- Mindestens 2 Jahre im Eichenholzfass gereift
- Trockener, kraftvoller Geschmack

| Untere Grenze | Obere Grenze |
|---|---|
| €4,99 | €7,90 |

€ _ _ _ ,_ _

**Vielen Dank für Ihre Mithilfe!**

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# Appendix IV-9:

## 7W questionnaire – Week 3

| Erster Buchstabe, Deines Geburtsorts. | Die ersten beiden Ziffern Deines Geburtsdatums/ Geburtstags. | Erster Buchstabe Deines Vornamens | Die letzten beiden Ziffern Deines Geburts-tags/ Geburtsda-tums. | W | Weiblich |
|---|---|---|---|---|---|
| | | | | M | Männlich |
| | | | | S | Sonstige |

F02A90W

Liebe Teilnehmerin,
lieber Teilnehmer,

wie versprochen erhältst Du ab dieser Runde Deinen individuellen Fragebogen. Die Fragen haben wir aus Deinen Antworten der vergangenen zwei Runden generiert. Und genauso wird es auch weitergehen:

Ab dieser Runde werden wir Dir die Produkte, die Du bereits kennst in unterschiedlichen Varianten zu unterschiedlichen Preisen anbieten. Die Unterschiede sind dabei immer **fett** gedruckt, *kursiv* gedruckte Produkteigenschaften sind bei beiden Produktvarianten gleich. Du kreuzt einfach die Produktvariante an, die Du am wahrscheinlichsten kaufen würdest. **Was immer gleich bleibt: Du triffst Deine Produktentscheidung einfach immer nach Deinem aktuellen Gefühl.**

Wie bei ganz alltäglichen Kaufentscheidungen, gibt es auch hier Produkte, die Dich mehr oder weniger interessieren. Das sind zum einen die Produkte, die Du selbst ausgeschlossen hast, indem Du sie offen gelassen hast oder 0 € Zahlungsbereitschaft hattest. In Einzelfällen lässt auch der Computer das ein oder andere Produkt herausfallen. Dass zu diesen Produkten immer noch ein Bild angezeigt wird, war leider technisch nicht anders zu lösen. (Genauso wie übrigens der Wechsel zwischen Du und Sie: Da man einen einmal gestellten Fragebogen nicht mehr ändern darf, habe ich diese kleinen Briefe vorweg gesetzt, die den Fragebogen nicht verändern, das ganze aber auch nicht so unpersönlich werden lassen.)

Ihr Code
F02A90W

Die abgebildeten Produkte kennen Sie bereits aus den vorherigen Umfragen. Beachten Sie bitte, dass . . .

- die *kursiv gedruckten Produkteigenschaften für beide Auswahlalternativen* eines Produkts gelten.
- die **Produkte unterscheiden sich nur in der fünften Eigenschaft sowie im Preis**. Diese beiden **Informationen** sind **fett gedruckt**.

**Fossil iPhone 5 Geldbörse Texture**

| *Lederetui* | *Verschiedene Farben* |
|---|---|
| *Drei Kreditkarteneinschübe* | *Magnetverschluss* |
| **Ledertyp: Rindsleder** | **Ledertyp: Ziegenleder** |
| **€ 5,00** | **€ 5,25** |

**Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?**

**Südzucker Fein Zucker 1000gr**

| *Reiner Raffinadezucker* | *Feine Kristallgröße* |
|---|---|
| *Universell einsetzbar* | *Papierverpackung* |
| **aus deutschen Zuckerrüben** | **aus biologisch angebauten Zuckerrüben** |
| **€ 1,00** | **€ 1,05** |

**Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?**

**IKEA Uddgrund Duschvorhang**

| *Polyesterduschvorhang* | *Verschiedene Muster* |
|---|---|
| *Wasserabweisend beschichtet* | *Größe 180x200cm* |
| **Stabilität: unterer Rand doppelt vernäht** | **Stabilität: Eingenähtes Gummiband** |
| **€ 10,00** | **€ 10,50** |

**Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?**

**Freitag F12 Dragnet Messenger Bag**

| *Obermaterial: LKW-Planen* | *Verschiedene Farben* |
|---|---|
| *Wasserabweisend & strapazierfähig* | *Ausreichend Platz für 13" Notebook* |
| **keine gesonderte Stiftaufbewahrung** | **Einschübe für drei Stifte aus Gummi** |
| **€ 10,00** | **€ 10,50** |

**Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?**

Weiter auf der Folgeseite !

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Ihr Code
F02A90W

**Logitech Wireless Mouse M317**

| *Gummierte Oberfläche* | *Verschiedene Farben* |
|---|---|
| *Ergonomisch geformt* | *Ein Jahr Batterielebensdauer* |
| **Funkreichweite bis 5 meter** | **Funkreichweite bis 7 meter** |
| **€ 10,00** | **€ 10,50** |

**Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?**

**Lindt Mousse au Chocolat**

| *Alpenvollmilchschokolade* | *Verschiedene Geschmacksrichtungen* |
|---|---|
| *Gefüllt mit geschlagenem Schokoladenmousse* | *Aromaschutzverpackung* |
| **Kakaobohnen in Lindt Qualität** | **Fair gehandelte Kakaobohnen in Lindt Qualität** |
| **€ 1,00** | **€ 1,05** |

**Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?**

**Apple iPad Air 2**

| *Hochauflösendes Display (Retina)* | *Außenhülle aus Aluminium in gold, silber, spacegrau* |
|---|---|
| *64 GB Speicherkapazität* | *WiFi und 3G SIM-Kartenslot* |
| **Hülle: Apple Smart Cover aus Kunststoff** | **Hülle: Apple Smart Cover aus Leder** |
| **€ 200,00** | **€ 210,00** |

**Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?**

| € | € |
|---|---|

| € | € |
|---|---|

**Vielen Dank für Ihre Mithilfe!**

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# Appendix IV-9:

## 7W questionnaire – Week 4

| Erster Buchstabe Deines Geburtsorts. | Die ersten beiden Ziffern Deines Geburtsdatums/ Geburtstags. | Erster Buchstabe Deines Vornamens | Die letzten beiden Ziffern Deines Geburts-tags/ Geburtsda-tums. | W | Weiblich |
|---|---|---|---|---|---|
| | | | | M | Männlich |
| | | | | S | Sonstige |

F02A90W

Liebe Teilnehmerin,
lieber Teilnehmer,

die Funktionsweise des Fragebogens kennst Du schon aus der letzten Runde. Auch hier wird nur eine Produkteigenschaft verändert. Die *kursiv* gedruckten Eigenschaften teilen sich beide Varianten eines Produktes, der Unterschied ist **fett** gedruckt.

Das Einzige, was Du nun noch wissen musst, ist, dass die Zahl 462 im Grunde eine bedeutungslose zufällige Zahl ist. Das bedeutet, Du hast keinen Einfluss das wievielte Produkt aus der Serie Du bekommst.

Vielen Dank für Deine Teilnahme.

**Nur für die unter Euch, die gerne rätseln:** *Seit der vorherigen Runde wird die Preissetzung dieser Umfrage von einem Computer gemacht und ist nicht zufällig. Sie folgt vorab festgelegten Regeln. Frühestens nach 3 Runden (also in der kommenden Runde) könnte man diese Regel herausgefunden haben. Nur falls Du gerne rätselst.*

Ihr Code
F02A90W

Die abgebildeten Produkte kennen Sie bereits aus den vorherigen Umfragen. Beachten Sie bitte, dass . . .

- die *kursiv gedruckten Produkteigenschaften* für beide Auswahlalternativen eines Produkts gelten.
- die **Produkte unterscheiden sich nur in der fünften Eigenschaft sowie im Preis**. Diese beiden **Informationen** sind **fett gedruckt**.

Die Zahl 462 steht für eine zufällige, bedeutungslose Zahl zwischen 1 und 1000.
Auf die Auswahl der Ihnen zugeteilten Seriennummer haben Sie keinen Einfluss!!!!

| | | |
|---|---|---|
| **Fossil iPhone 5 Geldbörse Texture** | | |
|  | *Ledertui*<br>*Drei Kreditkarteneinschübe* | *Verschiedene Farben*<br>*Magnetverschluss* |
| | **Nur solange der Vorrat reicht**<br>**€ 4,76** | **Limitiert auf 1000 Stück-Sie besitzen Nr. 462.**<br>**€ 5,00** |
| **Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?** | ○ | ○ |
| **Südzucker Fein Zucker 1000gr** | | |
|  | *Reiner Raffinadezucker*<br>*Universell einsetzbar* | *Feine Kristallgröße*<br>*Papierverpackung* |
| | **Nur solange der Vorrat reicht**<br>**€ 0,95** | **Limitiert auf 1000 Stück-Sie besitzen Nr. 462.**<br>**€ 1,00** |
| **Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?** | ○ | ○ |
| **IKEA Uddgrund Duschvorhang** | | |
|  | *Polyesterduschvorhang*<br>*Wasserabweisend beschichtet* | *Verschiedene Muster*<br>*Größe 180x200cm* |
| | **Nur solange der Vorrat reicht**<br>**€ 9,52** | **Limitiert auf 1000 Stück-Sie besitzen Nr. 462.**<br>**€ 10,00** |
| **Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?** | ○ | ○ |
| **Freitag F12 Dragnet Messenger Bag** | | |
|  | *Obermaterial: LKW-Planen*<br>*Wasserabweisend & strapazierfähig* | *Verschiedene Farben*<br>*Ausreichend Platz für 13" Notebook* |
| | **Nur solange der Vorrat reicht**<br>**€ 10,50** | **Limitiert auf 1000 Stück-Sie besitzen Nr. 462.**<br>**€ 11,03** |
| **Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?** | ○ | ○ |

Weiter auf der Folgeseite !

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Ihr Code
F02A90W

| | | |
|---|---|---|
| **Logitech Wireless Mouse M317** | | |
|  | *Gummierte Oberfläche*<br>*Ergonomisch geformt* | *Verschiedene Farben*<br>*Ein Jahr Batterielebensdauer* |
| | **Nur solange der Vorrat reicht**<br>**€ 9,52** | **Limitiert auf 1000 Stück-Sie besitzen Nr. 462.**<br>**€ 10,00** |
| **Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?** | ○ | ○ |
| **Lindt Mousse au Chocolat** | | |
|  | *Alpenvollmilchschokolade*<br>*Gefüllt mit geschlagenem Schokoladenmousse* | *Verschiedene Geschmacksrichtungen*<br>*Aromaschutzverpackung* |
| | **Nur solange der Vorrat reicht**<br>**€ 1,05** | **Limitiert auf 1000 Stück-Sie besitzen Nr. 462.**<br>**€ 1,10** |
| **Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?** | ○ | ○ |
| **Apple iPad Air 2** | | |
|  | *Hochauflösendes Display (Retina)*<br>*64 GB Speicherkapazität* | *Außenhülle aus Alumimium in gold, silber, spacegrau*<br>*WiFi und 3G SIM-Kartenslot* |
| | **Nur solange der Vorrat reicht**<br>**€ 190,48** | **Limitiert auf 1000 Stück-Sie besitzen Nr. 462.**<br>**€ 200,00** |
| **Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer dieser beiden Artikel geplant, für welchen würden Sie sich entscheiden?** | ○ | ○ |
|  | | |
| | **€** | **€** |
|  | | |
| | **€** | **€** |
| Haben Sie eine Glückszahl, Lieblingszahl oder Ähnliches? Falls ja, tragen Sie diese bitte unten ein. | O D E R | Ich habe keine Glückszahl, Lieblingszahl oder Ähnliches. Bitte hier ankreuzen. |
| | | ○ |

**Vielen Dank für Ihre Mithilfe!**

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# Appendix IV-9:

## 7W questionnaire – Week 5

Erster Buchstabe Deines Geburtsorts. | Die ersten beiden Ziffern Deines Geburtstatzums Geburtstags. | Erster Buchstabe Deines Vornamens | Die letzten beiden Ziffern Deines Geburtstages Geburtsdatums.

| | |
|---|---|
| W | Weiblich |
| M | Männlich |
| S | Sonstige |

F02A90W

**Liebe Teilnehmerin,**
**lieber Teilnehmer,**

in dieser Woche steigt die Zahl der Produktvarianten von 2, wie Du es aus den vorherigen beiden Runden kennst, auf 3 an. Wenn Du mir in der letzten Runde Deine Glückzahl verraten hast, sind es sogar 4 Möglichkeiten pro Produkt. Dabei geht es um unterschiedliche Seriennummern aus der bereits bekannten Serie von 1 bis 1000. Von der limitierten Serie werden also nach wie vor 1000 Stück produziert. In dieser Woche hast Du also einen Einfluss darauf, welches Produkt aus der Serie Du kaufst.

Aus diesen 3 bzw. 4 Varianten wählst Du einfach diejenige aus, die Du am Wahrscheinlichsten kaufen würdest. Das wars dann auch schon.

Vielen Dank für Deine Teilnahme.

Ihr Code
F02A90W

Die abgebildeten Produkte kennen Sie bereits aus den vorherigen Umfragen. Beachten Sie bitte, dass . . .
• die kursiv gedruckten Produkteigenschaften für beide Auswahlalternativen eines Produkts gelten.
• die **Produkte unterscheiden sich nur in der fünften Eigenschaft sowie im Preis**. Diese beiden **Informationen** sind **fett gedruckt**.

Die Zahl 462 steht für eine zufällige, bedeutungslose Zahl zwischen 1 und 1000. Auf die Auswahl der Ihnen zugeteilten Seriennummer haben Sie keinen Einfluss!!!

| **Fossil iPhone 5 Geldbörse Texture** | *Lederetui* | *Verschiedene Farben* | *Drei Kreditkartenaufnahmeschübe* | *Magnetverschluss* |
|---|---|---|---|---|
| | **Limitiert auf 1000 Stück. Sie besitzen Nr. 462.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1000.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 269** |
| | **€ 5,00** | **€ 5,25** | **€ 5,25** | **€ 5,51** |
| **Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer der oben abgebildeten Artikel geplant, für welchen würden Sie sich entscheiden?** | ○ | ○ | ○ | ○ |

| **Südzucker Fein Zucker 1000gr** | *Reiner Raffinadezucker* | *Feine Kristallgröße* | *Universell einsetzbar* | *Papierverpackung* |
|---|---|---|---|---|
| | **Limitiert auf 1000 Stück. Sie besitzen Nr. 462.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1000.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 269** |
| | **€ 0,86** | **€ 0,90** | **€ 0,90** | **€ 0,95** |
| **Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer der oben abgebildeten Artikel geplant, für welchen würden Sie sich entscheiden?** | ○ | ○ | ○ | ○ |

| **IKEA Uddgrund Duschvorhang** | *Polyesterduschvorhang* | *Verschiedene Muster* | *Wasserabweisend beschichtet* | *Größe 180x200cm* |
|---|---|---|---|---|
| | **Limitiert auf 1000 Stück. Sie besitzen Nr. 462.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1000.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 269** |
| | **€ 10,00** | **€ 10,50** | **€ 10,50** | **€ 11,03** |
| **Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer der oben abgebildeten Artikel geplant, für welchen würden Sie sich entscheiden?** | ○ | ○ | ○ | ○ |

**WEITER AUF DER NÄCHSTEN SEITE**

Ihr Code
F02A90W

Die abgebildeten Produkte kennen Sie bereits aus den vorherigen Umfragen. Beachten Sie bitte, dass . . .
• die kursiv gedruckten Produkteigenschaften für beide Auswahlalternativen eines Produkts gelten.
• die **Produkte unterscheiden sich nur in der fünften Eigenschaft sowie im Preis**. Diese beiden **Informationen** sind **fett gedruckt**.

Die Zahl 462 steht für eine zufällige, bedeutungslose Zahl zwischen 1 und 1000. Auf die Auswahl der Ihnen zugeteilten Seriennummer haben Sie keinen Einfluss!!!

| **Freitag F12 Dragnet Messenger Bag** | *Obermaterial: LKW-Planen* | *Verschiedene Farben* | *Wasserabweisend & strapazierfähig* | *Ausreichend Platz für 13" Notebook* |
|---|---|---|---|---|
| | **Limitiert auf 1000 Stück. Sie besitzen Nr. 462.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1000.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 269** |
| | **€ 9,48** | **€ 9,95** | **€ 9,95** | **€ 10,45** |
| **Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer der oben abgebildeten Artikel geplant, für welchen würden Sie sich entscheiden?** | ○ | ○ | ○ | ○ |

| **Logitech Wireless Mouse M317** | *Gummierte Oberfläche* | *Verschiedene Farben* | *Ergonomisch geformt* | *Ein Jahr Batterielebensdauer* |
|---|---|---|---|---|
| | **Limitiert auf 1000 Stück. Sie besitzen Nr. 462.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1000.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 269** |
| | **€ 10,00** | **€ 10,50** | **€ 10,50** | **€ 11,03** |
| **Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer der oben abgebildeten Artikel geplant, für welchen würden Sie sich entscheiden?** | ○ | ○ | ○ | ○ |

| **Lindt Mousse au Chocolat** | *Alpenvollmilchschokolade* | *Verschiedene Geschmacksrichtungen* | *Gefüllt mit geschlagenem Schokolademousse* | *Aromaschutzverpackung* |
|---|---|---|---|---|
| | **Limitiert auf 1000 Stück. Sie besitzen Nr. 462.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1000.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 269** |
| | **€ 0,95** | **€ 1,00** | **€ 1,00** | **€ 1,04** |
| **Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer der oben abgebildeten Artikel geplant, für welchen würden Sie sich entscheiden?** | ○ | ○ | ○ | ○ |

**WEITER AUF DER NÄCHSTEN SEITE**

Ihr Code
F02A90W

Die abgebildeten Produkte kennen Sie bereits aus den vorherigen Umfragen. Beachten Sie bitte, dass . . .
• die kursiv gedruckten Produkteigenschaften für beide Auswahlalternativen eines Produkts gelten.
• die **Produkte unterscheiden sich nur in der fünften Eigenschaft sowie im Preis**. Diese beiden **Informationen** sind **fett gedruckt**.

Die Zahl 462 steht für eine zufällige, bedeutungslose Zahl zwischen 1 und 1000. Auf die Auswahl der Ihnen zugeteilten Seriennummer haben Sie keinen Einfluss!!!

| **Apple iPad Air 2** | *Hochauflösendes Display (Retina)* | *Außenhülle aus Aluminium in gold, silber, spacegrau* | *64 GB Speicherkapazität* | *WiFi und 3G SIM-Kartenslot* |
|---|---|---|---|---|
| | **Limitiert auf 1000 Stück. Sie besitzen Nr. 462.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 1000.** | **Limitiert auf 1000 Stück. Sie besitzen Nr. 269** |
| | **€ 200,00** | **€ 210,00** | **€ 210,00** | **€ 220,50** |
| **Stellen Sie sich bitte vor, Sie hätten ohnehin die Anschaffung einer der oben abgebildeten Artikel geplant, für welchen würden Sie sich entscheiden?** | ○ | ○ | ○ | ○ |

| | | | | |
|---|---|---|---|---|
| | € | € | € | € |

| | | | | |
|---|---|---|---|---|
| | € | € | € | € |

**Das wars für diese Woche. Vielen Dank für Ihre Mithilfe!**

# Appendix IV-9:

## 7W questionnaire – Week 6

| Erster Buchstabe, Deines Geburtsorts. | Die ersten beiden Ziffern Deines Geburtsdatums/ Geburtstags. | Erster Buchstabe Deines Vornamens | Die letzten beiden Ziffern Deines Geburts-tags/ Geburtsda-tums. | W | Weiblich |
|---|---|---|---|---|---|
| | | | | M | Männlich |
| | | | | S | Sonstige |

F02A90W

Liebe Teilnehmerin,
lieber Teilnehmer,

bislang sind wir von einer auf 1000 Stück begrenzten Menge für die limitierte Auflage der jeweiligen Produkte ausgegangen. In dieser Woche senken wir die Mengenbegrenzung für die alternative Variante des Produktes auf 500 Stück ab.

Ansonsten folgt der Fragebogen dem gleichen Prinzip wie in den vorherigen 3 Runden.

Zum Finale in der nächsten Woche gibt es auch noch einmal etwas Süßes.

Vielen Dank für Deine Teilnahme.

Ihr Code
F02A90W

Die abgebildeten Produkte kennen Sie bereits aus den vorherigen Umfragen. Beachten Sie bitte, dass . . .

- die *kursiv gedruckten Produkteigenschaften* für beide *Auswahlalternativen* eines Produkts gelten.
- die **Produkte unterscheiden sich nur in der fünften Eigenschaft sowie im Preis**. Diese beiden **Informationen** sind **fett gedruckt**.

Die Zahlen 246 und 462 stehen für zufällige, bedeutungslose Zahlen zwischen 1 und 500 bzw. 1000.
Im Falle dieser Zahlen, haben Sie auf die Auswahl der Ihnen zugeteilten Seriennummer keinen Einfluss!!!!

**Fossil iPhone 5 Geldbörse Texture**

| *Lederetui* *Drei Kreditkarteneinschübe* | *Verschiedene Farben* *Magnetverschluss* |
|---|---|
| **Limitiert auf 1000 Stück.** **Sie besitzen Nr. 1** | **Limitiert auf 500 Stück.** **Sie besitzen Nr. 1** |
| **5,25 €** | **5,51 €** |
| **Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines dieser oben beschriebenen Produkte geplant. Für welches würden Sie sich entscheiden?** | |
| ○ | ○ |

**Südzucker Fein Zucker 1000gr**

| *Reiner Raffinadezucker* *Universell einsetzbar* | *Feine Kristallgröße* *Papierverpackung* |
|---|---|
| **Limitiert auf 1000 Stück.** **Sie besitzen Nr. 462** | **Limitiert auf 500 Stück.** **Sie besitzen Nr. 246** |
| **0,82 €** | **0,86 €** |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines dieser oben beschriebenen Produkte geplant. Für welches würden Sie sich entscheiden? | |
| ○ | ○ |

**IKEA Uddgrund Duschvorhang**

| *Polyesterduschvorhang* *Wasserabweisend beschichtet* | *Verschiedene Muster* *Größe 180x200cm* |
|---|---|
| **Limitiert auf 1000 Stück.** **Sie besitzen Nr. 462** | **Limitiert auf 500 Stück.** **Sie besitzen Nr. 246** |
| **9,52 €** | **10,00 €** |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines dieser oben beschriebenen Produkte geplant. Für welches würden Sie sich entscheiden? | |
| ○ | ○ |

**Freitag F12 Dragnet Messenger Bag**

| *Obermaterial: LKW-Planen* *Wasserabweisend & strapazierfähig* | *Verschiedene Farben* *Ausreichend Platz für 13" Notebook* |
|---|---|
| **Limitiert auf 1000 Stück.** **Sie besitzen Nr. 1** | **Limitiert auf 500 Stück.** **Sie besitzen Nr. 1** |
| **9,95 €** | **10,45 €** |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines dieser oben beschriebenen Produkte geplant. Für welches würden Sie sich entscheiden? | |
| ○ | ○ |

Weiter auf der Folgeseite !

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Ihr Code
F02A90W

**Logitech Wireless Mouse M317**

| *Gummierte Oberfläche* *Ergonomisch geformt* | *Verschiedene Farben* *Ein Jahr Batterielebensdauer* |
|---|---|
| **Limitiert auf 1000 Stück.** **Sie besitzen Nr. 462** | **Limitiert auf 500 Stück.** **Sie besitzen Nr. 246** |
| **9,52 €** | **10,00 €** |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines dieser oben beschriebenen Produkte geplant. Für welches würden Sie sich entscheiden? | |
| ○ | ○ |

**Lindt Mousse au Chocolat**

| *Alpenvollmilchschokolade* *Gefüllt mit geschlagenem Schokoladenmousse* | *Verschiedene Geschmacksrichtungen* *Aromaschutzverpackung* |
|---|---|
| **Limitiert auf 1000 Stück.** **Sie besitzen Nr. 462** | **Limitiert auf 500 Stück.** **Sie besitzen Nr. 246** |
| **0,90 €** | **0,95 €** |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines dieser oben beschriebenen Produkte geplant. Für welches würden Sie sich entscheiden? | |
| ○ | ○ |

**Apple iPad Air 2**

| *Hochauflösendes Display (Retina)* *64 GB Speicherkapazität* | *Außenhülle aus Aluminium in gold, silber, spacegrau* *WiFi und 3G SIM-Kartenslot* |
|---|---|
| **Limitiert auf 1000 Stück.** **Sie besitzen Nr. 1** | **Limitiert auf 500 Stück.** **Sie besitzen Nr. 1** |
| **210,00 €** | **220,50 €** |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines dieser oben beschriebenen Produkte geplant. Für welches würden Sie sich entscheiden? | |
| ○ | ○ |

| | | |
|---|---|---|
| | € | € |
| | € | € |

**Vielen Dank für Ihre Mithilfe!**

**CENTER FOR LUXURY RESEARCH**
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# Appendix IV-9:

## 7W questionnaire – Week 7 (including TR-/TL-part for FR sample) part 1/2

Erster Buchstabe Deines Geburtsorts. Die ersten beiden Ziffern Deines Geburtstatums' Geburtstags. Erster Buchstabe Deines Vornamens Die letzten beiden Ziffern Deines Geburtstags' Geburtsdatums.

| | |
|---|---|
| W | Weiblich |
| M | Männlich |
| S | Sonstige |

F02A90W

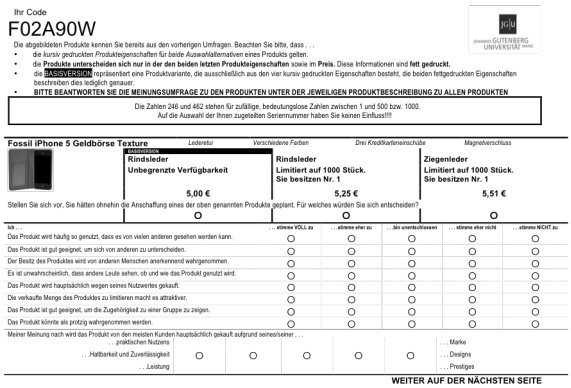
**Liebe Teilnehmerin,**
**lieber Teilnehmer,**

nach diesem letzten Fragebogen hast Du es endlich geschafft. Die Kaufentscheidungen für die Produkte, aus den letzten 4 Runden kennst Du schon und sie funktionieren genauso, wie Du es gewohnt bist.

Wie Du sicher schon gemerkt hast, ist dieser Bogen etwas dicker als die vorherigen. Das liegt in erster Linie daran, dass wir einerseits noch einmal **Deine generelle Meinung zu allen Produkten erfragen** wollen. Auf den ersten Blick sieht das nach viel Zeit aus. Du wirst aber schon beim zweiten Produkt feststellen, dass die Struktur immer die gleiche bleibt und lediglich die Produkte wechseln. Auf diese Weise wirst Du wesentlich schneller durch den Fragebogen kommen, als Du vielleicht zuerst erwartest.

Im Anschluss daran habe ich noch 8 kleine Fragen zu Deinem Entscheidungsverhalten beim Einkaufen.
Da der Fragebogen der Längste in der ganzen Umfrage ist, bekommst Du ein wenig Nervennahrung und ein kleines Dankeschön für Deine Teilnahme.

Vielen Dank für Deine Teilnahme. Du hast mir sehr geholfen.



Ihr Code
F02A90W

Die abgebildeten Produkte kennen Sie bereits aus den vorherigen Umfragen. Beachten Sie bitte, dass . . .
- die kursiv gedruckten Produkteigenschaften für beide Auswahlalternativen eines Produkts gelten.
- die **Produkte unterscheiden sich nur in der den beiden letzten Produkteigenschaften** sowie im **Preis.** Diese Informationen sind **fett gedruckt.**
- die BASISVERSION repräsentiert eine Produktvariante, die ausschließlich aus den vier kursiv gedruckten Eigenschaften besteht, die beiden fettgedruckten Eigenschaften beschreiben das lediglich genauer.
- **BITTE BEANTWORTEN SIE DIE MEINUNGSUMFRAGE ZU DEN PRODUKTEN UNTER DER JEWEILIGEN PRODUKTBESCHREIBUNG ZU ALLEN PRODUKTEN**

Die Zahlen 246 und 462 stehen für zufällige, bedeutungslose Zahlen zwischen 1 und 500 bzw. 1000.
Auf die Auswahl der Ihnen zugeteilten Seriennummer haben Sie keinen Einfluss!!!

**Fossil iPhone 5 Geldbörse Texture** *Lederetui* *Verschiedene Farben* *Drei Kreditkarteneinschübe* *Magnetverschluss*



| BASISVERSION | | | |
|---|---|---|---|
| **Rindsleder**<br>**Unbegrenzte Verfügbarkeit**<br>**5,00 €** | **Rindsleder**<br>**Limitiert auf 1000 Stück.**<br>**Sie besitzen Nr. 1**<br>**5,25 €** | **Ziegenleder**<br>**Limitiert auf 1000 Stück.**<br>**Sie besitzen Nr. 1**<br>**5,51 €** | |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines der oben genannten Produkte geplant. Für welches würden Sie sich entscheiden? | | | |
| | ○ | ○ | ○ |

| Ich . . . | . . . stimme VOLL zu | . . .stimme eher zu | . . .bin unentschlossen | . . . stimme eher nicht | . . .stimme NICHT zu |
|---|---|---|---|---|---|
| Das Produkt wird häufig so genutzt, dass es von vielen anderen gesehen werden kann. | ○ | ○ | ○ | ○ | ○ |
| Das Produkt ist gut geeignet, um sich von anderen zu unterscheiden. | ○ | ○ | ○ | ○ | ○ |
| Der Besitz des Produktes wird von anderen Menschen anerkennend wahrgenommen. | ○ | ○ | ○ | ○ | ○ |
| Es ist unwahrscheinlich, dass andere Leute sehen, ob und wie das Produkt genutzt wird. | ○ | ○ | ○ | ○ | ○ |
| Das Produkt wird hauptsächlich wegen seines Nutzwertes gekauft. | ○ | ○ | ○ | ○ | ○ |
| Die verkaufte Menge des Produktes zu limitieren macht es attraktiver. | ○ | ○ | ○ | ○ | ○ |
| Das Produkt ist gut geeignet, um die Zugehörigkeit zu einer Gruppe zu zeigen. | ○ | ○ | ○ | ○ | ○ |
| Das Produkt könnte als protzig wahrgenommen werden. | ○ | ○ | ○ | ○ | ○ |

Meiner Meinung nach wird das Produkt von den meisten Kunden hauptsächlich gekauft aufgrund seines/seiner . . .

| | | | | | | |
|---|---|---|---|---|---|---|
| . . .praktischen Nutzens | | | | | | . . . Marke |
| . . .Haltbarkeit und Zuverlässigkeit | ○ | ○ | ○ | ○ | ○ | . . . Designs |
| . . .Leistung | | | | | | . . . Prestiges |

**WEITER AUF DER NÄCHSTEN SEITE**

Ihr Code
F02A90W

**DIE MEINUNGSUMFRAGE UNTER DER PRODUKTBESCHREIBUNG BITTE ZU ALLEN PRODUKTEN BEANTWORTEN!**

**Südzucker Fein Zucker 1000gr** *Reiner Raffinadezucker* *Feine Kristallgröße* *Universell einsetzbar* *Papierverpackung*

| BASISVERSION | | | |
|---|---|---|---|
| **Aus deutschen Zuckerrüben**<br>**Unbegrenzte Verfügbarkeit**<br>**0,78 €** | **Aus deutschen Zuckerrüben**<br>**Limitiert auf 1000 Stück.**<br>**Sie besitzen Nr. 462**<br>**0,82 €** | **Zuckerrüben aus ökologischem Anbau**<br>**Limitiert auf 1000 Stück.**<br>**Sie besitzen Nr. 462**<br>**0,86 €** | |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines der oben genannten Produkte geplant. Für welches würden Sie sich entscheiden? | | | |
| | ○ | ○ | ○ |

| Ich . . . | . . . stimme VOLL zu | . . .stimme eher zu | . . .bin unentschlossen | . . . stimme eher nicht zu | . . .stimme NICHT zu |
|---|---|---|---|---|---|
| Das Produkt wird häufig so genutzt, dass es von vielen anderen gesehen werden kann. | ○ | ○ | ○ | ○ | ○ |
| Das Produkt ist gut geeignet, um sich von anderen zu unterscheiden. | ○ | ○ | ○ | ○ | ○ |
| Der Besitz des Produktes wird von anderen Menschen anerkennend wahrgenommen. | ○ | ○ | ○ | ○ | ○ |
| Es ist unwahrscheinlich, dass andere Leute sehen, ob und wie das Produkt genutzt wird. | ○ | ○ | ○ | ○ | ○ |
| Das Produkt wird hauptsächlich wegen seines Nutzwertes gekauft. | ○ | ○ | ○ | ○ | ○ |
| Die verkaufte Menge des Produktes zu limitieren macht es attraktiver. | ○ | ○ | ○ | ○ | ○ |
| Das Produkt ist gut geeignet, um die Zugehörigkeit zu einer Gruppe zu zeigen. | ○ | ○ | ○ | ○ | ○ |
| Das Produkt könnte als protzig wahrgenommen werden. | ○ | ○ | ○ | ○ | ○ |

Meiner Meinung nach wird das Produkt von den meisten Kunden hauptsächlich gekauft aufgrund seines/seiner . . .

| | | | | | | |
|---|---|---|---|---|---|---|
| . . .praktischen Nutzens | | | | | | . . . Marke |
| . . .Haltbarkeit und Zuverlässigkeit | ○ | ○ | ○ | ○ | ○ | . . . Designs |
| . . .Leistung | | | | | | . . . Prestiges |

**WEITER AUF DER NÄCHSTEN SEITE**

Ihr Code
F02A90W

**DIE MEINUNGSUMFRAGE UNTER DER PRODUKTBESCHREIBUNG BITTE ZU ALLEN PRODUKTEN BEANTWORTEN!**

**IKEA Uddgrund Duschvorhang** *Polyesterduschvorhang* *Verschiedene Muster* *Wasserabweisend beschichtet* *Größe 180x200cm*

| BASISVERSION | | | |
|---|---|---|---|
| **Stabilität: Doppelt vernähter unterer Rand**<br>**Unbegrenzte Verfügbarkeit**<br>**9,07 €** | **Stabilität: Doppelt vernähter unterer Rand**<br>**Limitiert auf 1000 Stück.**<br>**Sie besitzen Nr. 462**<br>**9,52 €** | **Stabilität: Eingenähtes Gummiband**<br>**Limitiert auf 1000 Stück.**<br>**Sie besitzen Nr. 462**<br>**10,00 €** | |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines der oben genannten Produkte geplant. Für welches würden Sie sich entscheiden? | | | |
| | ○ | ○ | ○ |

| Ich . . . | . . . stimme VOLL zu | . . .stimme eher zu | . . .bin unentschlossen | . . . stimme eher nicht zu | . . .stimme NICHT zu |
|---|---|---|---|---|---|
| Das Produkt wird häufig so genutzt, dass es von vielen anderen gesehen werden kann. | ○ | ○ | ○ | ○ | ○ |
| Das Produkt ist gut geeignet, um sich von anderen zu unterscheiden. | ○ | ○ | ○ | ○ | ○ |
| Der Besitz des Produktes wird von anderen Menschen anerkennend wahrgenommen. | ○ | ○ | ○ | ○ | ○ |
| Es ist unwahrscheinlich, dass andere Leute sehen, ob und wie das Produkt genutzt wird. | ○ | ○ | ○ | ○ | ○ |
| Das Produkt wird hauptsächlich wegen seines Nutzwertes gekauft. | ○ | ○ | ○ | ○ | ○ |
| Die verkaufte Menge des Produktes zu limitieren macht es attraktiver. | ○ | ○ | ○ | ○ | ○ |
| Das Produkt ist gut geeignet, um die Zugehörigkeit zu einer Gruppe zu zeigen. | ○ | ○ | ○ | ○ | ○ |
| Das Produkt könnte als protzig wahrgenommen werden. | ○ | ○ | ○ | ○ | ○ |

Meiner Meinung nach wird das Produkt von den meisten Kunden hauptsächlich gekauft aufgrund seines/seiner . . .

| | | | | | | |
|---|---|---|---|---|---|---|
| . . .praktischen Nutzens | | | | | | . . . Marke |
| . . .Haltbarkeit und Zuverlässigkeit | ○ | ○ | ○ | ○ | ○ | . . . Designs |
| . . .Leistung | | | | | | . . . Prestiges |

**WEITER AUF DER NÄCHSTEN SEITE**

Ihr Code
F02A90W

**DIE MEINUNGSUMFRAGE UNTER DER PRODUKTBESCHREIBUNG BITTE ZU ALLEN PRODUKTEN BEANTWORTEN!**

**Freitag F12 Dragnet Messenger Bag** *Obermaterial: LKW-Planen* *Verschiedene Farben* *Wasserabweisend & strapazierfähig* *Ausreichend Platz für 13" Notebook*

| BASISVERSION | | | |
|---|---|---|---|
| **Gesonderte Stiftaufbewahrung: Keine**<br>**Unbegrenzte Verfügbarkeit**<br>**9,48 €** | **Gesonderte Stiftaufbewahrung: Keine**<br>**Limitiert auf 1000 Stück.**<br>**Sie besitzen Nr. 1**<br>**9,95 €** | **Gesonderte Stiftaufbewahrung: Einschübe für drei Stifte aus Gummi**<br>**Limitiert auf 1000 Stück.**<br>**Sie besitzen Nr. 1**<br>**10,45 €** | |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines der oben genannten Produkte geplant. Für welches würden Sie sich entscheiden? | | | |
| | ○ | ○ | ○ |

| Ich . . . | . . . stimme VOLL zu | . . .stimme eher zu | . . .bin unentschlossen | . . . stimme eher nicht zu | . . .stimme NICHT zu |
|---|---|---|---|---|---|
| Das Produkt wird häufig so genutzt, dass es von vielen anderen gesehen werden kann. | ○ | ○ | ○ | ○ | ○ |
| Das Produkt ist gut geeignet, um sich von anderen zu unterscheiden. | ○ | ○ | ○ | ○ | ○ |
| Der Besitz des Produktes wird von anderen Menschen anerkennend wahrgenommen. | ○ | ○ | ○ | ○ | ○ |
| Es ist unwahrscheinlich, dass andere Leute sehen, ob und wie das Produkt genutzt wird. | ○ | ○ | ○ | ○ | ○ |
| Das Produkt wird hauptsächlich wegen seines Nutzwertes gekauft. | ○ | ○ | ○ | ○ | ○ |
| Die verkaufte Menge des Produktes zu limitieren macht es attraktiver. | ○ | ○ | ○ | ○ | ○ |
| Das Produkt ist gut geeignet, um die Zugehörigkeit zu einer Gruppe zu zeigen. | ○ | ○ | ○ | ○ | ○ |
| Das Produkt könnte als protzig wahrgenommen werden. | ○ | ○ | ○ | ○ | ○ |

Meiner Meinung nach wird das Produkt von den meisten Kunden hauptsächlich gekauft aufgrund seines/seiner . . .

| | | | | | | |
|---|---|---|---|---|---|---|
| . . .praktischen Nutzens | | | | | | . . . Marke |
| . . .Haltbarkeit und Zuverlässigkeit | ○ | ○ | ○ | ○ | ○ | . . . Designs |
| . . .Leistung | | | | | | . . . Prestiges |

**WEITER AUF DER NÄCHSTEN SEITE**

Ihr Code
F02A90W

**DIE MEINUNGSUMFRAGE UNTER DER PRODUKTBESCHREIBUNG BITTE ZU ALLEN PRODUKTEN BEANTWORTEN!**

**Logitech Wireless Mouse M317** *Gummierte Oberfläche* *Verschiedene Farben* *Ergonomisch geformt* *Ein Jahr Batterielebensdauer*

| BASISVERSION | | | |
|---|---|---|---|
| **Kabellose Reichweite: 5 Meter**<br>**Unbegrenzte Verfügbarkeit**<br>**9,07 €** | **Kabellose Reichweite: 5 Meter**<br>**Limitiert auf 1000 Stück.**<br>**Sie besitzen Nr. 462**<br>**9,52 €** | **Kabellose Reichweite: 7 Meter**<br>**Limitiert auf 1000 Stück.**<br>**Sie besitzen Nr. 462**<br>**10,00 €** | |
| Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines der oben genannten Produkte geplant. Für welches würden Sie sich entscheiden? | | | |
| | ○ | ○ | ○ |

| Ich . . . | . . . stimme VOLL zu | . . .stimme eher zu | . . .bin unentschlossen | . . . stimme eher nicht zu | . . .stimme NICHT zu |
|---|---|---|---|---|---|
| Das Produkt wird häufig so genutzt, dass es von vielen anderen gesehen werden kann. | ○ | ○ | ○ | ○ | ○ |
| Das Produkt ist gut geeignet, um sich von anderen zu unterscheiden. | ○ | ○ | ○ | ○ | ○ |
| Der Besitz des Produktes wird von anderen Menschen anerkennend wahrgenommen. | ○ | ○ | ○ | ○ | ○ |
| Es ist unwahrscheinlich, dass andere Leute sehen, ob und wie das Produkt genutzt wird. | ○ | ○ | ○ | ○ | ○ |
| Das Produkt wird hauptsächlich wegen seines Nutzwertes gekauft. | ○ | ○ | ○ | ○ | ○ |
| Die verkaufte Menge des Produktes zu limitieren macht es attraktiver. | ○ | ○ | ○ | ○ | ○ |
| Das Produkt ist gut geeignet, um die Zugehörigkeit zu einer Gruppe zu zeigen. | ○ | ○ | ○ | ○ | ○ |
| Das Produkt könnte als protzig wahrgenommen werden. | ○ | ○ | ○ | ○ | ○ |

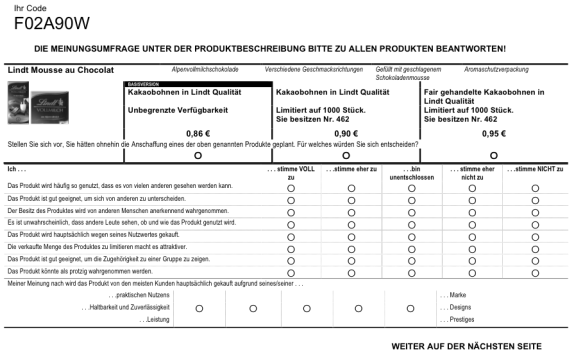
Meiner Meinung nach wird das Produkt von den meisten Kunden hauptsächlich gekauft aufgrund seines/seiner . . .

| | | | | | | |
|---|---|---|---|---|---|---|
| . . .praktischen Nutzens | | | | | | . . . Marke |
| . . .Haltbarkeit und Zuverlässigkeit | ○ | ○ | ○ | ○ | ○ | . . . Designs |
| . . .Leistung | | | | | | . . . Prestiges |

**WEITER AUF DER NÄCHSTEN SEITE**

# Appendix II-9:

## 7W questionnaire – Week 7 (including TR-/TL-part for FR sample) part 2/2



Ihr Code
F02A90W

**DIE MEINUNGSUMFRAGE UNTER DER PRODUKTBESCHREIBUNG BITTE ZU ALLEN PRODUKTEN BEANTWORTEN!**

**Lindt Mousse au Chocolat** — *Alpenvollmilchschokolade; Verschiedene Geschmacksrichtungen; Gefüllt mit geschlagenem Schokoladenmousse; Aromaschutzverpackung*

| DARSTELLUNG | | |
|---|---|---|
| **Kakaobohnen in Lindt Qualität**<br>**Unbegrenzte Verfügbarkeit**<br>**0,86 €** | **Kakaobohnen in Lindt Qualität**<br>**Limitiert auf 1000 Stück.**<br>**Sie besitzen Nr. 462**<br>**0,90 €** | **Fair gehandelte Kakaobohnen in Lindt Qualität**<br>**Limitiert auf 1000 Stück.**<br>**Sie besitzen Nr. 462**<br>**0,95 €** |
| O | O | O |

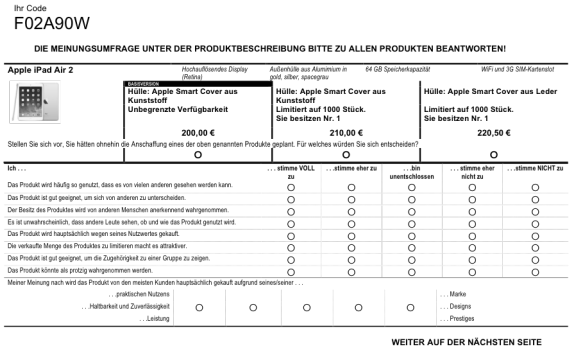
Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines der oben genannten Produkte geplant. Für welches würden Sie sich entscheiden?

| Ich … | … stimme VOLL zu | … stimme eher zu | … bin unentschlossen | … stimme eher nicht zu | … stimme NICHT zu |
|---|---|---|---|---|---|
| Das Produkt wird häufig so genutzt, dass es von vielen anderen gesehen werden kann. | O | O | O | O | O |
| Das Produkt ist gut geeignet, um sich von anderen zu unterscheiden. | O | O | O | O | O |
| Der Besitz des Produktes wird von anderen Menschen anerkennend wahrgenommen. | O | O | O | O | O |
| Es ist unwahrscheinlich, dass andere Leute sehen, ob und wie das Produkt genutzt wird. | O | O | O | O | O |
| Das Produkt wird hauptsächlich wegen seines Nutzwertes gekauft. | O | O | O | O | O |
| Die verkaufte Menge des Produktes zu limitieren macht es attraktiver. | O | O | O | O | O |
| Das Produkt ist gut geeignet, um die Zugehörigkeit zu einer Gruppe zu zeigen. | O | O | O | O | O |
| Das Produkt könnte als protzig wahrgenommen werden. | O | O | O | O | O |

Meiner Meinung nach wird das Produkt von den meisten Kunden hauptsächlich gekauft aufgrund seines/seiner …

| | | | | | | |
|---|---|---|---|---|---|---|
| … praktischen Nutzens | | | | | | … Marke |
| … Haltbarkeit und Zuverlässigkeit | O | O | O | O | O | … Designs |
| … Leistung | | | | | | … Prestiges |

**WEITER AUF DER NÄCHSTEN SEITE**



Ihr Code
F02A90W

**DIE MEINUNGSUMFRAGE UNTER DER PRODUKTBESCHREIBUNG BITTE ZU ALLEN PRODUKTEN BEANTWORTEN!**

**Apple iPad Air 2** — *Hochauflösendes Display (Retina); Außenhülle aus Aluminium in gold, silber, spacegrau; 64 GB Speicherkapazität; WiFi und 3G SIM-Kartenslot*

| DARSTELLUNG | | |
|---|---|---|
| **Hülle: Apple Smart Cover aus Kunststoff**<br>**Unbegrenzte Verfügbarkeit**<br>**200,00 €** | **Hülle: Apple Smart Cover aus Kunststoff**<br>**Limitiert auf 1000 Stück.**<br>**Sie besitzen Nr. 1**<br>**210,00 €** | **Hülle: Apple Smart Cover aus Leder**<br>**Limitiert auf 1000 Stück.**<br>**Sie besitzen Nr. 1**<br>**220,50 €** |
| O | O | O |

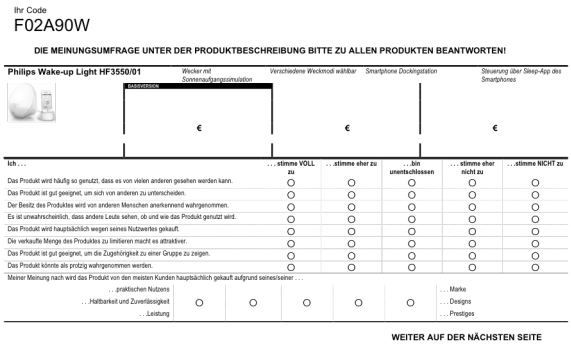
Stellen Sie sich vor, Sie hätten ohnehin die Anschaffung eines der oben genannten Produkte geplant. Für welches würden Sie sich entscheiden?

| Ich … | … stimme VOLL zu | … stimme eher zu | … bin unentschlossen | … stimme eher nicht zu | … stimme NICHT zu |
|---|---|---|---|---|---|
| Das Produkt wird häufig so genutzt, dass es von vielen anderen gesehen werden kann. | O | O | O | O | O |
| Das Produkt ist gut geeignet, um sich von anderen zu unterscheiden. | O | O | O | O | O |
| Der Besitz des Produktes wird von anderen Menschen anerkennend wahrgenommen. | O | O | O | O | O |
| Es ist unwahrscheinlich, dass andere Leute sehen, ob und wie das Produkt genutzt wird. | O | O | O | O | O |
| Das Produkt wird hauptsächlich wegen seines Nutzwertes gekauft. | O | O | O | O | O |
| Die verkaufte Menge des Produktes zu limitieren macht es attraktiver. | O | O | O | O | O |
| Das Produkt ist gut geeignet, um die Zugehörigkeit zu einer Gruppe zu zeigen. | O | O | O | O | O |
| Das Produkt könnte als protzig wahrgenommen werden. | O | O | O | O | O |

Meiner Meinung nach wird das Produkt von den meisten Kunden hauptsächlich gekauft aufgrund seines/seiner …

| | | | | | | |
|---|---|---|---|---|---|---|
| … praktischen Nutzens | | | | | | … Marke |
| … Haltbarkeit und Zuverlässigkeit | O | O | O | O | O | … Designs |
| … Leistung | | | | | | … Prestiges |

**WEITER AUF DER NÄCHSTEN SEITE**



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**DIE MEINUNGSUMFRAGE UNTER DER PRODUKTBESCHREIBUNG BITTE ZU ALLEN PRODUKTEN BEANTWORTEN!**

**Philips Wake-up Light HF3550/01** — *Wecker mit Sonnenaufgangssimulation; Verschiedene Weckmodi wählbar; Smartphone Dockingstation; Steuerung über Sleep-App des Smartphones*

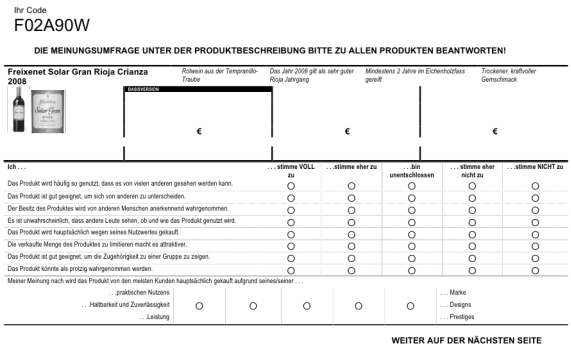
| DARSTELLUNG | | | |
|---|---|---|---|
| € | € | € | |

| Ich … | … stimme VOLL zu | … stimme eher zu | … bin unentschlossen | … stimme eher nicht zu | … stimme NICHT zu |
|---|---|---|---|---|---|
| Das Produkt wird häufig so genutzt, dass es von vielen anderen gesehen werden kann. | O | O | O | O | O |
| Das Produkt ist gut geeignet, um sich von anderen zu unterscheiden. | O | O | O | O | O |
| Der Besitz des Produktes wird von anderen Menschen anerkennend wahrgenommen. | O | O | O | O | O |
| Es ist unwahrscheinlich, dass andere Leute sehen, ob und wie das Produkt genutzt wird. | O | O | O | O | O |
| Das Produkt wird hauptsächlich wegen seines Nutzwertes gekauft. | O | O | O | O | O |
| Die verkaufte Menge des Produktes zu limitieren macht es attraktiver. | O | O | O | O | O |
| Das Produkt ist gut geeignet, um die Zugehörigkeit zu einer Gruppe zu zeigen. | O | O | O | O | O |
| Das Produkt könnte als protzig wahrgenommen werden. | O | O | O | O | O |

Meiner Meinung nach wird das Produkt von den meisten Kunden hauptsächlich gekauft aufgrund seines/seiner …

| | | | | | | |
|---|---|---|---|---|---|---|
| … praktischen Nutzens | | | | | | … Marke |
| … Haltbarkeit und Zuverlässigkeit | O | O | O | O | O | … Designs |
| … Leistung | | | | | | … Prestiges |

**WEITER AUF DER NÄCHSTEN SEITE**



Ihr Code
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**DIE MEINUNGSUMFRAGE UNTER DER PRODUKTBESCHREIBUNG BITTE ZU ALLEN PRODUKTEN BEANTWORTEN!**

**Freixenet Solar Gran Rioja Crianza 2008** — *Rotwein aus der Tempranillo-Traube; Das Jahr 2008 gilt als sehr guter Rioja Jahrgang; Mindestens 2 Jahre im Eichenholzfass gereift; Trockener, kraftvoller Geschmack*

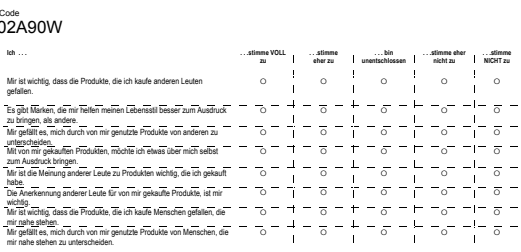
| DARSTELLUNG | | |
|---|---|---|
| € | € | € |

| Ich … | … stimme VOLL zu | … stimme eher zu | … bin unentschlossen | … stimme eher nicht zu | … stimme NICHT zu |
|---|---|---|---|---|---|
| Das Produkt wird häufig so genutzt, dass es von vielen anderen gesehen werden kann. | O | O | O | O | O |
| Das Produkt ist gut geeignet, um sich von anderen zu unterscheiden. | O | O | O | O | O |
| Der Besitz des Produktes wird von anderen Menschen anerkennend wahrgenommen. | O | O | O | O | O |
| Es ist unwahrscheinlich, dass andere Leute sehen, ob und wie das Produkt genutzt wird. | O | O | O | O | O |
| Das Produkt wird hauptsächlich wegen seines Nutzwertes gekauft. | O | O | O | O | O |
| Die verkaufte Menge des Produktes zu limitieren macht es attraktiver. | O | O | O | O | O |
| Das Produkt ist gut geeignet, um die Zugehörigkeit zu einer Gruppe zu zeigen. | O | O | O | O | O |
| Das Produkt könnte als protzig wahrgenommen werden. | O | O | O | O | O |

Meiner Meinung nach wird das Produkt von den meisten Kunden hauptsächlich gekauft aufgrund seines/seiner …

| | | | | | | |
|---|---|---|---|---|---|---|
| … praktischen Nutzens | | | | | | … Marke |
| … Haltbarkeit und Zuverlässigkeit | O | O | O | O | O | … Designs |
| … Leistung | | | | | | … Prestiges |

**WEITER AUF DER NÄCHSTEN SEITE**



Ihr Code
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| Ich … | … stimme VOLL zu | … stimme eher zu | … bin unentschlossen | … stimme eher nicht zu | … stimme NICHT zu |
|---|---|---|---|---|---|
| Mir ist wichtig, dass die Produkte, die ich kaufe anderen Leuten gefallen. | O | O | O | O | O |
| Es gibt Marken, die mir helfen meinen Lebensstil besser zum Ausdruck zu bringen, als andere. | O | O | O | O | O |
| Mir gefällt es, mich durch von mir genutzte Produkte von anderen zu unterscheiden. | O | O | O | O | O |
| Mit von mir gekauften Produkten, möchte ich etwas über mich selbst zum Ausdruck bringen. | O | O | O | O | O |
| Mir ist die Meinung anderer Leute zu Produkten wichtig, die ich gekauft habe. | O | O | O | O | O |
| Die Anerkennung anderer Leute für von mir gekaufte Produkte, ist mir wichtig. | O | O | O | O | O |
| Mir ist wichtig, dass die Produkte, die ich kaufe Menschen gefallen, die mir nahe stehen. | O | O | O | O | O |
| Mir gefällt es, mich durch von mir genutzte Produkte von Menschen, die mir nahe stehen zu unterscheiden. | O | O | O | O | O |

**VIELEN DANK FÜR IHRE TEILNAHME. SIE HABEN UNS SEHR GEHOLFEN.**
**EIN KLEINES DANKESCHÖN FINDEN SIE AUF DER ERSTEN SEITE IHRES FRAGEBOGENS, OBEN RECHTS**

Part V

# V. Summary and conclusion

## V.-1 Summary

Although, Brock (1968, pp. 243) posited scarcity may have implications for both attitude and value change, implications about the latter remained meagre, at least if compared to those about the former. This state of research got preserved even though changes in consumers' valuations of goods usually translate into changes in willingness to pay which in turn positively affect revenues and profits. Szybillo's (1973, pp. 36) results of a lack of generalisable interaction between price and scarcity may have assured this position. Assumptions such as those made by Lynn (1989, pp. 269), that scarcity and price effect may replace one another, might have further strengthened beliefs. This work was aimed to revitalise discussion about a willingness to pay for scarcity and scarcity messages promoted in proximity to price information.

To tackle these problems, the state of research has been reviewed in **Part II**. The scope of research has been kept as wide as possible including a broad range of scarcity messages. Demand and supply side scarcity messages have hence been discussed as well as restrictions on sales duration and sales quantity. As especially supply-side quantity restricted goods are used for status games, the role of conspicuous consumption was focussed. Both striving for status ascent and conspicuousness of goods are also among the most important preconditions for reference group effects. These effects arise, when at least two different consumer segments make diametrically opposed utility judgements based on the number of individuals who already own a particular, mostly conspicuous, good. Reference group effects can be assumed to play a role in most conspicuous purchase settings. Adding supply side scarcity messages changes consumers' conduct and their willingness to pay, if reference group effects are sufficiently strong. According to Amaldoss and Jain (2010, pp. 630), especially Limited-Editions are among the very few strategies to translate reference group effects into higher profits for the supplier. With these experimental results in mind, special emphasis was placed on the definition of status and susceptibility of prevalent variables of market segmentation and their role in status games. Based on this knowledge, the scope has been narrowed to Limited-Editions and their two main variables, namely quantity and price.

In the **following part (III)**, willingness to pay (WTP) for scarcity and scarcity promotions in proximity of price information were discussed. It was hypothesised that scarce products sell at price premiums, enhancements of scarcity messages may further increase WTP and improvement offers in general such as differing Limited-Edition-offers and minor changes in the physical product may mitigate mark-downs in the course of a product's life cycle. To test hypotheses, scarcity messages were put in a commercial setting. A stated preference choice game was designed, in which product changes were spread along a minimum period of seven weeks in order to simulate obsolescence along product life cycle. Products offered were differentiated along price level, degree of conspicuousness and whether being a consumable or a durable. Participants defined their individual price level for each product in the first two weeks and prices got varied in multiples of 5% in the following weeks, so that comparison took place on the base of relative price changes only. Anovas have been used to elicit general WTP, while propensity to improve feature or Limited-Edition choice has been elicited using linear regressions and choice graphs. Results from linear regression formed the base for price pattern analysis along product life cycle, while Cox regressions and Kaplan-Meier curves fortified results.

As the review resulted in a myriad of research results dealing with attitude changes induced by scarcity, a framework was constructed to retrieve, if these attitude changes remain stable under commercial framing. For that purpose, the stated preference choice game designed for part III was extended in **part IV**. Questionnaires added included general inferences made from scarce products, participants' affinity to status and lifestyle expression through means of consumption and participants' opinion on the match between the products offered and these products' capabilities to aid them in status gaming. Among the general inferences were for example quality and price, but also buying frenzy-triggering as a consequence of scarcity messages. Lifestyle expressions through means of consumption included participants' general affinity for conspicuous consumption as well as their position on the differentiation vs. assimilation continuum. Matching of product purchases with status gaming was retrieved likewise with general conspicuousness judgements as base level and suitability for either assimilation or differentiation as the specific characteristic. Binary logit regression models have been used to elicit attitude changes subject to Limited-Edition offers.

# V.-2 Conclusion

In part II, it was shown that there is a wealth of research especially on consumers' changes in their attitudes towards goods subject to restrictions on their availability. In particular, conspicuous products were found by various researchers to aid individuals in reaching their status goals through means of consumption. This conduct can be observed, regardless, if life goals were truly achieved or the consumers seek to create the impression of successful goal achievement. Ironically, one striking outcome of part II is a lack in the definition of status. Surely, monetary resources are needed to live up to higher standards and most likely these resources will originate from income changes, which suggests a socioeconomic definition. Veblen's idea of conspicuous consumption provides the foundation for consumption-based status games, namely somebody of lower status mimics consumption patterns of a higher status individual. However, to turn this foundation into commercial success, decision makers need to know which products are suitable to reach a critical mass of opinion leaders, who then encourage followers' purchases.

The flip side of the income medal is, thus, the creation of customer value, which is pivotal to turn mostly conspicuous scarce goods into commercial success. Utility assumptions for a conspicuous good in turn largely rely on intragroup judgements on that good's signalling value. Thus, it was proposed in part II, that deeper social interactions between individuals are needed to make inferences on the status improving function awarded by a group's opinion leaders to a particular good or brand. This implicates the grasp for peer group behaviour, rather than an explanation at the conglomerate level such as social classes. Status definition, thus, needs to be at least extended by aspects from sociometric status. Part IV has confirmed this assumption especially for goods of conspicuous consumption, as brands were very carefully selected by individuals for their capabilities to express lifestyles. Fragmentation of lifestyles within middle class with lifestyle-based status structures within and between peer groups represent a sophisticated and well-defined set of tastes to select from. As a consequence, there is a broad diversity of subcultures and lifestyles which provide individualisation and belongingness accessible at relatively straightforward effort on the one hand while upper class lifestyles become comparatively difficult to access on the other. This combination transforms the above-mentioned foundations of Veblen's theory to subcultures and lifestyles within a stratum, but makes traditional class ascent increasingly obsolete. In part IV, this finds support in the bisection of usage motives for the affiliation-oriented conspicuous product, as motives of choice were closely related to the time elapsed since life goal achievement. At the same time, this example reflects the declining stability of status structures within and

between subcultures. In part II, this context was proposed as the steady interplay of conformity and snobbism, originating in the fact, that individuals are partly obliged to change peer groups by job changes and partly actively change peer groups for status reasons.

Initial point of this research, was the lack of truly commercially framed studies on the sales of scarce goods, representing one of part II's most striking outcomes. Namely, it was unknown, if a scarce good sells at a higher price than the same good absent scarcity message and, if scarcity messages can be promoted in the proximity to price information. Part III has shown that there is a willingness to pay for scarcity. Somewhat surprising customers' higher valuation is not necessarily limited to conspicuous goods. However, part IV has shown that WTP for scarcity is considerably higher for conspicuous goods, than for primarily usage value-oriented ones. Moreover, WTP for scarcity declines the more a good's valuation depends on its usage value leading to negative WTP for scarcity in case of a pure commodity. This effect was expected, as there is for example no reason why consumers should even spend additional money on branded goods in that category, as product quality and, thus, value is exogenous. With pure commodities being the sole category of conflict between scarcity message and price information, it can also be said that scarcity messages can be promoted as an important value generating aspect of a good in proximity to its price.

Based on findings from literature in part II, it was proposed that Limited-Editions may represent the most credible form of scarcity message, given the finite unit count is properly promoted before sales commence and each good is visibly serial numbered. Part III showed, that increases in WTP for serial number personalisation and further restrictions on the unit count, especially for conspicuous Limited-Editions, confirm this rather tight definition of Limited-Editions. Part IV additionally lends support to the assumption, that especially snobs utilise scarcity messages for means of differentiation and are thus willing to spend additional money. The finite unit count, thus, seems a mandatory statement regardless of the consumer segment as it assures snobs of a low number of co-owners, while conformists can deem themselves being a part of coterie. Serial numbered goods on the other hand cater exclusively to snobs, in a sense of owning one's personal piece of a series. Another proposition from part II is the role of costly features, which were assumed to differentiate Limited-Editions from regular products. This is particularly true for conspicuous goods, as consumers seem to be unwilling to pay more for the feature alone, but for features exclusively reserved to Limited-Edition products. For goods with a low signalling value proportion of total utility, features are relatively more important to justify price premiums. Value increases by features in conjunction with WTP increases for different specifications of Limited-Editions show, that the notion of

variable prices is only supported insofar, that regardless of product consumers only accept well justified price variations.

Selling Limited-Editions of mass market products, was identified as a special challenge to suppliers. Levels of planned excess demand are assumed to be high in order to create credible scarcity signals, which in turn imply high opportunity cost, which need to be apportioned to the remaining units of the Limited-Edition. Feasible Limited-Edition strategies were, thus, assumed to be restricted to introductory scarcity or a small batch sub-series of regular products differentiated by additional features, if higher revenues are targeted. In part III, it was shown, that supply restrictions are not limited to introductory scarcity. Participants were also willing to pay more for last of the line combinations of feature and scarcity message. Regarding features, empirical analysis (III & IV) has shown, that usage value-oriented features are preferred to signalling value-supporting features, the cheaper the products are and the lower the signalling value proportion of their total utility is. However, especially for cheap low involvement products, the specific change in the product seems to play a subordinate role: seeking for variety, consumers seem to almost randomly opt for any kind of difference from what was formerly bought or what others bought. As long as not being used abundantly as a sales tool, Limited-Editions can, thus, prevent customer drain towards competitor brands of consumers in search of variety. If commercial success is not defined as immediate commercial success originating in higher revenues from the scarce product, but more in the sense of long term revenue increases from altered brand perception and positioning, Limited-Editions can be used for brand maintenance regardless, if conspicuous or non-conspicuous goods are sold. Increased quality inferences more or less related to scarcity, were found across product categories in part IV.

Results from part III support the notion, that scarcity strategies should be an important component of promotional standards tool box, especially when compared to tools implying revenue sacrifices such as price promotions. In terms of promotions, it was also assumed that many scarce goods display better sales performance compared to their non-scarce siblings based on the time component of scarcity. Although, supply side scarcity messages such as *'As long as stock lasts'* primarily point to a limited quantity being available, the pace of stock running out may be consumers' primary concern especially for non-conspicuous mass items. The antipodal force for many products is often the product life cycle and, hence, it is obsolescence which forces suppliers to lower prices as a function of time on offer. In part III it was shown, that Limited-Editions were able to fully offset these mark-down effects for conspicuous products and to provide significant mark-down mitigation for non-conspicuous products. The

impossibility of especially conspicuous brands and products to carry the same meaning to any interested customer has been discussed in terms of lifestyle fragmentation in part II. The lack of credibility in terms of Limited-Edition offers for the affiliation-oriented conspicuous good in part IV does not only confirm that being special and selling to the masses are antipodal. It also shows, that Limited-Editions of conspicuous products are anything but a promotional caprice – which calls for a consistent scarcity strategy – while the Limited-Edition sales success of the cheapest low involvement good reflect Limited-Editions may be nothing but a promotional caprice.

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Mainz, den 30. Mai 2018

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**Philipp Reis (Dipl.-Hdl.)**