STATUS QUO BIAS
AS A DETERMINANT OF CUSTOMERS' RETENTION

MASTER THESIS

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Abstract

Despite the fact that people are subjects to bounded rationality and cognitive misperceptions while making decision if to stay with the current provider or to switch, status quo bias has received little to no attention in marketing literature. The aim of this thesis is to examine status quo bias as a determinant of customers' retention and thus to reduce the gap between theoretical findings and the way people behave in reality. This is done by examining two hypotheses: 1) "pure" (stemming from cognitive misperceptions solely) status quo bias positively affects customers' retention; 2) "pure" status quo bias positively affects attitudinal loyalty, which is a crucial factor of retention.

Results of the carried out experiment among 200 university students have shown that respondents are indeed more likely to choose a particular provider when it is marked as the status quo, confirming the first hypothesis. They also tend to have higher attitude towards this provider and be more eager to recommend it to their friends; however, no significant difference in (affective) commitment towards the provider between treatment and control groups is found, meaning that the second hypothesis is partly confirmed.

Preface

The last sentences to write are always the hardest ones as you have the very last chance to thank everyone for their enormous help during this year and you really do not want to screw it up.

The biggest thank you goes to Han Bleichrodt, a person with phenomenal knowledge and experience, who is always ready to find a timeslot for you in his tight schedule and give an insight you would have never reached yourself.

I am sincerely thanking all the people, without whom I would have studied elsewhere and missed a great opportunity to grasp behavioural insights. I am thanking you for starting a wonderful master programme and carrying it out at the highest level throughout the year: Kirsten Rhode for excellent programme coordination, Aurélien Baillon and Han Bleichrodt (I do not think you mind the repetition) for a really thought-provoking seminar, Jan Stoop for his energy and enthusiasm, Julia Müller for coordinating thesis writing process and everyone else responsible for the Behavioural Economics I did not have a chance to meet.

Additional great thanks goes to my home university the Higher School of Economics, Perm, Russia, and its excellent professors for teaching me all the necessary skills for problem-solving and, what is more important, sparking to deeply study and understand people, customers and drivers of their motivation.

Finally, I am grateful to all the new people and friends I found here, who dragged me out of the computer screen and made every day the best day of my life. Even if it was raining. And it has been raining a lot. Without you I would not have enjoined that great year, would not have received all the pleasant memories that make me smile and would not have got something that is the most valuable and precious, though intangible, people who understand you and support you with no conditions.

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Introduction

Customer retention rates are receiving increasing attention from academic market researchers as one of the most important metrics in customer relationship management (Reinartz and Kumar, 2002). During the periods of mostly incremental changes in stable tenured industries ability to minimize the number of defected clients is becoming crucial (Benner and Tushman, 2003). Bain (1996) indicated that reducing defection rates by 5% boost profits, depending on industry, from 25% to 85%; Reichheld (1996) showed, that customers become not only significantly more profitable over time, but they are as well likely to bring new clients to the company, boosting its revenues even higher.

In order to retain customers more effectively, companies must understand its clients, as well as forces driving them to stay with the current provider and not to switch. Several studies have considered the impact of customer relationship management tools and metrics on retention rates, varying from measuring satisfaction levels to returns on loyalty programs) (e.g. Bolton et al., 2000; Verhoef, 2003). One of the most important factors is shown to be customer behaviour in the previous periods (Rust et al., 2000). People naturally tend to have higher probabilities of purchasing the product they have purchased before, meaning that previous behavioural loyalty induces future loyalty and retention (Dube et al., 2010).

Such persistence is called inertia in the marketing literature and has been used for a long time in econometric models to measure attitudes towards brand and/or supplier, derive subjective utility from consumption and predict future behaviour. Due to inertia customers often reject objectively superior brands and products (in terms of attributes), preferring inferior, but familiar ones over them (Boonen, Schut, Donkers, 2009). This is what makes the phenomena of particular importance and interest. This way of decision-making might be indeed rational if switching (transaction) costs are involved: either tangible, e.g. loss of money, time etc. when switching (Neipp and Zeckhauser, 1985), or intangible, e.g. need to build new relationships, loss of a special bond with current provider, etc. (Stombom et al., 2002). However, contrary to rational choice model of behaviour, even with absence of switching costs people tend to stick

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to the status quo (Samuelson and Zeckhauser, 1988). Such irrational preference for the current state of affairs has received a name of status quo bias and stems from a number of cognitive misperceptions. Status quo bias is fuller and richer than inertia, as it takes into account bounded rationality of economic agents, that rational for inertia omits. Cognitive misperceptions have received little attention, if any, in the literature as a determinant of customer retention.

Thus, the aim of this thesis is to explain, how status quo bias affects customer retention, with particular attention on cognitive misperceptions as its component.

 The paper is structured as follows: Chapter 1 gives an overview of relevant literature; chapter 2 states the hypotheses examined; chapter 3 describes the experiment, carried out to determine presence of status quo bias in decision-making of switching; chapter 4 presents the results; chapter 5 comprises discussion, limitations, applications and concludes.

Chapter 1. Literature overview

In this chapter theoretical findings are discussed about the very issue of retention, its importance and factors of retention with emphasis on switching costs, inertia and (attitudinal) loyalty as key elements of the paper; the concept of "status quo bias" is discussed, its nature and determinants are introduced.

Retention

Retention rate is a ratio of retained customers to the number of people in the customer base. If retention rate, for instance, is 80%, out of 100 newly acquired clients only 80 will continue relationship with a particular firm in a year. In this case a customer would stay with a company on average for 5 years. If retention rate is 10% higher, expected cooperation duration doubles, meaning much higher profits, market share and market capitalization of the company. This is why retention rates are of crucial attention today.

Another important factor is that tenured customers are less likely to defect than newly acquired ones. There are two explanations for this: on the one hand, customers become more loyal, as they get used to services provided, receive a special bond with brand or stay longer due to network externalities; on the other hand, those who are not satisfied with product have already left, making a sort of natural selection (Kumar, 2009).

More tenured customers are not only more likely to stay, but also they are more profitable. This is explained due to 5 major factors. Firstly, once customers understand the trustworthiness of the company, they are prone to purchase either more goods, or upscale goods from the same brand, or purchase supplementary goods. Secondly, they are subject to reduced operating costs. For example, one is more likely to call a service centre for proper installation advice right after printer purchase, than after 3 years of usage. Thirdly, as far as trust and satisfaction level grow, people are more likely to recommend the company to friends and acquaintances, meaning acquisition of a new client with very little costs. Moreover, more tenured customers are eager to pay price premiums. Finally, reducing defection rates means reduction of acquisition costs to

maintain the same size of customer base. In service industries, like auto insurance, where acquisition costs are about $250, this can boost profits dramatically (Reichheld, 1996).

When analyzing retention rates one has to keep in mind that the "lost for good" case, assuming the customer leaving the company never comes back, does not hold most of the time in real life. More often clients "migrate" between competitors (like going to McDonald's the one day and to Burger King the other) or giving different suppliers share of spending (for example, to reduce risks). To take this into account it is reasonable to use Markov chains for analysis (Pfeiffer and Carraway, 2000); however, this is out of scope of this paper.

Now that the importance of retention is clear, we can proceed to its determinants.

The relationship marketing literature emphasizes three key dimensions driving retention rates: satisfaction level, affective commitment and calculative commitment (Gustaffson et al. 2005). The latter two issues are created through attitudinal loyalty and switching costs and are discussed later.

Satisfaction is defined as "a person's feeling of pleasure or disappointment from comparing a product's perceived performance relative to his or her expectations" [Kotler, 2000]. Note that satisfaction is related to a specific subjective reference point, and thus disconfirmation strongly affects satisfaction than confirmation due to loss-aversion, regret avoidance and anchoring (Kahneman et al., 1991). Satisfaction levels for the same product or provider vary within customers and depend on specific individual preferences.

Since actors maximize their subjective utility derived from consumption, satisfaction positively affects customers' retention, as was empirically proved by several researchers (e.g. Bolton et al. 2000). The issue, however, is not that simple. First of all, the relationship is nonlinear but inverted S-shaped (Anderson and Mittal, 2000). It means that most of the customers do not change their behaviour with slight increase or decrease of product quality; they become "advocates" of the company, spreading positive word-of-mouth, only when the quality and/or subjective satisfaction levels are

really high; on the other hand, they defect when they are indeed dissatisfied with current provider. Second of all, high satisfaction levels do not necessarily imply actual loyalty, as well as low satisfaction does not mean that the customer will defect. In the former case the reason might be in variety-seeking behaviour (Bawa, 1990). Even if a customer is satisfied with a product, but consumes it too much or too often, he might become satiated and bored and switch to competitor. The issue mostly arises in routine consumption cases, like grocery shopping. Variety-seeking behaviour is uncommon among complex and important issues, though, like choosing health-care plan, pension provider or purchasing a car. On the other hand, when the customer is dissatisfied, he still might continue relationship with the company if high transition costs are a strong obstacle to switch. Also other small issues arisen, like sociodemographics, product usage, relationship age etc. might mediate the satisfaction-retention link (Bolton, 1998).

Since satisfaction levels alone cannot explain retention and thus might lead to unreliable results, one has to understand the difference between behavioural loyalty, meaning simple repeat purchase, and attitudinal loyalty, meaning high attitude and affective commitment towards the company.

Behavioural and attitudinal loyalty

Behavioural loyalty represents a simple act of repeat purchase, which happened either in the past or is likely to be made in the future (Raju et al. 1990). When marketers talk about behavioural loyalty only, they do not look into the underlying drivers of customer behaviour, how he values the product, to what extent he is satisfied and would he switch if he had a chance. In many cases it might indeed be beneficial, if for example carrying out a whole-range marketing research is too expensive, or customer is subject to so high switching costs that he is unlikely to change provider, or simply because of lack of competitors. Consider a case of electricity consumption by households. Customers do not choose a different provider at every purchase decision, nor do they re-evaluate their satisfaction every time they switch the lights on; moreover, in many countries they do not even have a choice of provider or changing the provider means a lot of paperwork that requires more resources than bring

benefits. In this case indeed thinking about satisfaction levels for profit-maximizing companies in many cases is counterproductive.

However, in an overwhelming majority of industries customer preferences, attitudes towards the product and commitment to repeat purchase play a significant role, as actors choose better attribute combinations to maximize their derived utility. Since behavioural loyalty is an outcome of a set of perceived value from consumption, it becomes impossible to successfully design and realize loyalty programs to increase behavioural loyalty without understanding of what customer needs and finds important (Benneth and Rundle-Thiele, 2002). That is why marketers should include attitudinal loyalty in their analysis, which covers the customers' attitudes towards purchase.

Since there is no official and accepted by all the researchers definition of attitudinal loyalty, as distinction of it from behavioural loyalty is a relatively new issue in academic literature, in this paper we adopt the definition given by Jacoby and Chestnut (1978), as the one used by many other researchers and the one most suited for purposes of the analysis.

Attitudinal loyalty is defined as follows: "the consumer's predisposition towards a brand as a function of psychological processes. This includes attitudinal preference and commitment towards the brand". Note that it is a single consumer's predisposition, meaning that attitudinal loyalty is a personality trait and the same product with the same attributes may be perceived differently by different customers, resulting in different behavioural loyalty and probability of repeat purchase.

Attitudinal loyalty itself may be fragmented into two components: attitudes and commitment towards the brand or the product. The former component is explained straightforwardly – the higher the attitude, the higher chances of future purchases, meaning higher retention. Attitudes also affect satisfaction levels of the customers, that is the very first determinant of retention discussed. The latter is undefined yet, despite its importance. Commitment is a degree of customer willingness to continue relationships with a partner (Moorman et al. 1992). Affective commitment stems from psychological attachment towards the partner, regardless of his attributes,

(Bhattacharya et al. 1995) and is positively connected to both satisfaction levels and retention rates (Verhoef, 2003). Eagerness to recommend the product to friends and acquaintances is considered an important factor of attitudinal loyalty and may be viewed as a proxy for attitudinal loyalty, as it comprises both attitudes and commitment towards the product (Kumar, 2009).

Focus on attitudinal loyalty in comparison with behavioural loyalty is especially crucial for profit-driven purposes. Attitudinal loyalty contributes to retaining customers more effectively, and tenured customers become more profitable over time. Such factors of their increasing profitability arise as positive network effects, word-of-mouth, cross-selling and tolerance to price premiums. If the customer, however, is "locked-in" within a particular company due to high switching costs and dissatisfied with product provided, he is unlikely to spread the word and advocate this company to friends, colleagues and acquaintances. More likely is that he spreads negative word-of-mouth, depriving the company of new potential clients. This is why focusing on behavioural loyalty and raising switching costs without paying attention to what customers actually feel may be harmful for the firm (Kumar, 2009). On the other hand, neither is the customer likely to purchase additional or upper-scale goods from the same provider. Thus, targeting attitudinal loyalty can help both increasing future purchase probability and quality of this purchase, giving the most satisfaction to the customer and getting the most in return.

Since attitudinal loyalty plays crucial role in customers' retention and is based on individual psychological perceptions, it may be a subject to cognitive biases, status quo bias in particular and this shall be explored later on. Before that the final major element of customers' retention, switching costs that constitute rational decision-making part of status quo bias, is discussed.

Switching costs and retention

Switching costs, or "the costs customers perceive to occur upon moving from one supplier to another" [Fornell, 1992], arise naturally within any industry, though with different magnitude. The problem with switching costs is that its presence results in a wide discrepancy between satisfaction level and retention rates, between attitudinal,

intended, loyalty and behavioral, actual, loyalty (J.D. Power and Associates, 2005). Thus, customers are dissatisfied with current provider but cannot change it for the more superior one. Impact of switching costs on satisfaction-retention relationship varies between industries: one must be really dissatisfied with the local telephone provider to change it, while switching airlines is much more likely to happen. If the switching costs are relaxed, though, the markets quickly get closer to intended equilibrium, as for example happens at the very 37th month in cellular industry with a 3-year contract, when clients defect right after the contract is over.

The academic literature distinguishes three major factors of switching costs presence: tangible procedural and financial factors and intangible relationship one (Buschken, 2004).

Procedural switching costs involve time and cognitive effort required for changing the current provider. When a customer does not know enough about alternatives, information is required to be gathered (searching costs) and analyzed (evaluation costs) in order to make the best decision (Dube et al. 2010). As customers gain more experience with a particular product, they spend less cognitive effort on learning purposes; if they choose competitors' product, the whole learning process starts all over again (learning costs). Finally, once the product is purchased, it needs to be installed and adjusted (setup costs).

Financial switching costs are associated with loss of financial quantifiable resources. This factor includes benefit and monetary losses. The former one arises with accumulated benefits perished, for example "miles" saved with airline carriers or other initiated loyalty programs. The latter constitutes direct payments required. Legal entry or exit barriers may also be included into this category.

Relationship switching costs are the ones needed to build new relationships of trust and respect with new provider and/or its employees. While procedural and financial costs are quantifiable and more or less the same between customers, the relationship ones are intangible and do significantly differ between customers due to psychological features.

The so called "network externalities" may also play a role in presence of switching costs. They appear when utility derived from consumption rises with increase in the amount of customers. Consequently, customers might stay with inferior provider because of anticipation of growth of its customers, like Toyota Prius users looking forward to electric cars infrastructure improvement due to increase in demand, or because switching means coordination problems appearance, like in case of QWERTY keyboard layout. Network externalities are especially likely to occur in technological markets.

One studying switching costs should as well take into account the reverse phenomenon – variety-seeking behavior, that is purchase of a product decreases chances of its purchase in the future (McAlister, 1982). The explanation mostly lies in satiation and boredom from consumption. People get tired over time of the same products and brands and tend to try something new, especially when it is a case of everyday non-crucial and affordable product-lines like chocolate bars. The relationship between familiarity of a product and probability of its purchase has a form of reverse parabola: with repeat purchases familiarity increases and learning costs go down, making the product more likely to be bought; at some point, however, satiation and novelty-seeking behavior overweigh, decreasing the likelihood (Bawa, 1990). Behavioral economics researchers are as well aware of this phenomenon and strive to examine the trade-off between variety-seeking behavior, stemming from satiation, and maintaining acquired habits (e.g. Baucells and Sarin, 2010).

Switching costs are a major factor of inertia, representing a positive relationship between past and future consumption behavior. Inertia is studied and discussed as a significant factor of both customer retention rates (Kekre et al. 1995, Boonen et al. 2009, Banerjee and Bandyopadhyay, 2003) and (attitudinal) loyalty (Jeuland, 1979, Verhoef 2003). Inertia is a separate factor of customer behavior and does not arise because of unobserved consumer differences not taken into account while modeling, as some of the researchers tend to argue (Dube et al. 2010).

Switching costs explain only rational decision-making fraction of current state of affairs preference. Consumers are assumed to be rational economic agents not switching to

the more superior provider, in terms of attributes, only because loss of a number of benefits does prevail over potential benefits. If switching costs are eliminated, objectively the best companies should get the most clients. However, due to bounded rationality and cognitive biases this conclusion might be wrong in real life. That is why investigation into psychological misperceptions is needed and status quo bias to be introduced to get the full understanding of consumer decision-making process and customers' retention rates.

Status quo bias

Researchers have found presence of status quo bias in cases free of "rational" switching costs, proving psychological factors to be involved in the process of decision-making. Knetsch (1989) in his experiment divided students into two groups and endowed each one with either a chocolate bar or a mug and then allowed exchange without any transaction costs. Since goods were assigned randomly, half of participants should have received the least valued item and exchange it for the more valuable to them. However, only 10% of participants were willing for exchange. In a similar experiment Kahneman, Knetsch and Thaler (1990) asked one group of participants about maximum price they would pay for a mug when they were not endowed with it and the other group about minimum price they were willing to pay to acquire the mug otherwise. The difference turned out to be about three-fold.

Thaler (1980) named such a discrepancy between willingness to pay and willingness to accept an endowment effect, meaning that people value things they have more than ones they do not. Endowment effect by definition is very close to status quo bias, when agents tend to disproportionally stick to the current state of affairs. Presence of status quo bias was as well found regarding hypothetical goods never owned by participants (Novemsky and Kahneman, 2005). The significance of experiments explained lies in absence of any switching costs: participants did not lose any money when switching, the time and cognitive effort required was minimal and not dependent on decision made, and there was no possibility to build strong relational bond with a particular mug or chocolate bar.

Results obtained in lab are consistent with a number of field experiments. Moreover, the effect of status quo bias in real life might loom even larger, than in the lab, as the latter always provides a set of explicit alternatives to doing nothing, while in reality the whole set of alternatives is not recognized or efficiently analyzed by people (Samuelson and Zeckhauser, 1988). People were found to behave differently based on default option when choosing health plan or retirement program (Samuelson and Zeckhauser, 1988), rights to sue (Insurance information institute, 1992), gift certificates (Sen and Johnson, 1997) etc. However, with field experiments it is up to impossible to eliminate all the transaction costs to measure psychological misperceptions solely; it is hard to distinguish whether a result is due to status quo bias or to strengthening of customers' relationships with a particular provider (Strombom et al. 2002).

Behaviour economists argue that agents derive utility mostly not from the final outcomes, but from its relative change from reference point (Camerer, 2000). Kahneman and Tversky (1979) demonstrated that individuals weigh losses more heavily than gains. Since the decision to do nothing is a reference point for people, potential losses from switching loom larger for them than potential gains from alternatives. This effect of loss aversion is considered to be the major cause of endowment effects and status quo bias (Thaler, 1980). Note that customers' perception might depend on framing effects, i.e. what is framed as losses and gains. Even in cases of no explicit framing of gains and losses, like choosing between automobile colour, people may reframe it in their minds, leading to default option choice. However, apart from loss aversion other factors in explaining status quo bias play a role.

 Due to the fact that customers are subjects to bounded rationality, a second cognitive misperception, anchoring, arises (Tversky and Kahneman, 1974). During decision-making economic agents rely too much on the first obtained information and adjust away from it while evaluating alternatives. However, these adjustments are generally insufficient. Anchoring is reinforced in carrying out complex and time-consuming decisions, since people are likely to undertake only partial analysis of alternatives.

Thirdly, in real life not all alternatives are explicitly presented and probabilities of outcomes are not given, but the information given is rather ambiguous, especially when dealing with complex goods. People tend to avoid uncertainty when possible (Kahneman, Tversky, 1979) and consequently might prefer the status quo ceteris paribus.

Sunk costs also might be a factor of status quo bias. The more the customer has invested is a particular alternative, the more reluctant he is to change his course of action even though it is inferior in terms of attributes (Brockner and Rubin 1982). This is done in order to justify the previous commitment and strongly connected with drive for consistency: economic agents do not want to admit suboptimal choice in the first place and try to find benefits of that decision and put a blind eye on disadvantages in order to avoid cognitive dissonance (Samuelson and Zeckhauser, 1988).

Moreover, individuals tend to avoid the situations in which there is a possibility to make a wrong choice. This is called regret avoidance: people feel more regret from making suboptimal decisions than from inaction, even if they both result the same outcomes (Kahneman and Tversky, 1982). Following similar logic, omission bias arises: people tend to blame themselves for making wrong decision, but the degree of blame is substantially less when the same consequences result from doing nothing (Baron and Ritov 1994). Since keeping default option requires no action, but changing it requires action, regret avoidance and omission bias are additional factors of status quo bias.

Finally, when people are faced with an important issue or the one likely to bring negative outcome, they are likely to postpone the decision-making. Sometimes this postponement can last for years, meaning that for all of these years status quo was preferred to alternative.

Degree of status quo bias is affected by a set of individual-specific and product-specific attributes. Meyerhoff and Liebe (2009) and Moon (2004) found that perceived task complexity and objective task complexity, respectively, intensify status quo bias. Indeed, when economic agents are afraid to make incorrect or suboptimal decisions, they might choose to do nothing. The fact that more alternatives provided lead to the

same results (Samuelson and Zeckhauser, 1988) follows the same line of reasoning. Moon (2004) also indicated that age and probability to stick to the current state of affairs are positively correlated. Finally, the longer duration of item ownership strengthens status quo bias as well (Strahilevitz and Loewenstein, 1998).

Now, when fundamental nature and factors of both status quo bias and retention are discussed, we switch to practical part of the paper in order to find out to what extent status quo bias affects customers' retention.

Chapter 2. Hypotheses examined

Inertia, stemming from switching costs, has been found a significant factor of customers' retention (e.g. Rust et al. 2000). However, even in cases of no switching costs involved, people still tend to disproportionally stick to the current state of affairs. The reason lies in psychological misperceptions while decision-making process. These psychological misperceptions constitute "pure" status quo bias, i.e. free of rational decision making components like switching costs, influence of which on customers' retention has received little, if any, attention in marketing literature.

Thus, the first hypothesis examined in this thesis states:

H1: "Pure" status quo bias positively affects customers' retention.

Inertia has been found to be a determinant of (attitudinal) loyalty (e.g. Jeuland, 1979). Attitudinal loyalty is comprised of two components – attitudes and affective commitment towards the brand or the product. Due to a number of psychological misperceptions, people tend to justify their initial decision, even if it was objectively inferior in terms of attributes, and "create inferences suggesting that the original choice was appropriate" [Samuelson and Zeckhauser, 1988]. Consequently, due to status quo bias their perceptions and attitudes towards particular good might change. Moreover, affective commitment demands psychological attachment, that itself is a subject to biases (Bhattacharya et al. 1995). Taking into account that attitudinal loyalty is positively connected with customers' retention (Kumar, 2009), the following hypothesis is examined:

H2: "Pure" status quo bias positively affects attitudinal loyalty, which increases retention, i.e. attitudinal loyalty is a mediator in status quo bias-retention link.

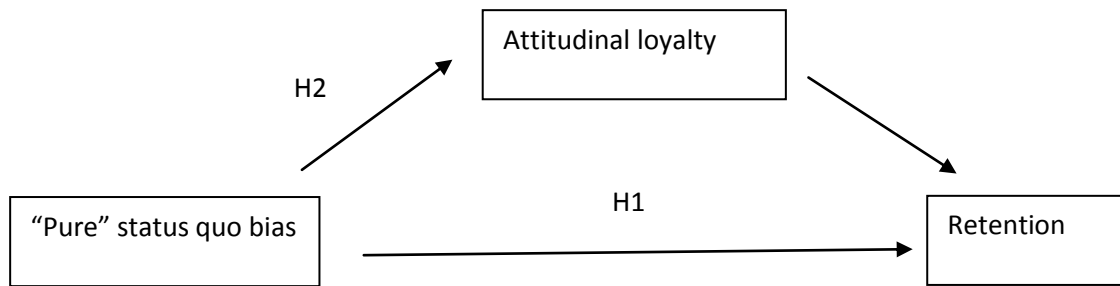Visual overview is given in Figure 1.

Figure 1. Hypotheses examined

Chapter 3. Experiment design and methodology

Experiment design

Data is collected through questionnaires for a couple of reasons. Firstly, analysis of available empirical data on retention rates would be unreliable due to presence of switching costs and thus impossibility to evaluate what fraction of variance is due to them and what is due to psychological misperceptions, which is an object of the thesis. The same logic applies to field experiment, as one cannot fully mediate all the "rational" transaction costs arising. Secondly, with questionnaires one can easily design the environment of the experiment and assure no confounding effect play a role. Questionnaires are distributed offline in order to mediate self-selection bias, common within online questionnaires, and answer questions of participants if they have any.

Participants are asked to consider themselves as employees of a big telecommunication company earning average Dutch salary. Every May they have to choose a pension provider for the next year. There are five different pension providers available that differ from each other only in commission rates and service quality. Commission rates are defined as "the amount of money you pay to insurance company for their services", while service quality as the one "containing every aspect from handling with complaints to accessibility of offices". Description is quite ambiguous for purpose, as in reality a process of choosing provider is complex and ambiguous as well, without clear characteristics of the alternatives. Within every provider there is a trade-off between "price" and "quality", meaning that every company is either relatively expensive but the services it provides are relatively good, or the other way around. In order to mitigate potential "rational decision-making" switching costs, additional information that no extra time or effort is required, as well as no money loss is associated with choosing the particular provider or switching to it, is provided.

Participants have to indicate their chances of choosing each provider, allocating 100% among five of them. Basically they have to fill in the Table 1.

Provider	How cheap	Service quality	Chance
A	Above average	Below average	
B	Slightly above average	Slightly below average	
C	Average	Average	
D	Slightly below average	Slightly above average	
E	Below average	Above average	

/100%

Table 1. Choice of the provider

Participants in the treatment group are given information that during the previous three years they have been using provider B. Provider B is also indicated as their default option for this year and given 100% chance in pencil in Table 1 (rubber is provided). Participants in control group do not have such information or any default option.

In order to examine the first hypothesis that "pure" status quo bias positively affects retention, differences in likelihood of choosing provider B in treatment and control groups are estimated. Since no switching costs are involved, effects from psychological misperceptions solely are investigated; since providers' attributes across groups are identical and there is no difference in description, apart from stated, no confounding effects are involved.

In order to examine the second hypothesis that "pure" status quo bias positively affects attitudinal loyalty, participants are asked to answer additional eight questions about provider B on the flip side of the questionnaire. Participants are asked to indicate on a 5-point Likert scale to what extent they are committed towards provider B, to what extent they think choice of provider B would be good, pleasant, favourable, positive, desirable and wise, and to what extent they are likely to recommend provider B to friends. There is no conventional methodology to evaluate attitudinal loyalty, however a combination of these question was shown to be one of the most useful (Bennett et al. 2002). Thus the two major factors of attitudinal loyalty, commitment and attitudes, are examined as well as major indicator of its presence, eagerness to spread positive word-of-mouth.

Additional questions about importance of commission rates and service quality are asked to the participants in order to compute a more reliable econometric model to examine effects of status quo bias.

The whole questionnaire for control and treatment groups one might find in Appendixes 1 and 2 respectively.

Sampling

Questionnaires are distributed among a relatively homogenous group of students on campus of Erasmus University Rotterdam. The overall response rate was about 98%, meaning that no self-selection bias was in place. Demographic characteristics of the participants are available. Out of 120 completed questionnaires from each group, treatment and control, 200 in total were suitable for further analysis. Other respondents filled in the information either in an incorrect way, for example stating only their most desirable provider, or in an incomplete way, e.g. completing only one side of the questionnaire.

Given conventional 95% significance level, 20% probability of Type 2 error and obtained standard deviation for control and treatment groups, sampling size is big enough to find results meaningful. The exact achieved power is 0.937.

Chapter 4. Estimation and results

Estimation

In order to explore the first hypothesis of positive influence of status quo bias on retention, two conditions must be met: respondents of the second group should be on average more likely to choose provider B and the difference between this value and the one given by the control group respondents should be significant.

The first condition is examined with regular descriptive statistics, like frequencies or descriptive statistics.

The second conditioned is examined with a Kruskal-Wallis nonparametric test as data is of scale type, samples are unrelated and variance between the groups is not equal. 95% significance level is used. The null hypothesis in this test is that means of both samples are equal.

In addition to that, multinominal logit model, as a random utility model, is used to quantitatively examine to what extent respondents are more likely to stay with provider B when it is marked as default option. General form of multinominal logit is the following:

$P_c(i) = Exp(V_{i)}/ \sum_{j \in C} Exp(V_j)$, where

C varies from 1 to the number of alternatives and denotes the set of these alternatives;

P denotes the probability that the individual chooses alternative i when presented with set C;

V denotes values of derived utilities.

Values of utilities have linear form, that is:

$V_i = X_{i1}b_1 + X_{i2}b_2 + \cdots + X_{ik}b_k,$ where

b varies from 1 to the number of attributes, k, and denotes product attributes;

x denotes subjective importance of these attributes to the particular respondent, the preference weights.

Note, however, that the aim of the model is not to observe the exact utilities derived, but only which of the alternatives has the highest utility, and thus the highest probability to be chosen.

Since data collected provides us with product attributes, preference weights and alternatives choices, one has full information to realize multinominal logit model. Optimal scaling procedure is applied to receive the more reliable results, as 7-point Likert scale might be not ideal for attributes' importance indication in this particular analysis. Multinominal logit model is realized in Eviews and the code is enclosed in Appendix 3.

In order to explore the second hypothesis that status quo bias positively affects attitudinal loyalty, comparison of median answers on questions X1-X8 between control and treatment groups is needed. The comparison is based on commitment towards the provider (X1), attitude towards it (X2-X7) and eagerness to advise it to friends (X8). Variables responsible for attitudes are combined into an overall attitude score with the use of factor analysis. Varimax is used as a rotation method; Eigen value >1 as an inclusion criteria. Overview is given in Table 2.

Nonparametric Mann-Whitney U test is used to compare medians in this case, as data is of ordinal type and samples are unrelated.

Code	Variable function before factor analysis	Variable function after factor analysis
X1	Commitment	Commitment
X2	Good-bad	Attitude
X3	Pleasant-unpleasant	
X4	Favourable-unfavourable	
X5	Positive-negative	
X6	Desirable-undesirable	
X7	Wise-unwise	
X8	Eagerness to recommend	Eagerness to recommend

Table 2 Attitudinal loyalty components before and after factor analysis

Codebook containing all the variables used in the analysis is enclosed in Appendix 6.

Results

Retention

Descriptive statistics

Descriptive statistics required for examination of the first hypothesis are given in Table 3 for both control and treatment groups. The full frequency table with price and quality importance frequencies are summarized in Appendix 7.

Variable	Response	Frequency, %	
		Control group	Treatment group
Provider B choice probability	0	19	19
	1-5	7	2
	6-10	24	12
	11-15	9	5
	16-20	12	13
	21-40	14	21
	41-99	14	24
	100	1	4

Table 3. Descriptive statistics for control and treatment groups

From frequencies obtained by percentiles it is clear that respondents in treatment group are more likely to choose provider B than in control group, even though number of participants indicated they would definitely not choose provider B is equal between groups. The number of participants not considering other providers but B is quadrupled in treatment group in comparison with control group.

On average, respondents in treatment group state 30.45% chance of choosing provider B, while in control group this number is only 19.8%. With higher mean value comes higher standard deviation, though, meaning that the status quo influence is different among the respondents.

	N	Mean	Std. deviation
Control group	100	19.8	20.1781
Treatment group	100	30.45	26.734

Table 4 Provider B mean and standard deviation

Quite interesting results are obtained for other providers as well. Seems logical, that if on average provider B received 10.5% higher "market share" in treatment group, then market share for other providers should decrease. However, probabilities of choosing providers A and C, that are close to provider B in terms of attributes, have not decreased, or decreased slightly, while providers D and E faced a sudden drop (Figure 2).
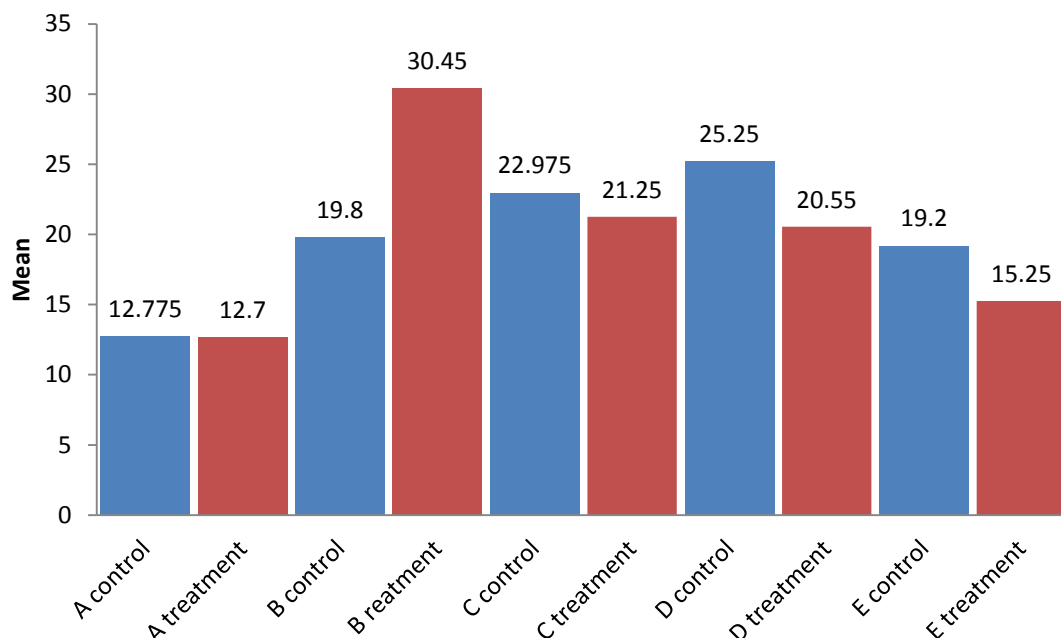
Figure 2 Providers choice probabilities, control and treatment groups

Explanation of the issue is most probably that respondents consider provider B as an anchor and adjust away from it while evaluating alternatives. Thus, closer in terms of attributes alternatives appear to them more attractive. Another possible explanation lies in loss aversion: since choosing provider B is a reference point for respondents, potential losses from switching to "distant" alternatives loom larger than from switching to "closer" ones.

T-test and multinominal logit

Result of the Kruskal-Wallis test have shown that mean values of provider B in treatment and control group are different at 95% significance level (p-value = 0.006). Note that p-values for providers A, C, D and E are 0.373, 0.212, 0.20 and 0.40 respectively. Since respondents tend to be more likely to choose provider B when it is marked as default option and results are significantly different from control group, we conclude that status quo bias positively affects probability of retention.

Results of multinominal logit also support this conclusion. Table 4 depicts how likely people are to choose provider B when it is stated as default option or not with relation to importance of price and quality indicated by them.

Price importance	Quality importance	Probability of provider B choice		
		Control group	Treatment group	Difference
7	7	19%	32%	13%
7	6	25%	39%	14%
7	5	28%	43%	15%
6	7	14%	23%	9%
6	6	19%	32%	13%
6	5	25%	39%	14%
5	7	9%	16%	7%
5	6	14%	23%	9%
5	5	19%	32%	13%

Table 5 Provider B choice probabilities

The table contains only the most frequent responses on price and quality importance for the sake of compactness. In order to estimate probabilities of provider B choice, one can use the output from multinominal logit model, given in Appendix 4. Table 5 provides us with two important insights. Firstly, probability of provider B choice decreases with lower importance of price and increases with lower importance of quality. Since provider B has slightly smaller prices and slightly worse quality than competitors, this is logical and means that respondents have understood the purpose of the task, the trade-off between price and quality for every company, and have given their answers in a consistent way. The second insight is that status quo bias is the more reinforced, the more favourable price and service quality are for the provider B. That is, when price importance is the highest and quality importance is the lowest, 7 and 5 respectively in this case, marking provider B as status quo would increase probability of its choice by 15%, while when price importance is the lowest, but quality importance is the highest, 5 and 7, difference between control and treatment groups is only 7%. The conclusion is that status quo bias affects people stronger when the status quo represents their needs and fits preferences; and otherwise, when the status quo is totally different from what customers want, marking it as default option might have little effect.

Multinominal logit model is a powerful instrument for analyzing customers' retention, in particular estimating effect of different factors on retention/defection probabilities and forecasting number of clients left in a particular period; thus, this model is strongly encouraged to be used in similar researches.

Attitudinal loyalty

Descriptive statistics for questions X1-X8 responsible for attitudinal loyalty measurement are given in Table 6. Keep in mind that responses are of ordinal type and strictly speaking mean value cannot be obtained.

Variable	Responses			
	Median, control group	Median, treatment group	Mean, control group	Mean, treatment group
X1. Commitment	3	3	2.78	3.05
X2. Good	3	3	2.96	3.28
X3. Pleasant	3	3	2.79	3.13
X4. Favourable	3	3	2.84	3.19
X5. Positive	3	3	3	3.27
X6. Desirable	3	3	2.77	3.12
X7. Wise	3	3	2.87	3.09
X8. Recommendation	2	3	2.56	3.01

Table 6. Attitudinal loyalty descriptive

Results of the Mann-Whitney U test conclude that differences in medians are meaningful at 95% significance level for questions X2, X3, X4, X5, X6 and X8 and not meaningful for questions X1 and X7 (p-value 0.102 and 0.183 respectively).

	X1	X2	X3	X4	X5	X6	X7	X8
Mann-Whitney U test	4356	4104.5	4025.5	4146.5	4159.0	4109.0	4473.5	3971.0
Asymp. Sig. (2-tailed)	.102	.023	.012	.031	.031	.024	.183	.009

Table 7 Attitudinal loyalty. Mann-Whitney U test

Since scores obtained within questions X2-X7 are quite similar, one can run factor analysis to reduce dimension and get a single score for respondents' attitudes towards provider B in both control and treatment groups. According to the result, all six factors

may be included into one factor representing attitudes towards providers. Together they are responsible for 77.1% of variance. Factor loadings are given below; full results of factor analysis can be found in Appendix 5. Difference between control and treatment group regarding single score for attitudes towards provider B exists at 95% significance level (p-value equals to .015).

Variable	Factor loadings
X2. Good	.913
X3. Pleasant	.828
X4. Favourable	.878
X5. Positive	.903
X6. Desirable	.885
X7.Wise	.859

Table 8 Factor loadings

Overview of differences, and its significance, between control and treatment groups regarding commitment, attitudes and eagerness to recommend provider B to friends is given below:

| Variable | Response | | |
	Mean, control group	Mean, treatment group	Significance (p-value)
Commitment	2.78	3.05	0.102
Attitude	2.87	3.18	.015
Recommend	2.56	3.01	0.09

Table 9 Attitudinal loyalty results

We have found that people have better attitude towards the provider marked as the status quo and are more likely to recommend it to their friends, which are two essential components of attitudinal loyalty. The difference in commitment towards the status quo is found insignificant, though. The most probable reason for this is that (affective) commitment demands psychological attachment, which is usually cultivated throughout years and hardly can appear during 3 minutes of filling in the questionnaire. Consequently, it is quite difficult to design a laboratory experiment in order to fully grasp this phenomenon. Thus, second hypothesis that status quo bias positively affects attitudinal loyalty is only partly confirmed.

Finally, all the three components of attitudinal loyalty have medium to strong positive relationship with probability of provider B choice, meaning that indeed attitudinal loyalty is positively related with retention.

			Provider B	Commitment	Recommend	Attitude
Spearman's correlation	Provider B	Correlation Coefficient	1.000	.628[**]	.584[**]	.681[**]
		Sig. (2-tailed)		.000	.000	.000
		N	200	200	200	200

Table 10 Attitudinal loyalty - retention Spearman's correlation

Summing up, results indicate that status quo bias positively affects customers' retention, confirming the first hypothesis. Respondents tend to have better attitude towards the status quo and are more likely to recommend it to their friends; however, they did not indicate significantly different commitment to the status quo, thus second hypothesis that status quo bias positively affects attitudinal loyalty is partly confirmed.

Chapter 5. Conclusion, limitations and applications

Conclusion

 Researchers in the field of marketing long ago have found that past purchasing behaviour influences future behaviour and that customers are unlikely to switch from current provider to the new one even when alternatives are objectively better in terms of attributes. They have named such persistence inertia and have associated it with tangible, like monetary loss when switching, or intangible, like necessity to build new trustworthy relationships, switching costs. In such a way individuals were considered as rational decision makers, weighting pros and cons and deciding to retain if costs of defecting are higher than potential benefits. However, people are subjects to different biases and psychological misperceptions affecting their behaviour. One of such biases is status quo bias, implying irrational preference for the current state of affairs. Despite its potential high value and importance for marketers, it received little to no attention in studies.

The aim of this thesis is to examine status quo bias as a determinant of customers' retention and thus to reduce the gap between theoretical findings and the way people behave in reality. The aim is reached by examining two hypotheses: the first one is that "pure" status quo bias positively affects customers' retention; the second one is that "pure" status quo bias positively affects attitudinal loyalty, that itself is a significant factor of deciding to switch or to stay. "Pure" status quo bias is defined as one free of "rational decision-making" components, i.e. the switching costs.

Results of the carried out experiment indicate that when a particular option is marked as status quo, and thus the default option, it has higher probability to be chosen than when it is not marked as status quo (30.45% vs 19.8% respectively in this experiment). The second hypothesis is partly confirmed as well. Respondents tend to have better attitude towards the provider when it is marked as status quo and are more eager to recommend it to their friends; however, their commitment towards the provider, one of the components of attitudinal loyalty, is not shown to be different from respondents in the control group. The most probable reason for this is that (affective) commitment demands psychological attachment, which is usually cultivated

throughout years and hardly can appear during 3 minutes of filling in the questionnaire.

In addition to that, two interesting and important insight were derived from the experiment, not indicated as examined hypotheses ex ante.

Firstly, status quo bias leads to redistribution of customers not only in favor of the status quo, but also in favor of its closest competitors in terms of attributes. In the experiment respondents were more likely to choose providers A and C, which are quite close to provider B, the status quo, in comparison to providers D and E, which are quite far, in treatment group than in control group. In practice it means that, for instance, if McDonalds is a status quo eating place for students, they would visit Burger King more frequently as well in comparison with Subway, which has different product characteristics.

Secondly, status quo bias affects people stronger when the status quo has closer attributes to desirable by individual. Continuing the analogy, if for fast-food lover McDonalds is marked as status quo, he is very likely to go their more often; however, marking it as status quo for vegetarian is unlikely to change his behavior at all. This means that marking a particular alternative as status quo would lead to different behavior change in different customer segments.

Summing up, "pure" status quo bias, free of "rational decision-making" switching costs, is a significant factor of customers' retention and affects its rates both directly and indirectly, by improving customer's attitude towards the provider marked as status quo.

Limitations

The biggest limitation of the research is that participants were given no incentives to make cognitive effort when decision-making and actually think carefully about the task and the given alternatives. In reality people are more likely to pay attention to their choice, especially so important as their future pensions, and depend less on the status quo. On the other hand, however, in real situation alternatives are never given explicitly, description of them is extremely difficult to grasp or simply ambiguous and

people start thinking about defecting mostly when they are already dissatisfied with the current provider. Thus, effect of status quo bias might be smaller in the study, than it would have been in reality.

Secondly, participants might behave differently with "paper" money and real money, not associating themselves with decision-makers, not realizing that their decision affects their future and thus not critically evaluating every alternative. However, analysis of empirically available data about retention rates would not help to differentiate status quo bias stemming from psychological misperceptions from the one stemming from switching costs. Thus, by the balance of harms laboratory experiment seems to be more favorable, despite its limitations.

Finally, results of the experiment cannot be simply generalized due to two factors: complexity of decision and frequency of decision making. Regarding the former factor, status quo bias is more likely to appear in complex and important situations, like choosing pension provider. If the task is not considered as difficult or crucial, people would be less loss averse while decision making, diminishing the effect of status quo bias. Regarding the second factor, respondents were told they can change their choice only the next year, lifting the degree of responsibility. If they could change their decision whenever they want, fear for making a mistake would have gone down, decreasing the effect of status quo bias. Consequently, if decision people make is less complex, less important and they can change their decision without negative effects, effect of status quo bias is likely to be weaker. Consequently, effects of status quo bias would be different for different products.

Applications and future researches

Companies can exploit status quo bias while carrying out customer relationship management and loyalty programs in order to better understand their customers and their needs and/or to use psychological misperceptions of customers to be able to sell more or to sell more effectively. Estimating the effect of status quo bias on different customer segments can help to forecast defection rates and implement solutions to decrease that number. Also, optimal service quality per customer segment can be evaluated in order to minimize costs and thus increase profitability of the company. In

terms of strategic planning, understanding behavior and probability of defection to competitors can be beneficial to forecast company's market share, examine consequences of entering new markets and potential effects and threats from new entrants. Understanding drivers of customers' behavior is crucial for sales team. To better tackle the issue of status quo bias soft selling techniques, like trial periods, pre-payments etc., can be better tailored and more broadly implemented. Also higher attention and effort might be advantageous to be paid to acquire new customers than to secure existing customers. Finally, since status quo bias is reinforced when customers' needs correspond to the product's attributes, companies receive additional incentive to better segment their customers, apply different programs to each of them and develop tailored solution in order both to satisfy the customers and increase profitability of the firm.

Employees responsible for purchasing goods for the company are subject to status quo bias as well and might stick to the current supplier even though its products price and quality mix is suboptimal. In order to tackle this, managers might find useful to shuffle purchase teams from time to time, making them responsible for buying different products than before, thus ensuring reevaluation of available alternatives. Groups of external experts may be occasionally invited as well to inspect the effectiveness of purchase teams.

Status quo bias reinforces the positions of current market players, increasing entry barriers for potential competitors. Such an issue may be taken into consideration by prudential industry regulators to forecast market shares attributed to companies after new player entry, mergers and acquisitions or other market changing events and develop policies tackling abuses of a dominant industry position more effectively.

Since people tend to stick to the current state of affairs, many newly developed public policies are not accepted by the society, even though they are beneficial. The task of the government, as of an agent with better knowledge and bigger amount of information, is not only to provide citizens with better developed alternatives, but also to give incentives to people to choose it, even if it demands elements of paternalism.

In order to fully examine the effect of status quo bias on customers' retention one might find interesting to develop a field experiment design to better understand how people act outside the laboratory. The most important factor to consider here is to be able to distinguish psychological misperceptions from "rational decision making" components like switching costs or to be able to get rid of the latter. Idea to examine presence of status quo bias in less complex and important industry as insurance providers also seems promising. In FMCG markets people are often subjects to variety-seeking behavior, thus it would be reasonable to understand if marking products as status quo accompanied with variety-seeking pattern of behavior has positive or negative correlation with probability of the product to be purchased.

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List of appendices

Appendix 1. Questionnaire 1. Control group

You are working in a big telecommunication company X-Connection and earn average Dutch salary. Every May you have to choose pension provider for the next year that would deal with your funds till you retire. All the companies are the same apart from two parameters – commission rates and service quality. Commission rate is the amount of money you pay to insurance company for their services. Service quality contains every aspect from handling with complaints to accessibility of offices. All the funds are insured by the government, so there is no chance you can lose your money.

To which extent do you find commission rates and service quality important?

Commission rates

☐ ☐ ☐ ☐ ☐ ☐ ☐

| Totally unimportant | | Totally important |

Service quality

☐ ☐ ☐ ☐ ☐ ☐ ☐

| Totally unimportant | | Totally important |

Currently there are 5 companies in the market. For all the 3 years at X-Connection you have been using provider B. If you decide to switch to different provider, it would not require extra time, effort or money loss. You do not have any special connection with any provider, neither you know anyone working there. Once the provider is chosen, you can't change it till the next May.

What are the chances you would choose the following providers?

Provider	How cheap	Service quality	Chance
A	Above average	Below average	
B	Slightly above average	Slightly below average	
C	Average	Average	
D	Slightly below average	Slightly above average	
E	Below average	Above average	

/100%

Questionnaire 1. Control group, flip side

Using a scale from 1 to 5 please indicate how committed you are to choosing provider B

| X1. Uncommitted | ☐ | ☐ | ☐ | ☐ | ☐ | Committed |

Choosing provider B would be:

| X2. Bad | ☐ | ☐ | ☐ | ☐ | ☐ | Good |

| X3. Unpleasant | ☐ | ☐ | ☐ | ☐ | ☐ | Pleasant |

| X4. Unfavourable | ☐ | ☐ | ☐ | ☐ | ☐ | Favourable |

| X5. Negative | ☐ | ☐ | ☐ | ☐ | ☐ | Positive |

| X6. Undesirable | ☐ | ☐ | ☐ | ☐ | ☐ | Desirable |

| X7. Unwise | ☐ | ☐ | ☐ | ☐ | ☐ | Wise |

I would recommend provider B to my friends

| X8. Disagree | ☐ | ☐ | ☐ | ☐ | ☐ | Agree |

Appendix 2. Questionnaire 2. Treatment group

You are working in a big telecommunication company X-Connection and earn average Dutch salary. Every May you have to choose pension provider for the next year that would deal with your funds till you retire. All the companies are the same apart from two parameters – commission rates and service quality. Commission rate is the amount of money you pay to insurance company for their services. Service quality contains every aspect from handling with complaints to accessibility of offices. All the funds are insured by the government, so there is no chance you can lose your money.

To which extent do you find commission rates and service quality important?

Commission rates

☐ ☐ ☐ ☐ ☐ ☐ ☐

| Totally unimportant | Totally important |

Service quality

☐ ☐ ☐ ☐ ☐ ☐ ☐

| Totally unimportant | Totally important |

Currently there are 5 companies in the market. If you decide to switch to different provider, it would not require extra time, effort or money loss. You do not have any special connection with any provider, neither you know anyone working there.
Once the provider is chosen, you can't change it till the next May.
What are the chances you would choose the following providers?

Provider	How cheap	Service quality	Chance
A	Above average	Below average	
B	Slightly above average	Slightly below average	
C	Average	Average	
D	Slightly below average	Slightly above average	
E	Below average	Above average	

/100%

Appendix 2. Questionnaire 2. Treatment group, flip side

Using a scale from 1 to 5 please indicate how committed you are to choosing provider B

| X1. Uncommitted | ☐ | ☐ | ☐ | ☐ | ☐ | Committed |

Choosing provider B would be:

| X2. Bad | ☐ | ☐ | ☐ | ☐ | ☐ | Good |

| X3. Unpleasant | ☐ | ☐ | ☐ | ☐ | ☐ | Pleasant |

| X4. Unfavourable | ☐ | ☐ | ☐ | ☐ | ☐ | Favourable |

| X5. Negative | ☐ | ☐ | ☐ | ☐ | ☐ | Positive |

| X6. Undesirable | ☐ | ☐ | ☐ | ☐ | ☐ | Desirable |

| X7. Unwise | ☐ | ☐ | ☐ | ☐ | ☐ | Wise |

I would recommend provider B to my friends

| X8. Disagree | ☐ | ☐ | ☐ | ☐ | ☐ | Agree |

Appendix 3. Multinominal logit model coding in Eviews

```
logl mnl

coef(4) constant=0
coef(1) scale_price=0
coef(1) scale_quality=0
coef(1) lambda=1
coef(1) sqbias=0


mnl.append @logl loglmnl


mnl.append util_A=constant(1)+(price_imp+scale_price(1))*5
+(qual_imp+scale_quality(1))*1

mnl.append util_B =constant(2)+ sqbias(1)*group+(price_imp+scale_price(1))*4
+(qual_imp+scale_quality(1))*2

mnl.append util_C=constant(3)+(price_imp+scale_price(1))*3
+(qual_imp+scale_quality(1))*3

mnl.append util_D=constant(4)+(price_imp+scale_price(1))*2
+(qual_imp+scale_quality(1))*4

mnl.append util_E=(price_imp+scale_price(1))*1 +(qual_imp+scale_quality(1))*5


mnl.append util_A=util_A *lambda(1)
mnl.append util_B =util_B *lambda(1)
mnl.append util_C=util_C*lambda(1)
mnl.append util_D=util_D*lambda(1)
mnl.append util_E =util_E *lambda(1)


mnl.append denom=exp(util_A)+exp(util_B)+exp(util_C)+exp(util_D)+exp(util_E)

mnl.append loglmnl=(A1*util_A+b1*util_b+c1*util_c+d1*util_d+e1*util_e)/100 -
log(denom)

smpl 1 200
mnl.ml(d)
show mnl.output
```

, where

Constant (4) – estimated coefficients for constant in A, B, C and D utility functions;

Scale_price – scaling coefficient with respect to price;

Scale_quality – scaling coefficient with respect to quality;

Sqbias – estimated coefficient for importance of default option;

Util_a, util_b, util_c, util_d, util_e – derived utilities for providers;

Group – variable responsible for control and treatment groups. Equals to 0 if control group, 1 otherwise.

A1, B1, C1, D1, E1 – probabilities of choosing providers A, B, C, D, E

Appendix 4. Output of mulnimoninal logit model

CONSTANT(1)	460.7668
SCALE_PRICE(1)	354.2819
SCALE_QUALITY(1)	469.7888
CONSTANT(2)	347.0578
SQBIAS(1)	2.570419
CONSTANT(3)	232.6308
CONSTANT(4)	117.3482
LAMBDA(1)	0.257905

Thus, in order to measure utility for choosing provider B for particular individual one has to do the following:

Utility of provider B = constant(2) + sqbias(1)*group + (price_imp+scale_price(1))*attribute_price + (qual_imp+scale_quality(1))*attribute_quality

Utility of provider B = 347.0578 + 2.57*group + (price_imp+354.28)*4 + (qual_imp+469.8)*2, where:

Group equals 0 if control group, 1 otherwise;

Price_imp and qual_imp are different for every respondent.

Probability of choosing provider B is derived from equation:

Probability = Exp(util_b)/(Exp(util_a)+exp(util_b)+exp(util_c)+exp(util_d)+exp(util_e))

Appendix 5. Attitudinal loyalty questions X2-X7. Factor analysis

Communalities

	Initial	Extraction
X2	1.000	.834
X3	1.000	.685
X4	1.000	.770
X5	1.000	.815
X6	1.000	.783
X7	1.000	.739

Extraction Method: Principal
Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.627	77.114	77.114	4.627	77.114	77.114
2	.422	7.036	84.149			
3	.329	5.482	89.631			
4	.263	4.387	94.019			
5	.192	3.199	97.218			
6	.167	2.782	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
X2	.913
X3	.828
X4	.878
X5	.903
X6	.885
X7	.859

Extraction Method:
Principal Component
Analysis.
a. 1 components
extracted.

Appendix 6. Codebook

Variable	Lable	Values
Group	Type of questionnaire	0. For control gorup
		1. For treatment group
Gender	Respondent's gender	1. female
		2. male
Price_imp	Importance of price	1…7
Quality_imp	Importance of quality	1…7
A	Chance of choosing provider A	1…100
B	Chance of choosing provider B	1…100
C	Chance of choosing provider C	1…100
D	Chance of choosing provider D	1…100
E	Chance of choosing provider E	1…100
X1	Committed to choosing provider B	1…5
X2	Choosing provider B would be good	1…5
X3	Choosing provider B would be pleasant	1…5
X4	Choosing provider B would be favourable	1…5
X5	Choosing provider B would be positive	1…5
X6	Choosing provider B would be desirable	1…5
X7	Choosing provider B would be wise	1…5
X8	Recommend provider B to friends	1…5

Appendix 7. Frequency table

Variable	Response	Frequency, %	
		Control group	Treatment group
Price importance	1	0	0
	2	1	0
	3	5	5
	4	14	12
	5	19	19
	6	45	41
	7	16	23
Quality importance	1	0	0
	2	2	2
	3	11	4
	4	12	9
	5	23	27
	6	34	32
	7	18	26
Provider B choice probability	0	19	19
	1-5	7	2
	6-10	24	12
	11-15	9	5
	16-20	12	13
	21-40	14	21
	41-99	14	24
	100	1	4