BACHELOR THESIS

Interrelationships between Behavioural Economics and Consumers' Decision-making with emphasis on Pricing Strategies

Souvislosti behaviorální ekonomie a spotřebitelova rozhodování s důrazem na strategii oceňování

STUDY PROGRAMME

Economy and Management

FIELD OF STUDY

Management and Economy of an Industrial Enterprise

SUPERVISOR

Ing. Robin Maialeh, Ph.D.

KNOROVÁ
KRISTÝNA

2018

ČESKÉ VYSOKÉ UČENÍ TECHNICKÉ V PRAZE

ZADÁNÍ BAKALÁŘSKÉ PRÁCE

I. OSOBNÍ A STUDIJNÍ ÚDAJE

Příjmení: Knorová Jméno: Kristýna Osobní číslo: 460615

Fakulta/ústav: Masarykův ústav vyšších studií (MÚVS)

Zadávající katedra/ústav: Oddělení ekonomických studií

Studijní program: Ekonomika a management

Studijní obor: Řízení a ekonomika průmyslového podniku

II. ÚDAJE K BAKALÁŘSKÉ PRÁCI

Název bakalářské práce:

Souvislosti behaviorální ekonomie a spotřebitelova rozhodování s důrazem na strategii oceňování

Název bakalářské práce anglicky:

Interrelationships between Behavioral Economics and Consumers' Decision-making with Emphasis on Pricing Strategies

Pokyny pro vypracování:

Cíl: Vytvořit ucelený přehled problematiky behaviorální ekonomie ve vztahu ke strategii oceňování. Analyzovat a popsat (i)racionalitu chování a rozhodování spotřebitelů, na základě filosofie behaviorální ekonomie.
Přínos: Zvýšení konkurenceschopnosti na konkretním případu pomocí analýzy cenových strategií a návrhu efektivního využití behaviorálního oceňování v reakci na spotřebitelovo chování a rozhodování.
Osnova: Teoretická část: 1) Behaviorální ekonomie: a) základní přehled, b) nejdůležitější teorie; 2) Strategie oceňování: a) oceňování v klasické ekonomii, b) behaviorální oceňování, Praktická část: 3) Analýza cenových strategií na konkrétním případu

Seznam doporučené literatury:

ARIELY, D. Predictably Irrational: The Hidden Forces That Shape Our Decisions. Harper Perennial, 2010
KAHNEMAN, D., TVERSKY, A. Prospect Theory: An Analysis of Decision under Risk. Econometrica, 1979
THALER, H., R. Misbehaving: The Making of Behavioral Economics. W. W. Norton & Company, 2015
CALDWELL, L. The Psychology of Price: How to use price to increase demand, profit and customer satisfaction. Crimson Publishing

Jméno a pracoviště vedoucí(ho) bakalářské práce:

Ing. Robin Maialeh, Ph.D., Oddělení ekonomických studií

Jméno a pracoviště konzultanta(ky) bakalářské práce:

Datum zadání bakalářské práce: 5. 12. 2017 Termín odevzdání bakalářské práce: 5. 5. 2018

Platnost zadání bakalářské práce: 31. 8. 2019

Podpis vedoucí(ho) práce Podpis vedoucí(ho) ústavu/katedry Podpis děkana(ky)

III. PŘEVZETÍ ZADÁNÍ

28 -03- 2018
Datum převzetí zadání

Knorová
Podpis studenta(ky)

KNOROVÁ, Kristýna. *Interrelationships between Behavioural Economics and Consumers' Decision-making with emphasis on Pricing Strategies*. Prague: CTU 2018. Bachelor thesis. Czech Technical University in Prague, Masaryk Institute of Advanced Studies.

MASARYKŮV ÚSTAV
VYŠŠÍCH STUDIÍ
ČVUT V PRAZE

Declaration

I hereby declare that I have compiled this final thesis on my own and all the quoted literature as well as other sources used in the thesis are listed in the bibliography. The electronic copy of the thesis is identical with the hard-bound copy. I approve that this diploma thesis is published pursuant to Section 47b Act No.121/2000 Coll., on Higher Education and on the amendment and modification of other acts (the Higher Education Act), as amended.

In Prague: 18. 05. 2018 Signature:

Acknowledgement

I would like to thank my thesis supervisor Ing. Robin Maialeh, Ph.D. for the support, time, knowledges, patience and valuable advices. He was always willing to help when I ran into a trouble or had a question about my writing and steered me in the right direction. I also must express my deep gratitude to my parents and to my beloved friends for their unfailing support and encouragement throughout my years. The accomplishment would not be possible without them. Thank you.

Abstract

The thesis deals with the issue of consumers' decision-making based especially on behavioural economics and behavioural pricing strategies. The thesis aims to review relevant literature regarding the topic, examine correlations between behavioural pricing and consumer decision-making and analyse pricing strategy of a particular company, in this case, Apple, Inc., with emphasis on behavioural pricing. The method is interpretative study and price analysis, since the topics is almost completely theoretical. In conclusion, the analysis revealed the way a company sensitively uses insights from behavioural economics and also the positive influence of behavioural pricing on revenue growth.

Key words

Behavioural economics, pricing strategies, behavioural pricing, consumers' decision-making

Abstrakt

Bakalářská práce se zabývá problematikou ovlivňování rozhodování spotřebitele založené na behaviorální ekonomii a behaviorální cenové strategii. Cílem práce je přezkoumat příslušnou literaturu týkající se tématu, prověřit vztah mezi behaviorálním oceňováním a rozhodováním spotřebitele a analyzovat cenovou strategii konkrétní společnosti, v tomto případě Apple, Inc. Zvolená metoda je studie a cenová analýza, neboť téma je převážně teoreticky orientované. V závěru analýza poukázala na spojitost mezi zvýšením obratu a behaviorálním oceňováním.

Klíčová slova

Behaviorální ekonomie, cenová strategie, behaviorální oceňování, rozhodování spotřebitele

List of Abbreviations

ASP: Average Selling Price

EUR: European Monetary Unit

MAP: Minimum advertised price

MSRP: Manufacturer Suggested Retail Price

USD: United States Dollar

VAT: Value Added Tax

Table of Contents

Introduction

Behavioural economics is a field of economics concerning topics of consumers' decision-making in relationship to rationality, emotions, social and cognitive factors. The goal of behavioural economics is not to replace neo-classic economics theories, but rather to complete them. In general, the issue with current economic theories is that they are far from reality. Many of the theories focus on rational decision-making, which in reality works differently, when circumstances are far from perfects. If we think outside of the box, as behavioural economics is persuading us to do, we might understand more about our behaviour, market behaviour and economics in general.

It is interesting to see how consumers' decision-making is influenced by perceived reality. If we work with an idea that consumers tend to behave irrationally based on bounded misperception, behavioural economics can explain seemingly irrational behaviour. It can help us understand how and why consumers' decision-making is influenced on certain occasions and can help us avoid making those mistakes in future or alternatively can help retailers use strategies that profit from human tendencies to misbehave. Also, we have only limited knowledge about the brain's function. We have a lot to discover in the fields of neuroscience and behaviour and therefore in behavioural economics as well. There are some limitations, one of which is literature. Since the topics of behavioural economics are new, enough resources do not exist yet. In the future, more attention should be directed to behavioural economics and more experiments should be conducted in order to broaden the field.

The first goal of my thesis is to examine new economic trends of behavioural economics in relationship with consumers and their decision-making processes. For that reason, I present behavioural economics and its concept concerning moments when consumers tend to make errors and misbehave. The second goal is to focus on price setting strategies using insights from behavioural economics and how to use them to maximize a company’s utility just from price itself. The third goal is to study pricing strategies of the chosen company and examine whether the company is using behavioural pricing strategies and whether they influence consumers’ decision-making on purpose. In conclusion, the aim is to confirm or disprove an interrelationship between behavioural economics and consumers' decision-making and also

to answer the question of whether using behavioural economics might help a company increase its profits.

For that reason, I divided the thesis into three chapters. The first two chapters are theoretical, and the third is practical. The methodology I will be using is interpretative study and price analysis.

Chapter 1 will focus on behavioural theories. I will cover the most important theories influencing consumers' decision-making such as prospect theory, decision-making biases, and issues with rationality. Chapter 2 will focus on pricing strategies. I will examine pricing strategies from classical economics, but the aim will be to understand behavioural pricing strategies in depth and how thus behavioural pricing strategies such as charm pricing, irrational value, power of free and hyperbolic discounting might influence consumers' decision-making. In Chapter 3, I will study pricing approaches of a particular company, with emphasis on behavioural pricing strategies and consumers' behaviours. The pricing policy and consumer segmentation will be aligned with approaches in the practical part. Also the impact of behavioural pricing on revenue will be discussed.

THEORETICAL PART

1 CHAPTER Behavioural Economics

According to classic economics, individuals are making-choices to maximize utility. In terms of business it means, that costumers are purchasing most desired products or services according to consumers´ preference, but individuals tend to do mistakes in their decision-making. Behavioural economics claims that those errors are caused mainly because of bounded and imperfect rationality and as result consumers are making inaccurate choices, causing inefficient purchases. For instance, they are often driven not by the actual cost of a product/service but by it perceived cost. Therefore, companies should take an advantage of knowing about customers' misbehaviour and misperception, and by using suitable methods of nudging people into desirable decision-making, companies can increase its own profit with minimum costs (Bar-Gill, 2008).

1.1 Behavioural Economic

At the core of Behavioural Economics is the conviction that making our model of economic man more accurate will improve our understanding of economics, thereby making discipline more useful. Behavioural Economics as a young field is missing specific coherent and unified theory explaining economics behaviour, but despite that, it has managed to dramatically change the way economists observe the world. Even if there exist numbers of theories attempting to correctly clarify behavioural phenomena, the core idea stays unchanged. For instance, according to Advances in Behavioural Economics; "Behavioural economics uses facts, models and methods from neighbouring sciences to establish descriptively accurate findings about human cognitive ability and social interaction and to explore implications of these findings for economic behaviour. "(Camerer, et al., 2004, p.3). Similarly, Thaler (2000, p.1) states that: "Behavioural Economics is the combination of psychology and economics that investigates what happens in markets in which some of the agents display human limitations and complications.". Behavioral economics uses neighbouring sciences to help create new insights about human conginitive abilities in economic field, therefore help to understand true nature of economics.

1.2 Historical context

Behavioural economics may seem to appear as a relatively young science, but in fact the very first foundations were set up by Adam Smith in 18th century in Scotland (Rehman, 2016). In 1759, Smith come up with his work: The Theory of Moral Sentiments (1759), in which he states that *"*… the mental principles of individuals' lead are apparently as big as their monetary observations" (Rehman, 2016). The main idea of Smith's work was focused mainly around justice and fairness, as well as psychological principles of human behaviour, therefore this piece could be considered as a first published book regarding Behavioural Economics, although at that time the term did not exist yet. As stated in The Foundations of Behavioural Economics Analysis, Smith's book The Theory of Moral Sentiments, reads like an agenda for modern behavioural economics; "It recognizes many behavioural phenomena such as loss aversion, altruism, emotions, willpower, and the planner." (Dhami, 2016). Later on in 1776, Smith wrote his magnum opus: *An Inquiry into the Nature and Causes of the Wealth of Nations*. The work included well-known theory of "invisible hand of free market" which is nowadays being recognized as the groundwork of classic economics and happened to become predominant theory.

In the 20th century, economists have been attempting to shape economics as more scientific field. The psychology was in a scope at that time. Economists were assuming that psychology insights provided too unsteady foundation for economics, therefore they have gradually removed psychology aspects from economic discipline to respond more to an idea of economics as a natural science (Thaler, 2016).

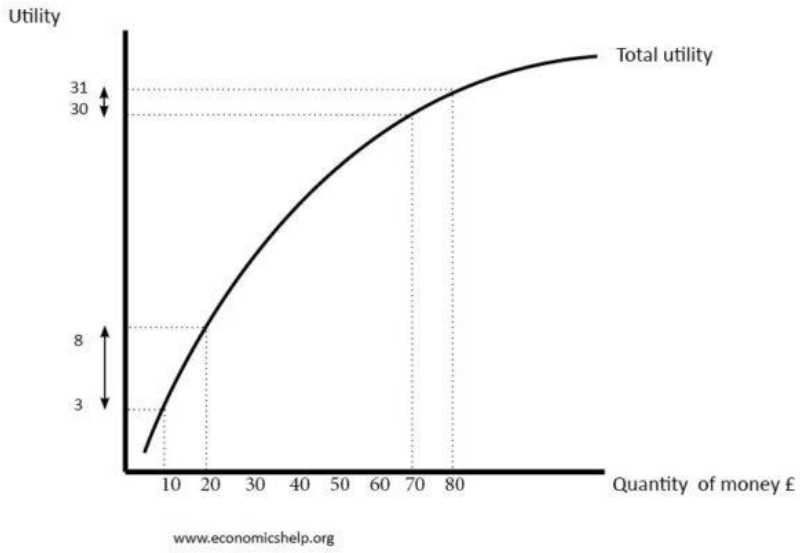
It took two more decades to "rediscover" behavioural economics. In the 1950s and 1960s breakthrough progress had happened such as: axiom of expected utility, violations of subjective utility, bounded rationality, hyperbolic discounting and others. At that time behavioural economic struggled to receive deserved attention. Until the emergence of cognitive psychology, helped to understand importance of mental processes involving decision making, memory, problem solving (Dhami, 2016). In 1979 Adam Tversky and Daniel Kahneman came up with ground breaking discovery regarding of decision-making under risk and uncertainty called Prospect Theory, one of the core principles of behavioural economics and behavioural finances (Thaler, 2016).

Nowadays, important influencers dealing with behavioural economics are: Dan Ariely, Richard Thaler and Daniel Kahneman. In fact, in 2017 Richard Thaler received Nobel prize in economics science for ‘nudge’ theory, where he examined influence of human instincts on rational choice.

1.3 Prospect theory

To understand prospect theory completely, we must first acknowledge the expected utility theory proposed by Daniel Bernoulli in 1738 and then further developed by John von Neumann and Oscar Morgenstern in 1994. The expected utility theory is applied as a normative and descriptive model of economic behaviour for decisions under risk. The theory states that under uncertainty and probability, individuals choose the options that offer the highest utility (Kahneman, 1979).

Figure 1 Utility function



Source: (Pettinger, 2018)

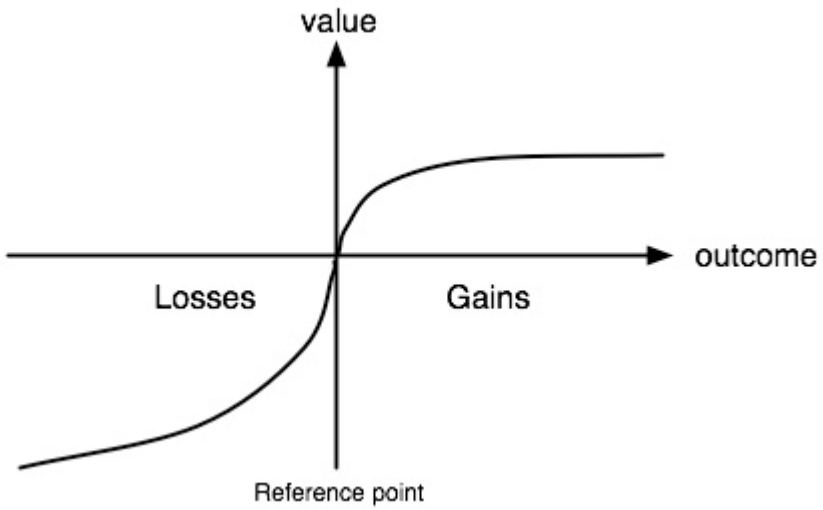
The underlying issue with most economic theories and therefore with the utility model is that they often make simplified assumptions. For instance, one premise of classic economic theory is that agents are entirely rational. The theory does not recognise that humans’ behaviour is complex. Our limited willpower and cognitive abilities influence our decisions, which are often led by self-interest, but also fairness and equality. Likewise, we struggle with self-control and motivation (Committee, 2017).

Prospect theory

Kahneman and Tversky's (1979) prospect theory intends to distinguish the actual behaviour of individuals when they are making decisions under risk (Kahneman, 1979). They worked with an idea that not every decision individuals make must be necessarily entirely rational or optimal. Many findings about human behaviour motivated their theory, which focuses on how people systematically violate the predictions of the expected utility theory (Committee, 2017).

The prospect theory describes how people choose between different options/prospects and how they estimate the perceived likelihood of each of these options (Harley, 2016).

Figure 2 Prospect theory



Source: (Kahneman, 1979)

Reference point

A reference point is not related to probabilities. It is used in prospect theory as the point in which the value function changes curvature and slope (kink) and divides outcomes into gains and losses (Kahneman & Tversky, 1979).

Prospect theory contains four main elements.

1) Individuals derive utility from gains and losses relative to some reference point, rather than wealth.
2) Individuals are more sensitive to losses than to gains.
3) Individuals exhibit diminishing sensitivity to gains and losses. Larger utility impact is experienced when losing (or gaining) 100 USD when moving from a 100 USD to a 200 USD than moving from a 10 100 USD to a 10 200 USD.
4) The theory includes probability weighting: individuals overweighting low probabilities and underweighting high probabilities (Committee, 2017).

1.4 Decision-making systems

In the book *Thinking, Fast and Slow*, Kahneman (2011) addressed two system models that describe our decision-making. The two systems do not work against each other, but rather are complementary. Usually, we use both systems at the same time. When we are in a calm state, System 1 is working automatically and giving suggestions to System 2, which is in low-effort mode. Usually System 2 just adopts these suggestions: ”Impressions and intuitions turn into beliefs, and impulses turn into voluntary actions” (Kahneman, 2011, p. 24). When difficulty occurs, System 1 calls on System 2. “System 2 is activated when an event is detected that violates the model of the world that System 1 maintains”, (Kahneman, 2011, p. 24). System 2 also controls our own behaviour: politeness, anger and more.

Christopher Chabris and Daniel Simons' experiment illustrates how sometimes the two systems may clash and fail in terms of observing. They created a short film of two teams playing basketball. One team wore white shirts and the other black shirts. The task was to count the number of passes done throughout the video. It is very difficult task, and it requires all the attention. During the video, a woman wearing a gorilla costume appears for 9 seconds. Thousands of viewers did not notice anything extraordinary. The reasons are that task was extremely difficult for the cognitive functions and also that the instruction was to focus and try to ignore the other team. If there were no instructions, viewers would not have missed the gorilla. “The gorilla study illustrates two important facts about our minds: we can be blind to the obvious, and we are also blind to our blindness” (Kahneman, 2011, p. 24).

System 1

"System 1 operates automatically and quickly, with little or no effort and no sense of voluntary control" (Kahneman, 2011, p. 20). System 1 uses mental shortcuts, common sense and emotional reactions. It is activated when an individual is driving a car on an empty road, determining the source of sound, detecting distance between objects or detecting emotions such as disgust.

System 2

"System 2 allocates attention to the effortful mental activities that demand it, including complex computations. The operations are often associated with the subjective experience of agency, choice, and concentration" (Kahneman, 2011, p. 20). To perform well, system 2 needs deeper attention and focus, conscious thinking and mindfulness. It is activated, for instance, when individuals are filling out tax forms, comparing prices between two products, or focusing on their own behaviour. System 2 is much slower than System 1, so when quick thinking is needed, individuals often use System 1. Interestingly, System 2 is more easily influenced and manipulated toward consumer decision-making (Kahneman, 2011).

Behavioural economists have been quite interested in the gorilla experiment because it shows that people are able to pay attention to only a limited number of things and that when some of those things are not salient, we ignore them, sometimes to our detriment (Sunstein, 2012).

1.5 Decision-making biases

The Oxford dictionary (Stevenson, 2010) describes bias as "prejudice in favour of or against one thing, person, or group compared with another, usually in a way considered to be unfair". People generally do not enjoy making decisions because it is mentally and physically draining. When individuals are faced with several decisions in a row, they tend to get apathetic and incoherent. So instead of using critical thinking, as in most cases, they like to use habits, automatic thinking and biases so they avoid the stress associated with making a choice.

Biases recur predictably in particular circumstances such as when the person's positive or negative traits influence other areas of his or her perception (Kahneman, 2011). We recognise several biases; a great example of well-known bias is the "halo effect". Kahneman (2011) defines the halo effect as the likelihood of audiences to judge a handsome and confident speaker more favourably than he/she actually deserves.

Biases can be divided into several subgroups:

a. cognitive biases occurring towards decision-making and economic behaviour;
b. biases in probability and belief (anchoring); and
c. social biases (halo effect).

1.5.1 Cognitive biases

Behavioural economics focuses heavily on cognitive bias. Shiraev (2016) described cognitive bias as "(…) any systematic error in thinking that derives from limits that are inherent in people's cognitive abilities to process information, therefore affecting their decision-making and judgments". Cognitive biases can help reduce the complexity of a problem.

Availability bias

According to Kahneman and Tversky (1973), availability bias is the human tendency to evaluate the frequency or probability of an event by the ease with which examples of the event can be retrieved from one's memory. Humans tend to overestimate the likelihood of events, because if a similar event had occurred recently or if such event stirred deep emotions. Generally, availability bias is a phenomenon of illusory correlation. If we can recall information easily, such as a plane crash or police shooting, we believe it is common because we assume our memory is a representative sample of reality. The truth is, we recall some information more easily because it is emotional or unique and therefore it stands out in our minds.

For instance, lottery companies often remind us of recent winners so we will overestimate the likelihood of winning and purchase a ticket. Investors often make judgements about stocks based on the news that subsequently underperform in later years. The doctors who have treated a patient with a serious disease are likely to believe other patient have similar symptoms, which could lead to improper treatment (Tversky & Kahneman, 1974).

Confirmation bias

According to Wason (1960), confirmation bias is a cognitive error that people make when they are only willing to accept new information when it confirms what they already believe. People who fall into the trap of confirmation bias tend to purposefully seek out evidence that supports already solidified beliefs and purposefully reject any evidence that goes against those beliefs.

This is a socio-psychological concept that describes the tendency of a person to prefer information and interpretations that support his or her own opinion and, on the contrary, to ignore or underestimate information that is inconsistent with his or her conviction, possibly interpreting ambiguous information in a manner consistent with its view. It is a type of cognitive distortion and a frequent reason for misconduct. The effect of confirmation distortion is stronger in emotionally coloured issues and in heavily rooted opinions. Confirmation distortions also apply to memory and the popularity of information sources.

1.5.2 Heuristics

According to Kahneman (2003), "Heuristics are commonly defined as cognitive shortcuts or rules of thumb that simplify decisions, represent a process of substituting a difficult question with an easier one" (Kahneman, 2003). Heuristics is an important part of decision-making. It helps shorten the amount of time needed to make a decision. Every day, we are overloaded with information, so our brain creates shortcuts to make quick and efficient decisions. Heuristics is helpful tool in many cases, but sometimes the simplification of the problem can create errors called cognitive biases.

1.5.3 Anchoring

"Anchoring occurs when people consider a particular value for an unknown quantity before estimating that quantity" (Kahneman, 2011, p. 199). Anchoring is the human tendency to rely heavily on the first piece of information they were given. For example, at San Francisco's Exploratorium, costumers were asked what the height of the tallest redwood is. They were given two anchors. For a few participants, it was the high anchor, more or less than 1,200 feet, while others got the low anchor, 180 feet. According to Kahneman (2011), those

two groups produced very different outcomes. The first estimated the height of the redwood at roughly 844 feet, while the other estimated the height as approximately 282 feet tall. The anchor ratio was around 55%. According to the results, we can assume that anchoring profoundly influenced the consumers.

Anchoring can be very powerful. For instance, Kahneman mentioned in his book *Thinking, Fast and Slow* (2011) that few German judges read the description of a woman, a shoplifter, shortly after they were supposed to sentence the woman to prison. Before they were asked about their opinion, the rolled a pair of dice. In the experiment, the dice were loaded, so the only possible outcome was 3 or 9. According to Kahneman, those who rolled 9 said they would sentence her to 8 months in prison, while those who rolled 3 said they would sentence her to 5 months. Such result is warning example of how humans can be subconsciously influenced by the anchor.

1.5.4 Loss Aversion

Tversky and Kahneman (2011) first acknowledged the fascinating human trait of being loss averse. They have found out that losses cause more pain than equivalent gains cause pleasure and that individuals overweigh small probabilities to guard against losses. Kahneman said, "When directly compared to each other, losses loom larger than gains relative to a reference point" (Kahneman and Tversky, 2011, p. 282). Inequality between positive and negative assumptions has an evolutionary history. According to Kahneman (2011, p. 282), "organisms that treat threats as more urgent than opportunities have a better chance to survive and reproduce". The loss aversion bias affects individuals differently when riskless and risky choices occur.

Gain frame (endowment effect)

Endowment (ownership) effect is the example of riskless choice. The endowment effect analyses how ownership affect valuations. The hypothesis states that individuals value possessions they already have more than individuals who do not. The power of endowment effect can be seen through sellers who struggle to sell a commodity because they want more money than consumers are willing to pay. Therefore, it is convenient for sellers to give samples to consumers or let consumers use the product for a limited time since they can create the feeling of ownership.

Loss frame (loss-seeking behaviour)

An example of risky choices is that individuals reject small-scale gambles that have a positive expected value but may involve losses. Generally speaking, loss-seeking behaviour is common in special cases such as certain loss.

Certainty

Individuals are better satisfied with smaller but certain gains over the chance of winning or getting more, but at the same time, they risk losing everything. The same principle is applied when individuals have possibilities to gain certain rewards over the mere chance of larger gains. When dealing with certain losses, that is the only moment when individuals are like to engage in risky behaviour to avoid even greater loss.

When individuals are facing the choice between products or services they know and are satisfied with and products or services that might be better, most of the time, they remain loyal. Consumers do not want to risk using something different, even though it is more likely a better option.

1.5.5 Framing

Framing effect explains how distinctive forms of presenting information may cause different emotions. For example, individuals react more positively when they hear that the chance of survival after surgery is 90%, rather than that mortality after such surgery is 10%. Although it is the same information, because it is presented differently, individuals react in favour of the first statement. The same principle applies to fat-free products. Consumers are more likely to buy the product labelled 90% fat-free, rather than that product that includes 10% fat (Kahneman, 2011).

1.5.6 Questioning rationality and decision-making

The approach of behavioural economists towards rationality is notably distinctive from classical economists' perspective. In general, economics study choices people take under the conditions of scarcity and uncertainty, also consider humans are fully rational (Angner, 2012).

Giergenezer (2001) described the fully rational man as a "Mythical hero who knows the solutions of all mathematical problems and can immediately perform all computations, regardless of how difficult they are". In his book *Bounded Rationality: The Adaptive Toolbox*, he focused on analysing the gap between how economics expect man will behave and how in reality man actually does.

Behavioural economics aims to reconstruct microeconomics on the basis of a more realistic picture of economic decision-making. The truth is, humans are very far from precise computers. Our cognitive capabilities are limited. Also, unlike computers, we have to deal with emotions and mental and physical variables that influence our perceptions (Gigerenzer, 2001).

Humans are not always aware of those variables on a conscious level, although they believe they are acting rationally and in advance. According to Horst and Matthijsen (2013), only 5% of our behaviour is conscious and planned, and the remaining 95% is unconscious. Decisions are mostly automatic, made by emotion, memory and intuition based on the environment we are living in and what we have been taught (Horst and Matthijsen, 2013).

1.5.7 Bounded rationality

Nobel prize laureate for economics sciences (1978) Herbert A. Simon laid the foundation of the theory of bounded rationality. It is important not to confuse this theory with irrationality. Irrationality explains phenomena of human behaviour such as trust in lucky numbers, addiction behaviour or trust in lotteries. However, according to Reinhard Selten, "Behaviour should not be called irrational only because it fails to conform to norms of full rationality. A decision maker who is guided by aspiration adaptation rather than utility maximisation may be entirely rational" (Selten, 1999).

Simon described the theory of bounded rationality as non-optimizing and non-rational decision-making. Three key features describing bounded rationality can summarise Simon's work: the search for alternatives, satisficing, and aspiration adaptation.

Bounded rationality is the situation in which the available information is limited, and therefore uncertainty exists (Simon, 1956). Simon wanted to create a realistic theory of economic decision-making. The economic decision-maker has limited computation capabilities, despite what he/she has to decide, meaning decision-making necessarily involves non-optimizing procedures (Selten, 1999).

Satisficing is the combination of two words: "satisfy" and "suffice". Generally speaking, it is the opposite of optimisation. In other words, optimisation maximises the utility function. On the other hand, satisficing seeks a satisfactory or adequate result rather than the optimal solution. Satisficing is a sequential process that stops the search when the predefined threshold is reached (Simon, 1956). Satisficing is simple and requires limited computation and time (Selten, 1999).

Aspiration level is, according to Selten (1999), ". . . a value of a goal variable which must be reached or surpassed by a satisfactory decision alternative". In other words, aspiration level is a level individuals demand to reach to satisfy certain minimal utility. Outcomes below aspiration level are accepted as failures, while those above the aspiration level are successes. For instance, farmers often choose to cultivate crops that are safe and that produce steady but lower profit instead of crops that could yield greater revenue but are considered "unsafe" to cultivate (Diecidue, 2006).

1.5.8 Irrational behaviour and decoy effect

Economic theory understands individuals as rational and well-informed decision-makers. Those assumptions are very deeply rooted but not necessarily true. In fact, new research shows that what we know about economic man is quite far from reality. Actually, humans rarely ever make rational decisions (Economic Irrationality, 2012). Therefore, decision-making and irrational behaviour are deeply interrelated.

Irrational behaviour in decision-making can be illustrated by an experiment in *Predictably Irrational* by Dan Ariely (2009). He observed an exciting advert on *The Economist*'s website.

The way the advertisement was written might suggest that the rational decision would be to purchase the third option, print and web subscription, since the price is the same as for a

print subscription only. It almost looks like one can purchase the web subscription for free! In fact, the second option (print subscription) is called a decoy option, which nudges prospects towards the third offer. Such model is called good-better-best. The second option was presented to encourage consumers to purchase the more expensive option since they are offered two options for the same price, which makes it easy to compare and choose the better one, and to disregard the first option even if it is half the price. If we remove the decoy option—the print subscription—suddenly it no longer make sense to purchase both print and web subscriptions.

Figure 3 Economist subscription without decoy

Source: (Ariely, 2009)

Figure 4 Economist subscription with decoy

Source: (Ariely, 2009)

Ariely tested 100 students at MIT's Sloan School of Management to determine the influence of the decoy effect on consumers' perception. He gave his student two different offers, the first without the decoy option and the second one with the decoy option. The proportion of students who went for different options when presented with these choices was:

1. Internet-only subscription for $59.—68%
2. Print-and-internet subscription for $125.—32%

1. Internet-only subscription for $59.—16%
2. Print-only subscription for $125.—0%
3. Print-and-Internet subscription for $125.—84%

Decoy effect

The decoy effect is an additional option retailer give customers to choose from. It is presented as a slightly worse option for the product. Humans naturally have tendency to compare to make quick and efficient decisions. Such false options make the decision easier.

The third option, the decoy, in Ariely's experiment was asymmetrically dominated. It was dominated by one alternative on all of the attributes, in this case the attributes were high price and lack of the option to have "Internet subscription" as well. It changed the basis for comparison in that context, and because the students did not have any idea about the real value of each option, they change their preference to what seem to be a better deal after they compared the cost and benefit. In this case, Print only subscription received 0% of students willing to purchase.

According to Ariely (2009), we are always looking at the things around us in relationship to others. We not only tend to compare things with one another, but we also tend to focus on comparing things that are easily comparable and avoid comparing things that are not (Ariely, 2009).

For instance, potential buyers are presented with three buildings for purchase. The price is similar, but two buildings are colonials and one is contemporary. One of the colonials needs roof reconstruction. The greater chance is that buyer will choose the colonial with the better roof. The reason is quite simple. Since the options are similarly desirable, the only difference is that one house (the decoy) needs some repair. Therefore, it is easier to decide between those two, and the last option, in this case the contemporary building, remains out of game (Ariely, 2009).

The asymmetrically dominated decoy is one of the types of dominated and non-dominated alternatives. There exist many more.

The second type of dominated decoy is the **symmetrically dominated alternative**, an alternative that is dominated by all other alternatives in the choice set. For example, a symmetrically dominated alternative would have the highest price and the lowest user rating among all alternatives in a choice set. Additionally, the symmetrically dominated decoy would be

expected to receive little to none of the choice share when included in a choice set because it is inferior to all other alternatives available.

Related research has also examined the effect of including **a non-dominated decoy alternative** that is not dominated by any of the other alternatives in the choice set but is typically viewed by participants as being inferior to at least one other alternative. Such a decoy is referred to as a viable decoy, meaning that it is not dominated by any of the other alternatives and thus may receive some of the market share, but is likely still perceived by the participant as being inferior to at least one of the other (Hartzler, 2012).

2 CHAPTER Pricing Strategies

2.1.1 Introduction

In thesis, I focus on price from a marketing point of view since marketing activities are crucial in business. Schindler (2012) identifies four main categories of marketing activities:

1) product: designing, naming, packaging goods and services that satisfy customers' needs;
2) distribution: making the product available at the times and places that customers want;
3) promotion: communicating about the product and the organization that produces it;
4) pricing: determining what must be given by a customer in return for the product.

Price can be considered as the most important of the four marketing actives mentioned above, since it is the only one which generates company's revenue.

2.1.2 Pricing and price

"How customers perceive the price is as important as the price itself".

- Harvard Business Review, 2017

One of the most crucial marketing activities is pricing and therefore price itself. Schindler (2012) described price as "What is given in return for a product in a commercial exchange". Alternatively, "Price is the quantity of payment or compensation given by one party to another in return for one unit of goods or services" (Parkin, 2017).

Price has a huge impact on consumers' perception. When influencing the perception of price, one can choose whether to lower or maximize the perceived magnitude through a reference price. Both strategies achieve the same effect—increasing the company's profit.

There is no cookie-cutter answer to whether the price should be low or high. Such a decision depends on several variables such as the type of product, the market, the country where the

product is being sold, the government, the economic situation, and the type of consumers we are attracting, also the brand itself.

For instance, low prices are desirable when selling certain type of product, but some consumers might perceive low-priced products as lower quality. It is important for sellers to create a focused market so their price strategies will meet the consumers they want to target (Heda, 2017).

2.1.3 Value

"Everything is worth what its purchaser will pay for it".

- Publilius Syrus, first century B.C.

Value is the cost of production and additional costs associated with a product's sale. Economic value measures the utility the economic agent gains from goods or services. It is measured relative to currency. Customer's perceived value is the worth the good or service has for the consumer, and it affects the willingness to pay. Perceived value is based on the consumers' opinion of what the product's or service/s theoretical utility might be. Every consumer is different. What one will consider valuable might be for another a waste of money (Anderson, 2017).

2.1.4 Pricing strategies

This chapter is focused firstly on classic marketing pricing strategies and secondly on pricing strategies based on behavioural economics insights.

2.1.5 Cost-based pricing

This is a pricing method in which the initial price considers the costs of a product. According to Schindler (2012), "An item's selling price should be greater than what it costs to produce or acquire that item". The price is calculated by adding an amount of money to the product costs. Cost-plus pricing is one form of cost-based pricing. It is calculated as follows:

P = C + added amount
where:
P is price
C is product costs

Such a pricing method is common among companies making customised products.

2.1.6 Value-based pricing

"Value-based pricing is the method of setting a price by which a company calculates and tries to earn the differentiated worth of its product for a particular customer segment when compared to its competitor" (Dholakia, 2016).

There are several rules for using value-based pricing to obtain desirable outcomes.

1) Value-based pricing always focuses on a single segment.
2) It compares one's own product with alternatives.
3) It recognises the product's uniqueness.
4) It adds the right amount to the price (Dholakia, 2016).

2.1.7 Penetration pricing

Penetration pricing is a strategy in which retailers set a low price when launching a new product, often significantly lower than the price of its competitors. The penetration pricing strategy, also called market-minus, is based on the idea that lower prices will attract consumers and help the brand move from unknown to well-known. After some time, retailers usually increase the price to the level of competing products.

It is strategy used to quickly achieve great sales and establish a product in the market. It is based on the assumption that the product does not have a price market segment and buyers are price-sensitive. Also, the market has to be large enough to accommodate low profit margins (McCannell Financial Group, 2016).

2.1.8 Skimming pricing

Skimming pricing is the opposite of penetration pricing. It is used when a new product is launched, but the price is set up high because of the product's uniqueness and benefits to consumers. When the product gets older, the price usually drops. Cell phone companies usually use skimming pricing when launching a new product. It plays on consumers' willingness to pay for premium or cutting-edge technology. After the competitors catch up to the technology, usually the company progressively lowers the price (Bhasin, 2017).

2.2 Behavioural pricing strategies

Behavioural pricing uses pricing strategy and insights from behavioural economics. Behavioural pricing sees a price as a tool for influencing consumers and their behaviour in favour of the seller. When value-based pricing meet irrational consumer psychology the literature refers to as behavioural pricing (Behavioural Pricing, 2012). By influencing decision-making through customers' perceptions, business can achieve greater sales. I focus more deeply on special cases of influencing perception by pricing techniques that behavioural economics include.

2.2.1 Charm pricing

One of the easiest and most popular ways to influence customers' perceptions is to reduce the digit by one. It is called charm pricing. Although the consumers know the true nature of price, they perceive the first number as a key information, and since the first piece of information says the price is significantly lower, they are more likely to buy the product. They anchor perceived magnitude as lower, since the first number says so. This is because our brain stays stuck with the first piece information (the anchor) and significantly ignore the rest of the information. For instance, instead of 15 EUR, it is better to show the price as 14.99 EUR. It also works with numbers ending in 95 or 90. The businesses do not have to use cents to trick consumers. Anchoring works even with whole numbers. According to an experiment conducted by the University of Chicago and MIT, the most prominent sales happened when a women's clothing retailer used the price of 39 USD. Firstly, they set prices for 34 USD, 39 USD and 44 USD. The researchers were amazed by the results because the item sold best when priced at 39 USD (Boachie, 2016).

2.2.2 Irrational Value (Prestige/Premium pricing strategy)

The opposite of charm pricing is prestige pricing. It works on the idea that round numbers are more fluently processed, and therefore, consumers find them more reliable. For instance, prestige pricing suggests it is better to sell products for 100 USD than for 99.99 USD. According to Kuangjie Zhang and Monica Wadhwa in a 2015 study, consumers were more inclined to buy a bottle of champagne when it was priced at 40.00 USD rather than at 39.72 USD or 40.28 USD.

Prestige prices make people feel unique, extraordinary and valued (White, 2017). Also, this technique suggests it is better to sell the product for significantly higher prices. Excellent examples of this strategy are companies such as Apple, Starbucks, Rolex, Nike and Adidas. The theory states that customers will pay higher prices for the right image and will not investigate whether the price accurately reflects the value (White, 2017).

Consumers feel superior and special when they purchase such products because it makes them feel they own something extraordinary. For instance, Rolex watches shows economic status and power. Seeing the watches on another person's hand suggests the individual is rich and can afford such products and thus probably can afford to spend money on other luxurious items such as sports car. It has little to do with the functioning of the actual gadget. It has actually been proven that Seiko watches are as good as Rolexes, but nevertheless, the price is what makes them special to their owners and society (White, 2017).

Black pearls

A possible first use of high price strategy dates to the 20th century. According to Areily (2009), this can be perfectly illustrated by Tahitian black pearls. When they were first discovered, there was not a place in the market for them. This could be considered a gap in a market. Imagine having something nobody knows anything about, does not even know it exists yet, so it is entirely up to the company to decide how to market the product and let consumers perceive the product. The black pearls could be sold as a discounted version of white pearls and the company could wait to see how consumers would respond, or it could choose a different approach and make them appear very special and extraordinary. One very smart businessman understood the potential. He decided to put the black pearls in a window

with extremely expensive gemstones and with outrageously high price tags. This courageous strategy worked perfectly. Women in Manhattan started buying black pearls. He had created a new status symbol - ownership of black pearls as a message that "I can afford such luxury".

According to research, there exists a correlation between price and perceived value. In one experiment, participants were tasting wines. Firstly, they were offered a few options of both cheap and expensive wines. In this case, they were convinced that the expensive wine tasted better then the cheaper one. Interestingly, when consumers tasted cheap wine presented as expensive, they labelled the wine as tastier than the "cheap wine", which was actually expensive. Such experiments demonstrate the power of perception. Humans brain anchored the expensive wine as tastier because the price tag said so. It does not necessarily work with every product, but when we are facing with specialities such as wine, we tend to subconsciously connect expensive with being better.

Also, Ariely (2009) found that participants who paid more for medicine reported the medicine as being strong and felt better sooner than participants who purchased the same but discounted medicine. This is called the placebo effect, which is one of the many biases that tend to influence humans. Such examples illustrate the power of perceiving product as prestige, meaning the product works better. It is extraordinary that such a correlation exists and how it influence the outcome of treatment (Ariely, 2009).

2.2.3 Power of free

"One of the most potent motivators of human behaviour is the fear of loss".

- Davod Hoffeld, 2016

The power of free or the zero price effect describes how the effect of free goods is influencing consumers' decision-making (Shampanier and Ariely, 2007). As mentioned, humans are by nature loss-averse. We try to avoid losses as much as possible. Nowadays, heuristics is activated when consumers are buying products. The consumer has to give up something (money) to gain something else (the product). As we know, losses are perceived as 2 times greater than gains. Therefore, it is completely understandable that consumers enjoy services or products "for free" more.

At first, it might to be perceived as the perfect deal. There is nothing to lose, only something to be gained without wasting precious resources. Therefore, it can be powerful tool used for merchandises, but in some cases, it is disadvantageous to consumers. The issue here is that consumers often overlook better choices just because they can get something for free. For instance, consumers might easily fall for an inconvenient deal just because some service or product is included "for free", like disadvantaged mortgage, a credit card or even a cell phone contract.

Free chocolate, better chocolate

Dan Ariely's experiments, documented in his book *Predictably Irrational* (2009), can demonstrate such issues. He set up a large table in a public building and offered two types of chocolate, Lindt truffles and Hershey's Kisses. During the first experiment, the Lindt truffles cost 15 cents, and the Hershey's Kisses cost 1 cent. The majority of consumers (around 73%) chose Lindt truffles, which is entirely rational, since Lindt truffles are known to have richer and more excellent flavour. During the second experiment, Lindt truffles and Hershey's Kisses were discounted by 1 cent. Therefore, Lindt truffles cost 14 cents, and Kisses was suddenly free of charge. Even though a 1 cent discount is not a dramatic change, since the Kisses were free, it actually made a massive difference in consumers decision-making. Suddenly, 69% of consumers wanted Kisses, and only 31% wanted Lindt truffles. When consumers were faced with a free option, the majority chose the free option because a free item does not carry any risk (Ariely, 2009).

Free shipping

Another excellent example of the power of free is Amazon.com. They started to offer free shipping for purchases over a certain amount. For instance, if someone wanted to buy a single book and the price was not high enough, he/she would have to pay shipping fees, but if the customer bought a certain amount, the shipping was suddenly free of charge. Let us say the book cost $12 and shipping was $4. If the consumer purchased more than $20 worth of merchandise, he/she would not have to pay shipping fees. The offer created the impression that, rather than paying for shipping, it is more convenient to invest more money, which would be lost anyway, in something else, for instance, another book. The idea seems completely rational.

But what if the shipping was not separate, but was included in the price? Would that change consumers' perceptions?

Ariely assumes that some consumers did not want to purchase another book, but because it seems to be a better deal since the purchase offered free shipping, they were likely to buy an extra book, just for the sake of getting free shipping.

The outcome was that Amazon's sales increased tremendously, except in France. This could suggest that French people are probably more rational than others, but the key issue was something else. Instead of offering free shipping, the France division offered shipping for 1 franc, which is roughly 20 cents—basically for free. The truth is consumers did not perceive the promotion as a profitable deal, because consumers have to pay anyway, even thought it is insignificant sum. They would lose money (which is what loss aversion is all about). One can assume that when Amazon.com changed the French promotion to free shipping like in rest of the divisions, sales increased tremendously also. Therefore, free shipping caused dramatic changes (Ariely, 2009).

2.2.4 Hyperbolic discounting

Discounts

When it comes to discounts, things can get really tricky. The key factor is the consumers' perception. If a consumer thinks it is a great deal, he/she is likely to buy a product. Some authors suggest it is better not to discount at all. It often happens that consumers get used to deep discounts and the retailers have to communicate with consumers only through discounts, which may result in a negative spiral of endless discounting. Also, consumers might perceive the reference point as lower thanks to repeated discounts. Professor Akshay Rao states "… consumers are inclined to perceive add-ons such as bonus packs as gains but view price discounts as reductions in losses" (Chen, 2012).

Hyperbolic discounting

"Hyperbolic discounting refers to the tendency for people to increasingly choose a smaller-sooner reward over a larger-later reward as the delay occurs sooner rather than later in time"

(Redden). People choose to wait when offered large rewards in the distant future. When faced with a decision in the present, they avoid waiting as much as possible. It is a human tendency to choose immediate pleasure in exchange for suffering later because we tend to overestimate our future selves. For instance, Liabson (1997) studied how people respond to rewards towards time. He found that people's investment behaviour exhibits patience in the long run and impatience in the short run. According to Liabson, hyperbolic discounting can explain why people have large credit-card debts at high interest rates and pre-retirement wealth growing at a lower interest rate. The rewards provided by buying something today outweigh the displeasure of future payments (Redden, b.r.).

2.2.5 Pain of paying

As we already know, humans are loss-averse, most decision-making is unconscious and humans do not always make rational decisions. The same rules applies for financial decisions. Therefore, people overall do not enjoy spending money, because they experience lose and sense the "pain of paying". Areas in brain associated with physical pain and disgust are activated when it comes to spending money. Making the payment actually worsens the pleasure accomplished from the purchase.

The more we perceive the pain of paying, the less we enjoy the service or product. It is important for sellers to eliminate the "pain of paying" as much as possible to make consumers spend more money.

In 1996, Zellermayer defined the concept of "pain of paying" as "direct and immediate displeasure or pain from the act of making a payment". The pain of paying may decrease the pleasure of making a purchase, or the prospect of it may persuade us not to make the purchase at all (Horst, 2013).

The pain of paying was also examined in 1998 by Prelec and Lowenstein. They find that certain ways of paying are less painful for consumers. If the payment is less transparent and evident, we are not experiencing "pain of paying" as strongly as we would by paying actual money. Using credit cards helps overcome the negative feeling. Therefore, it is in the interest of sellers to encourage consumers to pay by credit or debit card. When consumers have to

pay with money, they do not focus on the pleasure from the product or service, but their attention is drawn to the money they spend.

The pain of paying develop from three factors:

a) salience of the payment form/method;
b) salience of the amount; and
c) timing.

The saliency of the payment form occurs when occurs when we experience losing the money. The saliency of the amount relates to salience of the payment form, because cash payment makes the consumers more aware of the amount then other payment methods. The timing of the payment occurs when we pay after consumption (Horst, 2013).

Another way to overcome the pain of paying is automatic payment. For instance, downloading music from iTunes does not require bank details, because they are already registered, so to make a purchase, consumers just have to press the download button. The purchase is thus less visible, and consumers do not have to provide bank details, which causes the pain of paying.

Uber uses all these techniques to avoid the pain of paying. There is no visual meter or physical payment. Everything is done automatically. It is understandable why so many people choose Uber over taxis.

PRACTICAL PART

3 CHAPTER Analysis of pricing strategies

The purpose of this research is to analyse pricing strategies of a particular company critically and further discuss and propose recommendations. For analysis, the secondary data used has been borrowed from quarterly reports and data collected by surveys conducted by statistical companies. Since the data are secondary, data analysis was conducted.

The thesis analyses the pricing strategies of Apple, Inc. since the company uses many pricing strategies borrowed from behavioural economics, such as premium pricing, reference prices, the pain of paying, and more. Apple is one of the well-known companies using behavioural pricing strategies to influence consumers‘ decision-making. They are an example of how behavioural economics strategies work in real life and how such strategies can at least partially contribute to transforming a small start-up company into a billion-dollar business. I am going to analyse their pricing strategy, especially of iPhone products, since their highest revenue comes from selling mobile devices.

3.1 Introduction

“Think different.”

- Craig Tonimoto

Apple is one of the first tech fairy-tallish start-ups which emerged from a garage project conducted by three friends to successful business. Nowadays, Apple is the world's largest information technology company by revenue and the world's second-largest mobile phone manufacturer after Samsung. Throughout the years Apple happened to become one of the first U.S. companies valued over 600 billion USD. Apple's annual revenue in 2017 was 229 billion USD and possesses a huge product range and also a range of related software, services, accessories, applications, digital content and networking solutions. Apple sells mainly consumer electronics and online services. Apple’s hardware includes the iPhone, tablet iPad,

computer Mac, the iPod, the Apple Watch, the Apple TV, smart speaker HomePod. Apple's software includes macOS, iOS, iTunes, Safari, iLife and iWork. The online services include the iTunes Store, the iOS App Store and Mac App Store, Apple Music, and iCloud.

3.2 History

Apple Inc., formerly Apple Computers Inc., is an American company based in Cupertino California and was founded on April fool's day in 1976 by Steve Jobs, Steve Wozniak and Ronald Wayne, in Steve's parents' garage. The journey from start-up project to successful company was not easy. Apple went through many ups and downs.

The first Apple product was conducted by Steve Wozniak who designed and built computers from scratch. In 1976, he built himself the hardware and software. Name of the product was very simple, Apple I. Steve Wozniak's intention wasn't directed to selling computers, but luckily Steve Jobs saw the opportunity and decide to sell Wozniak's product. The Apple I was just a motherboard with processor and memory. The customers had to build their own case, keyboard and monitor. It was sold for 666.66 USD in 1976 (today it would equal 2 958.29 USD in 2018).

Steve Jobs found angel investor Mike Markkula, who was willing to invest 250 000 USD into the company and became a 3rd partner with 1/3 company's share. In 1977, Steve Wozniak designed a personal computer known as Apple II. In between the CEO of the company was Michael Scott, thanks to Mike Markkula. The Apple II was sold mainly to business customers, thanks to the VisiCalc – spreadsheet software application.

The company entered the exchange stock market in 1980 and within only a day achieved a shares increase by 32%. Thanks to success with the Apple II computer the company gained a name in the world and could expand. Already in 1980, the company employed a few thousand people in Cupertino.

The company almost went bankrupt when Steve Jobs left. The former CEO John Sculley, was not able to keep up with competition. In 1996, Apple bought company NeXT where Jobs worked, and named him CEO. Afterwards, the company slowly started to regain its

position on market. In 1998, the company introduced Mac, three years after the first iPod was sold. In 2007, Apple changed the technology world by introducing iPhone. After Steve Jobs' death, the CEO become Tim Cook. The company become the fastest growing company in the history of US business (Rawlinson, 2017).

3.3 Behavioural segmentation

This chapter is analysing the behavioural segmentation of consumers. The behavioural segmentation is more focused form of consumers segmentation based on decision-making patterns. It focusses less on who the consumers are and more on what consumers actions regarding the product or service really are. The patterns include for instance spending behaviour, consumption, life-style, desired benefits and many others.

3.3.1 Segmentation based on loyalty

According to Montgomerie and Roscoe (2013) the reason behind company success is especially strong brand loyalty and great customer relationship as a result of company's marketing mix and strategy of adding value to their products. Apple's customers are very strongly attached towards the brand and they rarely switch from the Apple to other competitors. Apple mastered the art of appealing towards human needs such as: creativity, respect and belonging to something bigger than ourselves. The company's branding uses minimalistic design, simplicity and recognizes that humans are in core social animals and that we want to be part of a revolution, part of the newest cutting-edge technology, part of something important. Especially the Apple ability to "own consumer" was the reason behind huge expand and grow. The consumers who already possess one of the company's product, often purchase others. The Apple's ecosystem is also company's advantage, since the devices communicate with each other fluently.

Endowment effect

One of the most important part towards consumers loyalty plays endowment effect. According to endowment effect, the individuals who already possess Apple products value them more than individuals who do not. This is also the reason, why Apple can afford to price

their product expensively, since the base of loyal consumers will be interested despite the price. (Giné and Goldberg, 2013)

3.3.2 Purchase behaviour

Consumer behaviour is affected by social, psychological, cultural and personal factors.

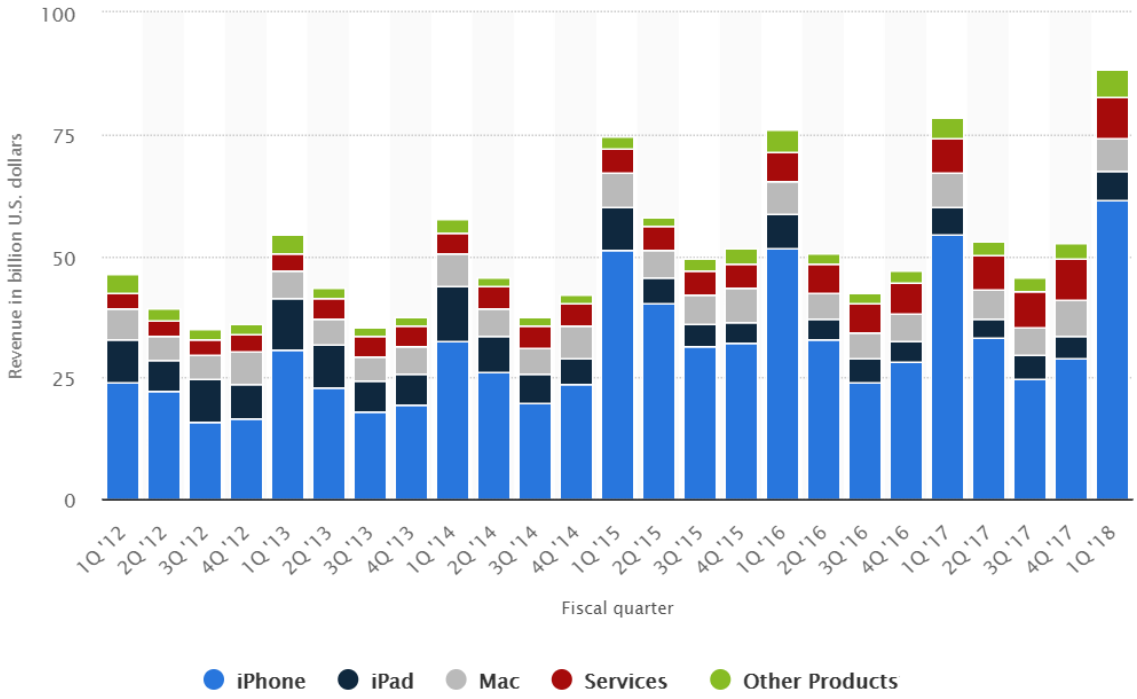
Confirmation bias

One of the market segment Apple is targeting is individuals who crave for social status and declaration (Montgomerie and Roscoe, 2013). By purchasing Apple products, they confirm themselves that they belong to a group of individuals interested in the high-tech market. The ownership of an Apple product confirms their own importance and sense of belonging to a group of individuals who are devoted to Apple products, therefore owning iPhone has more value, than possessing products of the other brands.

Loss aversion

When Apple launched the new iPhone, the company frequently undersupplied its stores. Usually, it is sold out within a few hours and those who did not buy the product in time must wait for weeks in order to be able to purchase newly released product. Why does it work so well? Firstly, it works as free marketing, since every time such occasion occurs, the media are full of messages regarding Apple. Secondly, people are loss averse, therefore the consumers who are interested in buying the product are experiencing anxiety of losing the opportunity to purchase an iPhone in time, since they have to wait weeks for the re-supply (Ordway, 2017).

Table 1 Apple revenue by operating segment



Source: (The Statistics Portal, 2018)[1]

The graph shows the demand is increasing every year. The highest revenue of all time Apple recorded in the first quarter of 2018 and majority of income comes from iPhone sales, where the revenue increased significantly from the other year.

3.4 Pricing models

The following chapter is focused on the company's pricing policy's beginning with classic strategies and continuing into behavioural pricing strategies. Price itself is a very important marketing tool since a pricing policy has strong impact on the company's performance. Right

[1] The Services mentioned in graph include: iTunes, App Store, Mac App Store, iBooks Store, AppleCare, Apple Pay and other services. The Other Products include revenue from: Apple Watch, Beats products, iPod, Apple TV, Beats Electronics and Apple-branded and third-party accessories

pricing strategies demand understanding the market and the structure of the company resulting with a positive effect on a company's revenue and also competitiveness.

3.4.1 Price maintenance

One of the strategies Apple uses is price maintenance. Price maintenance is an agreement between producer and distributor not to sell products under certain minimum price. Usually, distributors have space to decrease prices since the product they are selling has "manufacturer suggested retail price" (MSRP), meaning they buy the product for 100 USD, they are supposed to sell it for 400 USD, but since the price is not fixed terminally, retailers often decrease price and sell product for instance for 200 USD. Such variability is possible when large differences between the wholesale price and what retailers pays to distributor occurs.

Apple has such a gap also, but it is very tiny and do not allow retailers to move with is significantly. The percentage range is guarded secret. So why would retailers carry Apple products? Apple offers retailers' monetary incentives when selling products at or above a certain price called "minimum advertised price" (MAP). Such agreement empowers retailers to make profit and at the same time keep Apple's homogeneous prices (Tabini, 2013).

3.4.2 Skimming price strategy

Skimming price strategy is used to maximize profits in early stage of the product life cycle. Such strategy helps to cover costs of development and the research (Huimin and Hernandez, 2011).

When the new Apple product is launched, it is marketed with relatively high price because of the additional value the product carry with itself like innovation, improvement etc. In early stage of the product life cycle the consumers are less price sensitive. They prefer values such as status, fashion, technology changes and brand itself. The skimming strategy is focused towards early adopters - consumers who are willing to pay for product in order to have it sooner. Later in product lifecycle the prices are lowered, when the demand decreases and product is priced in competitive price range. Apple uses skimming price strategy for most of their product especially for iPhones.

Table 2 Product life cycle of iPhone 6s

Stage	Price
Introduction	649 USD
Growth	450 USD
Maturity	399 USD
Decline	350 USD

Source: (DealNews, b.r.)

The table shows how Apple uses skimming price strategy during the product life cycle. The initial price starts on 649 USD, the discounted price on the end of a lifecycle is 350 USD. Usually such discount occurs when Apple is releasing new devices and the demand after older devices decrease.

3.4.3 Price discrimination

Price discrimination happens when same product is being sold to different consumers for different prices, depending on size of the order or geographical location etc.

Whether Apple uses price discrimination is debatable, but the fact is that price for iPhone X vary significantly country by country. In the following chart, there are compared the USD equivalent of iPhone X prices in several countries for 64 GB model. The price for brand new iPhone X starts at 999 USD for 64 GB and 1 149 USD for 256 GB model in the USA. The exchange rate used was valid for 3rd April 2017.

Table 3 Comparison of iPhone X prices in USA with rest of the world

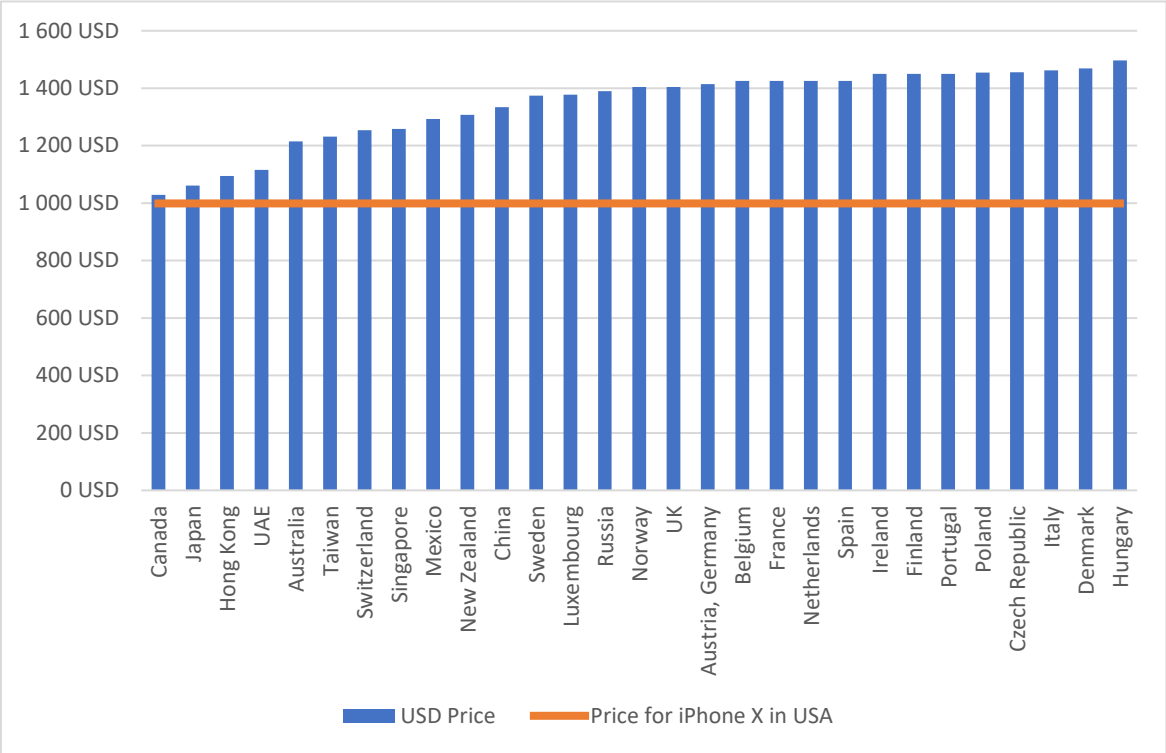
Country	Local Price	USD Price
Canada	1 319 CAD	1 029 USD
Japan	112 800 JPY	1 061 USD
Hong Kong	8 588 HKD	1 094 USD
UAE	4 099 AED	1 116 USD
Australia	1579 AUD	1 215 USD
Taiwan	35 900 TWD	1 231 USD
Switzerland	1 199 CHF	1 254 USD
Singapore	1 648 SGD	1 258 USD
Mexico	23 499 MXN	1 293 USD
New Zealand	1 799 NZD	1 307 USD
China	8 388 CNY	1 334 USD
Sweden	11 495 SEK	1 374 USD
Luxembourg	1 121 EUR	1 378 USD
Russia	79 990 RUB	1 390 USD
Norway	10 990 NOK	1 405 USD

Country	Local Price	USD Price
UK	999 GNP	1 405 USD
Austria, Germany	1 149 EUR	1 414 USD
Belgium	1 159 EUR	1 425 USD
France	1 159 EUR	1 425 USD
Netherlands	1 159 EUR	1 425 USD
Spain	1 159 EUR	1 425 USD
Ireland	1 179 EUR	1 450 USD
Finland	1 179 EUR	1 450 USD
Portugal	1 179 EUR	1 450 USD
Poland	4 979 PLN	1 455 USD
Czech Republic	29 990 CZK	1 456 USD
Italy	1 189 EUR	1 462 USD
Denmark	8 899 DKK	1 469 USD
Hungary	379 990 HUF	1 497 USD
USA	990 USD	990 USD

Source: (Apple, 2018)

The biggest difference between price in the USA was in Hungary, where the cost of iPhone X is 1497 USD, which is almost 50%. The lowest difference is in Canada, where customers might purchase new model for 1 029 USD. Interestingly in the UK, the price is same as in the USA, but in British pounds.

Table 4 The prices of iPhone X across the countries



Source: (Apple, 2018)

How is this possible? The reason behind different price ranges across countries according to Apple is that price for iPhone X in USD dollars are shown without VAT. In the USA, every state has different rate of the taxes so the products are shown without VAT. The taxes are up to 11%, so for instance in New York, customers actually purchase iPhone X for 1 249 USD. Since in Wilmington, Delaware, there are 0% taxes the cost of iPhone actually is 999 USD.

Also according to Apple, the difference between prices are the result of the currency exchange rate, import laws, taxes, business practice and more. It is interesting that for instance in the UK the price is 999 GBP, same as in USA but in British pounds, pointing on possibility, that more than issues with laws and taxes, it is part of Apple price discrimination strategy. The price discrimination allows company to target consumers who have different price elasticities of demand.

3.5 Behavioural pricing and strategies

In order to maximize company's profit, the fastest way is through the pricing. According to study published in the Harvard Business Review even 1% change in price can increase profits by 11% (Varn, 1992). The right pricing strategy will effectively boost revenue and behavioural pricing is one of those strategies which is not difficult to use and work wonders when used properly.

This chapter is focused more in depth towards Apple's usage of behavioural pricing strategies and discuss whether adopting thus strategy have positive impact on company revenue.

3.5.1 Pain of paying

In 2015 Apple first introduced Apple Pay, digital wallet and mobile payment. Apple pay allows users to make payments via iPhone, Apple Watch, iPad or Mac (Apple, 2018).

According to Apple, Apple Pay is used by 16% of iPhones owners, about 127 million people around the world. The number is growing rapidly, but the company does not hurry to enter other markets. Most of the users are in the United States where less than 40 million people use it. Outside of North America, the service operates in Western Europe, Russia, China, or Australia. The service supports more than 2700 banks, as well as the number of apps where Apple can pay. In the past, however, the service had a problem with large retail chains trying to push through their own mobile wallets. Apple Pay still does not work in the Czech Republic, where it is possible to use Google Pay.

Apple Pay greatly reduces the pain of paying by making the payments less salient. The user once fills credit card (or debit card) information into an app and can immediately start using Apple Pay by unlocking and confirming transaction with thumbprint or face recognition.

The reason why the pain of paying is almost none when using Apple Pay is, that as mentioned in previous chapters, when the consumer does not see money being spent, parts in the brain responsible for pain are less active, therefore consumers do not feel the unpleasant feelings of anxiety over loosing. But when the consumer is supposed to use a thumbprint or face recognition in order to finish purchase, it makes the consumer feel like he/she is paying

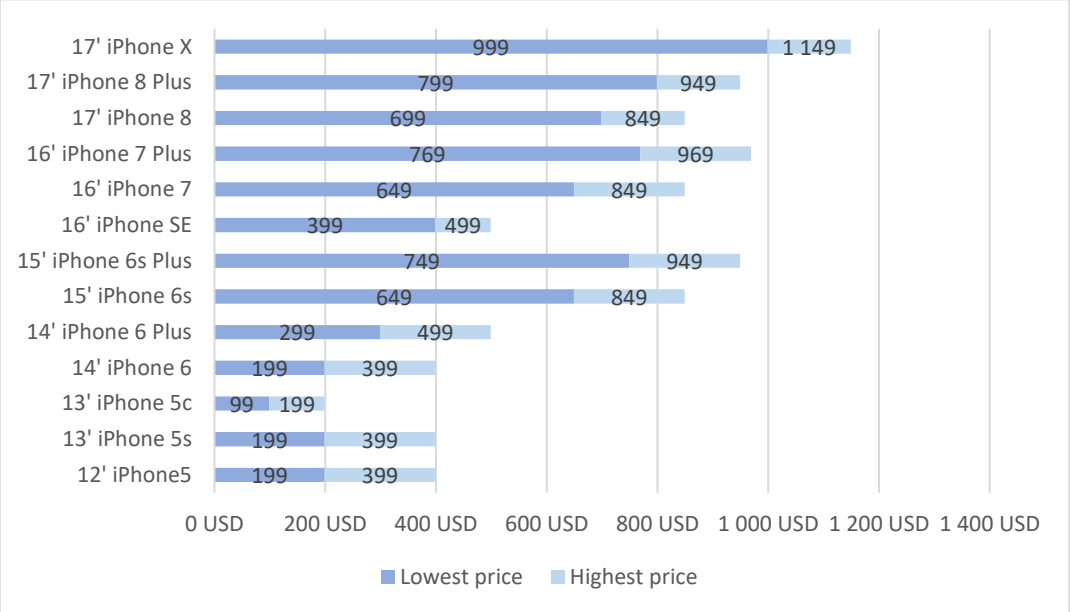
with identity more than actual money. Also, consumers have connected the smart phones with non-financial activities, making it even less painful.

On the other hand, when Apple Pay is connected with a credit card instead of debit card, it can create a very dangerous feature for users. The credit card is well known to ease consumers into overspending with postponing payments. With almost painless purchase, it can trigger consumers' willingness to spend excessive amount of money. Such conclusion is supported by study conducted by Le Bras (2017), where according to survey he determined the that cashless payment are easier to use, but stimulate overconsumption of individuals.

3.5.2 Charm pricing

The charm pricing (psychological pricing) is based on the observation that people, tend to start reading the numbers from the left and paying more attention to them while ignoring the last digits on the right. (Thaler, 2016). The consumers perceive 399 closer to 300 than to 400. Apple uses exclusively charm pricing as one of the pricing strategies.

Table 5 iPhone prices



Source: (Apple, 2018)

It might seem to be contradictory to other policies Apple uses. According to a study (Asamoah, 2011) price ending has a significant influence on level of sales. The retailers who

focus on high quality and expensive products usually use even prices, which should dismiss the connection between lower price and lower quality. Apple on the other hand uses high price strategy and at the same time the company is using odd prices. When the company wants to be exclusive, why would they choose psychological pricing, which should evoke a smaller price in perception of consumers?

It is part of Apple's strategic policy. Those techniques are complementary, together are targeting to create great range of consumers. Apple does not only attract only wealthy businessmen, but also youngsters and children, so it is in the interest of Apple to segment the market properly and set the prices in order to attract consumers from each segment of the market, that is also the reason why in USA the company is offering 2 years contract with mobile providers, so the product are available to more consumers, not only the prise insensitive one.

3.5.3 Anchoring and reference prices

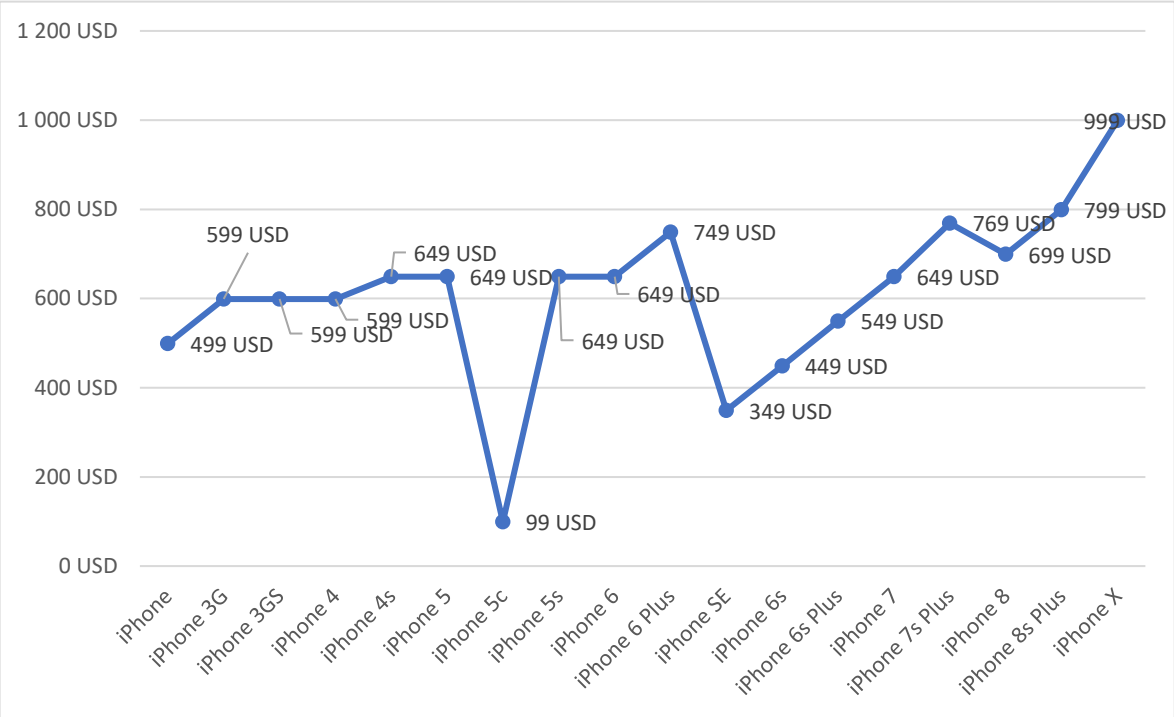
Consumers' willingness to pay is affected by observed prices and can be influenced by anchoring. Anchoring works as a bias towards value and, therefore, can influence purchasing decisions. Decision-making is influenced by quantity limits, suggestive selling, and multiple-unit pricing, which all contribute to increases in purchase quantities (Wansink, 1998). The anchoring is triggered when individuals rely on System 2 decision-making mentioned in the first chapter. The consumers consciously reason arguments against the anchor; however, System 2 is more easily influenced since individuals recall the data connected with anchoring easier (Kahneman, 2011). In order avoid the influence of anchoring, opposite thinking by consumers is recommended.

According to Thaler, consumers need reference prices to be able to decide whether the product/service value is worth the purchase. The initial reference price can be artificially high, and yet consumers are unable to tell whether the price corresponds to the item's true value and whether the price is a discount or a reasonable price. Apple is accused of launching its product for an artificially high reference price, as can be seen in Table 5. Since the company lowered the price so quickly after its initial release, the price drop was perceived as a discount, not a reference price. However, the paradox is that the discounted price was closer to the true value of the product. Apple could have started selling the iPhone for 399 USD, but

the company decided to try and create a reference price first, so that consumers had a comparison, as it was the company's first iPhone launched.

According to research conducted by the Pricing Society, the anchor Apple used is called "Sequential price anchoring", where the company adopts a high price policy in some cases for a limited amount of time. Such strategy attracts consumers whose are willing to pay a premium price in order to experience the product sooner. When sales start to decline, or sooner, prices are lowered sequentially, so they attract more price sensitive consumers and, therefore, improve sales. The company can benefit from such an approach by achieving a competitive advantage ahead of competitors. According to *The Pricing Advisor*, "a key benefit of this approach is that additional margins realized could potentially be utilized to create 'brand differentiation' and achieve competitive advantages ahead of competitor product launch." (The Pricing Advisor, 2010).

Table 6 iPhone entry-level pricing in USD

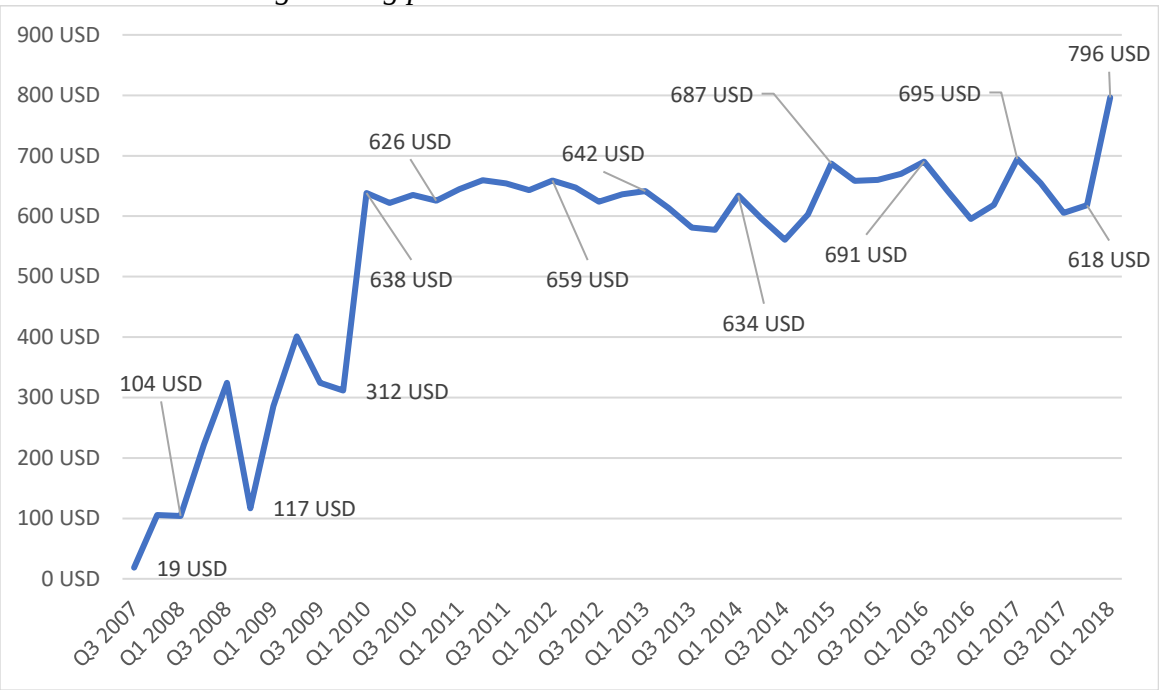


Source: Apple's financial report, (Apple, 2018)

The graph shows a pattern of price growing with each new model. The company adopted stable pricing with first four models, but afterwards, started to change the reference price for upgraded devices. The iPhone 4s is an upgraded version of the iPhone 4; therefore, it costs over 100 USD more. The company released a couple of less expensive devices such as the

iPhone SE and iPhone 5c. Lately, Apple's strategy is focused more on higher prices in exchange for technological progress, new design, better camera, and other features.

Table 7 iPhone average selling price



Source: Apple's financial report, (Apple, 2018)

The average selling price (ASP) of iPhone devices peaks usually in the first quarter, which for Apple is the last three months of previous calendar year and includes the holiday season. Therefore, the highest revenue and the highest selling price are usually observed in Q1, where loyal consumers are also the first to purchase the product.

Table 8 Average selling price

Quarter	Q1 2008	Q1 2009	Q1 2010	Q1 2011	Q1 2012	Q1 2013	Q1 2014	Q1 2015	Q1 2016	Q1 2017	Q1 2018
ASP (USD)	104	286	638	645	659	642	634	687	691	695	796
Annual ASP growth (USD)		182	353	6	14	-18	7	3	3	4	102

Source: Apple's financial report, (Apple, 2018)

The average selling price indicates how much money the manufacturer is receiving on average for their phones sales. Usually, the ASP differs from the advertised selling price, especially in the mobile phone industry. Since Apple is a product driven company, the information regarding financial performance is calculated by ASP. The importance of ASP is also because the greatest profitability comes from iPhone sales (in Q1 around 70%).

The downside of anchoring is that it can also operate against a company. For instance, when Apple launched the first iPhone on 30 June 2007, the company decided to price the new device at 599 USD for the 8GB model (732 USD in 2018 dollars). According to Apple reports, over 270,000 devices were sold in the first 30 hours. The company established the initial anchor by presenting the reference price thus affecting consumers' perceptions of price acceptance towards iPhones. The high price was interpreted as a sign of quality, ground-breaking technology improvements, social status, etc. Only two months after launching the new product, Apple decided to cut the price by 200 USD and start selling the iPhone for 399 USD. Many consumers were upset with Apple's decision to decrease the price shortly after its release. The timing was too short, and Apple's former CEO Steve Jobs reacted with a public apology and offered existing consumers 100 USD credit for any Apple products. Such behaviour borders between price discrimination and pricing error. After the backlash, the company adopted a policy of reducing prices the year after releasing a new product. The timing in case of anchoring is very important.

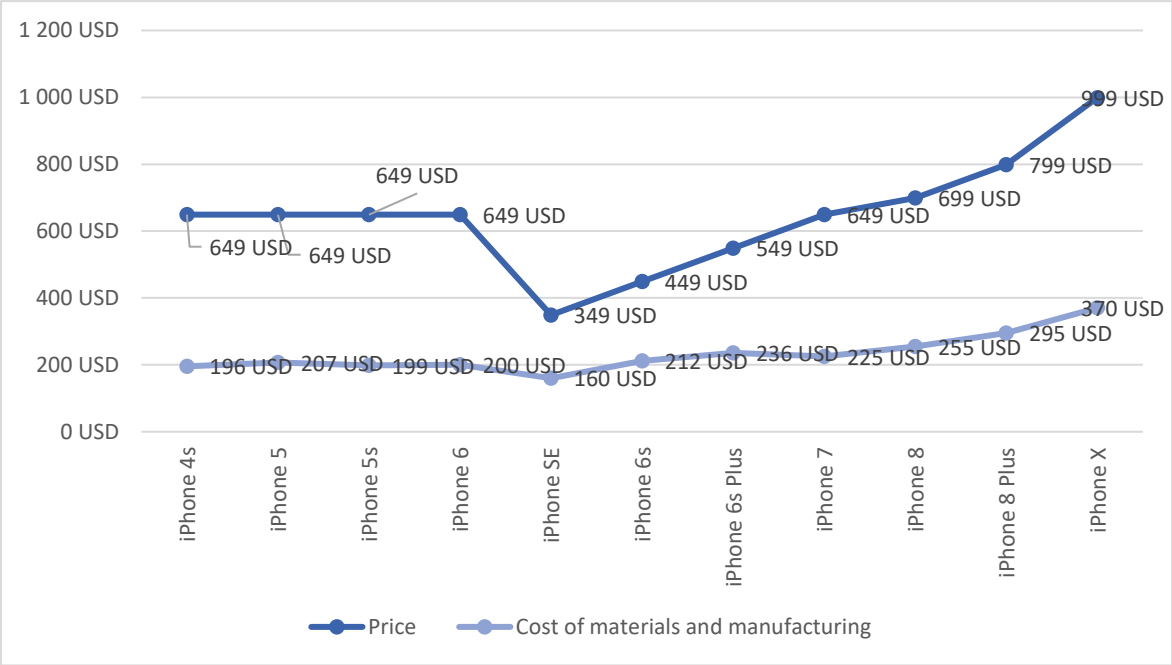
3.5.4 Prestige pricing

How do people perceive an expensive product/service? Generally speaking, when consumers are charged more to obtain a product or service, they appreciate the product/service more rather than if they had paid less. They perceive the higher price as an indicator of greater quality/value.

Consumers who are attracted by prestige pricing are typically the ones with or wanting to gain higher social status. They seek satisfaction and desire for a prestige product or service. For such consumers, the quality and price are proportional, and the price is linked to self-worth. An excellent example of prestige pricing is the last model of the iPhone, the iPhone X, with price tag 999 USD. It is exclusive not just because it is the peak of mobile technology, but also for its unavailability, as only a limited number of individuals can afford it. For price insensitive consumers, the iPhone X also carries the emotional value from possessing an expensive product, meaning that the product is priced more for its value rather than cost. In fact, consumers do not have a clear idea whether the value of the product or service responds to its price, as presented on the graph below.

Table 9 shows the estimated cost of materials and manufacturing for the iPhone compared to its entry price. The data are provided by HIS Markit, a global information provider. The estimation does not include research, development, logistics, marketing, or other additional costs.

Table 9 Comparison between the price and estimated manufacturing costs



Source: HIS Markit

The graph shows the difference between the price iPhone is sold for and the cost of making the device. The greatest difference is between their latest device, the iPhone X, where the estimated gross profit is 697 USD, almost 63% of the cost. Apple manages to produce an expensive device for a relatively small cost. Usually, in the manufacturing industries, the mark up is around 30% (Corporate Finance, 2016). Apple accomplishes this because the nature of the product allows Apple to use Prestige pricing. Apple could have initially priced the iPhone lower, but instead decided to adopt a high price policy, anchoring the initial price to be expensive in comparison with the competition.

Table 10 Apple quarterly reports

Quarter	iPhone units in thousand	Annual growth	ASP	ASP growth (USD)	Revenue iPhone sales in thousand	Revenue growth
Q1 2009	4 363	88.47%	285.81 USD	-	1 247	-
Q1 2010	8 737	100.25%	638.43 USD	352.62	5 578	347.31%
Q1 2011	16 235	85.82%	644.78 USD	6.35	10 468	87.67%
Q1 2012	37 044	128.17%	659.14 USD	14.36	24 417	133.25%
Q1 2013	47 789	29.01%	641.57 USD	-17.56	30 660	25.57%
Q1 2014	51 250	7.24%	634.11 USD	-7.46	32 498	5.99%
Q1 2015	74 468	45.30%	687.30 USD	53.19	51 182	57.49%
Q1 2016	74 779	0.42%	690.50 USD	3.20	51 635	0.89%
Q1 2017	78 290	4.70%	694.57 USD	4.07 USD	54 378	5.31%
Q1 2018	77 316	-1.24%	796.42 USD	101.85 USD	61 576	13.24%

Source: Apple's financial report, (Apple, 2018)

According to the quarterly reports, the ASP grew from Q1 2018 to Q1 2017 more than 100 USD, and Apple's total revenue grew over 13% from iPhone sales alone, despite fewer units sold. The data shows that adapting high price levels positively influenced revenue, although it did not increase the number of consumers purchasing the device.

Price elasticity

Price elasticity of the demand helps to analyse consumers' willingness to pay. The price elasticity or inelasticity helps to undercover the strategy company should adopt in order to increase total revenue, since the price has a direct impact on company's profit (Pettinger, 2017).

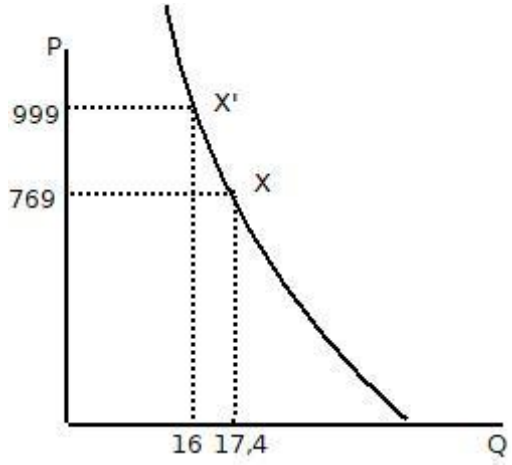
The most expensive devices in 2017 and 2016 were used to determine the elasticity of iPhone demand. The quantity of the demanded models is the global estimate from the Strategy analytics since Apple does not share quantity sold information for each model due to competitive advantage. Two models, the iPhone X and the iPhone 7 Plus, were compared.

Table 11 Price elasticity of the demand

Model	iPhone X	iPhone 7 Plus
Quantity	16 000 000	17 400 000
Price	999 USD	769 USD
PED	-0.27	

Source: (Strategy Analytics, 2018)

Figure 5 Price elasticity of the demand



According to Pettinger (2017), inelastic demand happens when change in price causes a smaller percentage change in demand. On the other hand, elastic demand happens when increasing a price causes greater percentage fall in demand.

In this case, the price increases about 29% and the quantity demanded falls about 8%; therefore, the PED = -8/29= -0.27. The PED is greater than -1; thus it can be referred to as inelastic demand. Figure 5 shows how the price affects demanded quantity. The higher prices created a new equilibrium x', so even when overall quantity demanded fell, as shown in Table 12 (-1.24%), the total revenue still increased considerably (13%).

Table 12 Comparison of price and revenue growth

2016		ASP
iPhone 7	649	**694**
iPhone 7s Plus	769	

2017		
iPhone 8	699	**796**
iPhone 8s Plus	799	
iPhone X	999	

Price growth	14.82%
Revenue growth – iPhone sales	13.00%
Overall revenue growth	9.65%
iPhone units sold	-1.24%

Source: Apple's financial report, (Apple, 2018)

The reason for inelastic demand could be the fact that iPhone has no substitutes for its operating system. If the consumer relies on having iOS, there are only Apple devices available. Also, the strong brand loyalty plays important role in creating inelastic demand.

The elasticity also differs when product enter to different product life-cycle. For instance, the price elasticity of iPhone 6s in last product-life cycle is elastic.

Table 13 Price elasticity of iPhone 6s

Year	Model	Price in USD	Market share
2017	iPhone 6s	320	6%
2018	iPhone 6s	220	9%

Source: (Strategy Analytics, 2018)

The price decreased about 37% and market share increased about 3%; therefore, the PED = -37/3 = -12,33. The PED is smaller than -1; therefore the demand become elastic.
The elasticity depends on many factors such as life-cycle, necessity, income, substitutes, advertisement, brand loyalty and many others. The inelastic demand can change when the product enters different product-life cycles.

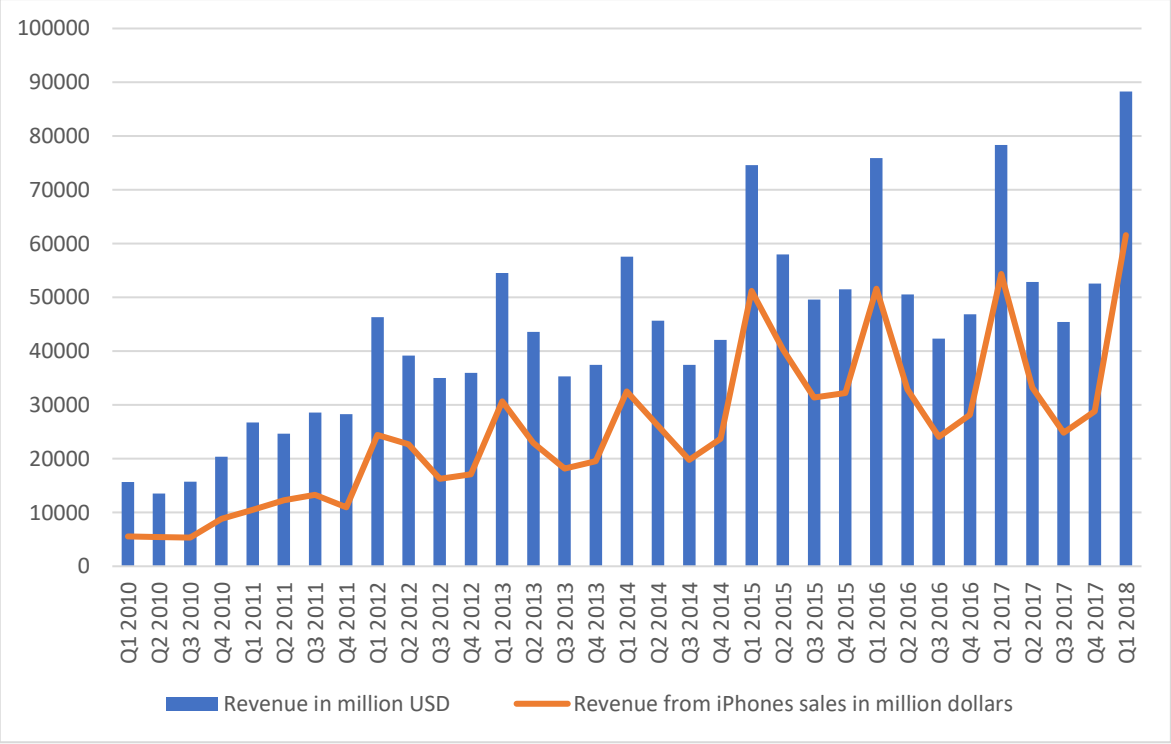
At this moment the elasticity of iPhone X is inelastic, meaning that increase in price resulted in increase in total revenue. The company's ability to create device with inelastic demand depends in this case on ability to add value to its product and support strong loyalty towards the brand.

Whether the company can retain inelastic demand by increasing prices with future models depends on plenty of factors. The consumers price sensitivity needs to be addressed as well as the amount of technological improvement compared with previous models.

High price policy and impact on revenue

The idea of the positive impact of the high price policy on revenue is also supported by a study conducted by Deonir De Toni et al. (2016) where the hypothesis "Adopting high price levels has a direct and positive impact on profit margin" was confirmed. The study was directed mainly towards value-based pricing, but since behavioural pricing has a very tight connection with value-based pricing, the results are applicable towards behavioural pricing as well.

Table 14 Apple revenue throughout the quarters

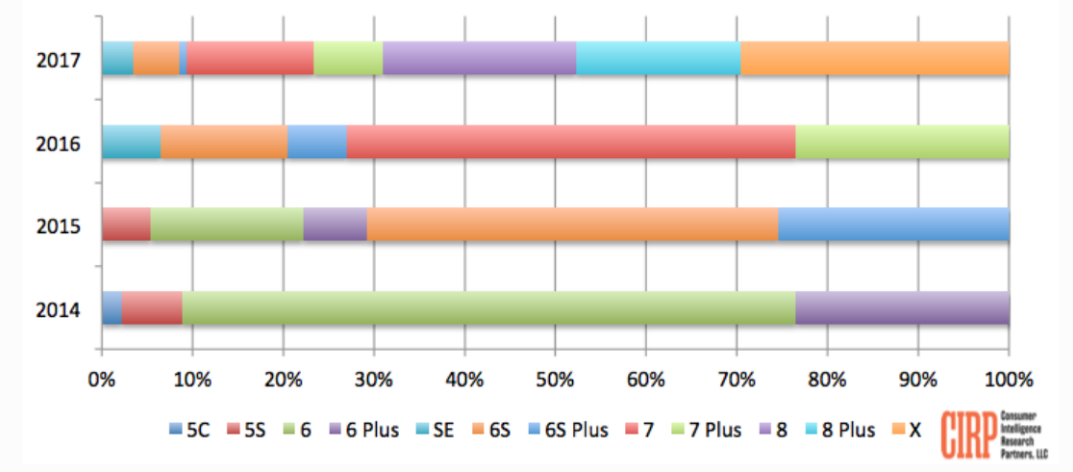


Source: Apple's financial report

The graph shows the revenue has an upward trend over time, as do the prices of iPhones. The highest revenue Apple recorded was in the first quarter of 2018, and a majority of income comes from iPhone sales. In Q1 2018, annual revenue grew about 12% compared with Q1 2017 and about 13% growth from iPhone sales alone. As usual, Q2 is weaker than Q1, and a further decline is expected. Apple adopted a strategy of a strong first quarter following with weaker quarters, with a significant decline in revenue from Q1 and Q4.

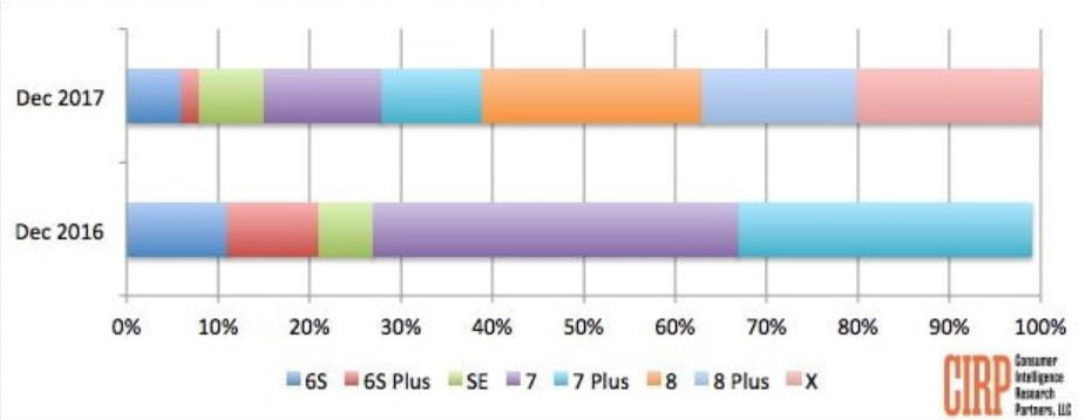
Another reason behind the growth in income from iPhone sales, despite fewer items sold, is the launch of three new expensive products: iPhone 8, iPhone 8 Plus, and the iPhone X. The premise that a higher ASP is based on increasing prices is also supported by research conducted by CIRP. Table 15 indicates the percentage of US consumers who purchased iPhone devices within 30 days after the launch of each new phone. In 2017 the greatest percentage of sales was from the iPhone X.

Table 15 Percentage of sold devices in the USA within 30 days after release



Source: (CIRP, 2018)

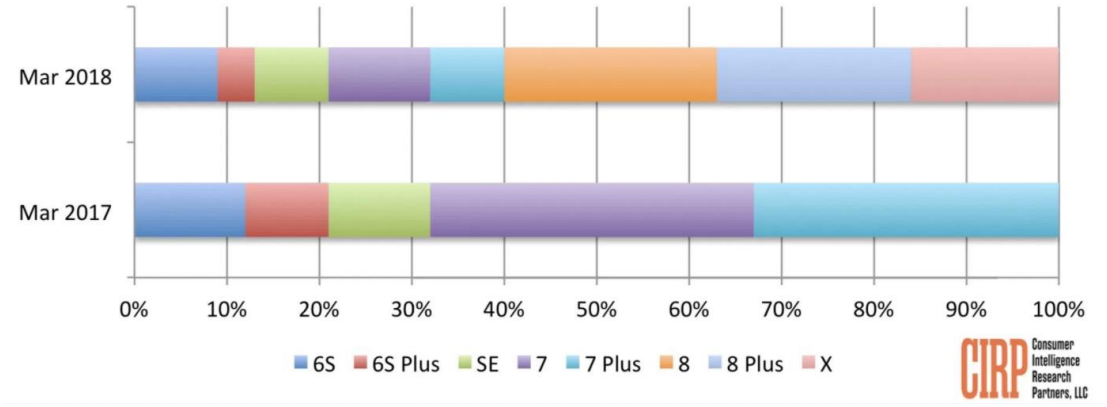
Table 16 Percentage of each iPhone model sold in Q1 2018 in the USA



Source: (CIRP, 2018)

Q1 2018 shows that 23% of total iPhone sales were made from the iPhone 8, 21% by the iPhone 8 Plus, and 20% by the iPhone X. Despite the fact that almost 1 million fewer iPhone units were sold compared to the previous quarter, the ASP increased over 100 USD compared to Q1 2017. The revenue also increased by 9.65%, which is more than 7 billion USD in growth from iPhone sales only.

Table 17 Percentage of each iPhone model sold in Q2 2018 in the USA



Source: (CIRP, 2018)

In Q2 2018, iPhone X sales declined, and more iPhone 8 and iPhone 8 Plus units were sold. The ASP in Q2 2018 dropped about 100 USD to 654.98 USD, the same as Q2 2017. Since ASP is correlated with revenue, there was also a decrease in revenue recorded.

3.5.5 Decoy effect

The way Apple, Inc. presents their latest devices also trigger allegations that the company is using the decoy effect. To be able to refer to a pricing strategy as decoy pricing, certain conditions must be met. Behavioural economics recognises symmetrical domination, asymmetrical domination and non-dominated decoy alternative (viable decoy). If dominance is not perceived, the effect is unlikely to occur.

As mentioned in 1st chapter, in order to be able to refer to option as a decoy, the option would have to have almost 0% of consumers willing to buy it in favour of the other options. According to a survey conducted by CIRP, consumers did not favour any option prevalently as can be seen in Table 12 and Table 13, where the percentage of consumers buying the devices was divided almost equally in case of iPhone 8, iPhone 8 Plus and iPhone X.

It is true that how the products are presented by Apple resembles some of the characteristics of the decoy effect. There is option iPhone 8 (A-), iPhone 8 Plus (A), and iPhone X (B).

Option A (iPhone 8 Plus) is more expensive than A- (iPhone 8), with greater size but same performance; therefore, the option are almost equal except the higher price. Option B is the most expensive and also the best device in terms of performance and additional features compared with Options A and A-. According to decoy effect theory, the consumers like to compare things which are easy to compare and avoid comparing things which are not. The consumers can easily compare iPhone 8 and 8 Plus. They cannot compare the iPhone X so easily since it differs heavily from the other options in terms of price and performance.

There is, therefore, not asymmetrical domination, but a resemblance of non-dominative decoy alternative. The consumers, according to the survey, did not prefer any of the options heavily, nor did they disprove any of these options; therefore the decoy option was not confirmed. In order to be able to refer to the pricing as decoy pricing, little to none of the shares of the market can be in connection with the product.

Discussion

The gathered data allowed an investigation of the effectiveness of behavioural pricing strategies based on critical review of literature related to behavioural economics and behavioural pricing. The literature review helped to understand the principle mechanisms behind consumers' decision-making and behavioural pricing. The insights could be used as a competitive advantage for other companies as well.

The analysed company, Apple, Inc., uses many neo-classical pricing policies with prevalence for value-based pricing. From behavioural pricing strategies, the analysed were: price charming (the usage of odd prices), irrational value (the difference between actual worth and price of an expensive good), and pain for paying (avoiding the pain of paying through contactless payment, using fingerprints or face recognition). The usage of a decoy effect was not confirmed since the essential criteria were not met.

The company reported the strongest quarter of all time, Q1 2018, which is the launch of the iPhone X, the most expensive device for an entry-level phone the company had ever created. The price analysis confirmed the connection between a higher price and a positive impact on average selling price per unit, increasing overall revenue for Apple since the iPhone currently contributes 70% to total revenue. Before the launch of the iPhone X, the annual ASP growth was relatively flat (about 4 USD), and the revenue had declined compared with the previous year. It is safe to assume that the iPhone X with its high price – 999 USD (without VAT) - was smart strategic move, saving the company from further revenue decline.

The reason why Apple is so successful is the strong connection between the brand and the perceived value. The consumers who are purchasing Apple products are paying mainly for the value connected to the brand. The company anchored its value based on prices from the very beginning, which allowed them to use prices to their advantage, creating additional profit from the large gap between the actual cost and price. Consumers are used to the high price policy and translate the price as evidence of the value, technological improvement, and others characteristics.

Table 18 Global Smartphone Marketshare (% of Total)

Global Smartphone Marketshare (% of Total)	Q1 '18
1. Apple iPhone X	4.6%
2. Apple iPhone 8	3.6%
3. Apple iPhone 8 Plus	2.4%
4. Apple iPhone 7	1.6%
5. Xiaomi Redmi 5A	1.6%
6. Samsung Galaxy S9 Plus	1.5%
Rest of Total Market	84.6%
Total	100.0%

Source: (Mawston, 2018)

The chart shows the prevalence of market share for individual devices is in favour of Apple devices especially the iPhone X, showing that despite the high price, consumers are willing to buy them more than other, less expensive devices. The consumers overcome the psychological boundary of 1,000 USD; thus the strategy was successful, improve the overall revenue and ASP for Apple.

Recommendation

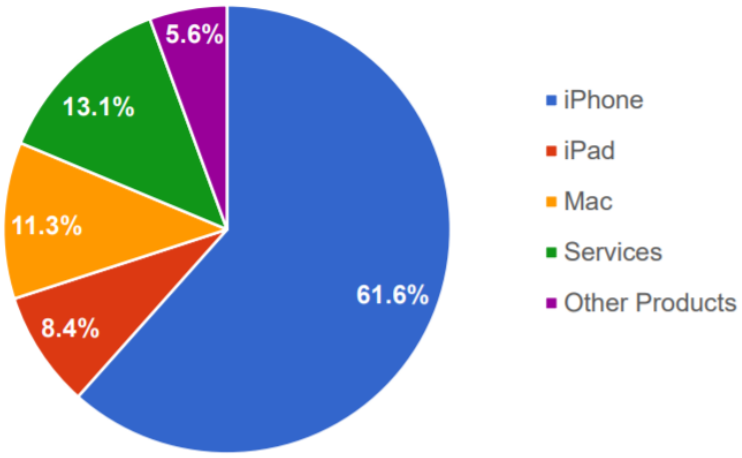
The analysis revealed some interesting ways Apple uses pricing strategies. Overall, Apple uses neo-classical and behavioural pricing strategies with an alliance. According to the analysis, the company made a great move by setting prices higher with a newly launched product in comparison with other years and models, and it seems they should continue this strategy. Surely, it is not only the pricing that made the company successful but also the devices themselves. The iPhone is currently their most successful product with largest revenue share.

At what point will Apple reach the peak pricing for the next iPhone? Is Apple able to increase prices for next model even more? As the data shows, the company steadily increases prices throughout the years and slowly changes the reference price for the models. At this point, the most expensive device for entry-level price is iPhone X for almost 1000 USD, the reference price is set high; therefore if the company decides to launch device for example for 600 USD, it will be suddenly perceived as cheap in comparison with reference price. The major increase in prices is unlikely to occur, since 1000 USD represents certain psychological barrier. The price acceptance towards price growth would vary depending on factors such as

household income, the additional value, the technological improvement or the lack of substitutes. If the perceived value is worth the price, the consumers will buy the product as long as they will be able to afford it. If the company is not going to make any major adjustment in terms of technology, the price should stay on the same level as iPhone X, since the perceived worth of the product would also stay the same.

Apart from the pricing strategy, the company could have lessened the over-dependence on iPhone sales since a major part of their revenue comes from those. In 2017, Apple received about 70% of their revenue just from iPhone sales alone. The iPhone can be considered Apple's cash cow, and it is the most successful device Apple ever introduced, since the greatest revenue share belongs to Apple sales. In 2014, the iPhone generated over 55% of the company's total revenue. In 2015, it was over 66%. The issue with over-dependence was clearly visible when in 2016, revenue declined, mainly due to a 12% decline in iPhone sales.

Figure 10 Apple's revenue breakdown by product in 2016



Source: Apple's financial report

The company should focus on diversification of its revenue because consumers may change their preference for products or competitors might overtake the market with ground-breaking technology. In that case, unfortunately, none of the pricing strategies will help the company to stay on top of the technology market. There are many factors the company cannot influence; therefore, they should focus on broadening their portfolio. Additionally, the market

seems to be saturated, and the overall purchases of mobile devices have decreased globally, as consumers do not find it appealing to upgrade their devices, since the mobile devices changes only in camera performance, and not in any major technologic features, which might cause issues in the future, unless competitors or the company alone would bring some major technological revolution (Tibken, 2018).

Conclusion

The aim of the thesis was to create a comprehensive overview of issues related to behavioural economics, to confirm or disprove an interrelationship between behavioural economics and consumers' decision-making and also to answer the question of whether using behavioural economics might help a company increase its profits. In the thesis, the author analyse pricing strategies with emphasis on behavioural economics on a company and propose effective utilizations of behavioural theories in response to consumers' behaviour and decision-making.

The analysed company is Apple Inc., since it is a well-known company that uses behavioural policies on top of the neo-classical policies on pricing and market segmentation. The company focuses on behavioural segmentation of the market specifically on decision-making patterns and consumers' actions, so its marketing is targeted more towards the needs of the company and less towards those of the consumers. As Steve Jobs once said: “A lot of time, people do not know what they want until you show it to them”. Studying Apple's pricing techniques also revealed that apart from the classical policies, Apple uses behavioural pricing strategies.

One of the techniques the company is using is avoiding the pain of paying through Apple Pay, by which the company successfully managed to create an easier way of paying in which the payment is connected with credit card or debit card details, so consumers do not have to spend time filling out forms. Apple used a similar technique with iTunes and its applications store, so Apple Pay is another upgrade towards making payments less unpleasant.

Other behavioural policies analysed were anchoring, irrational value and charm pricing, according to insight from behavioural research mentioned in the practical part. As the most successful strategies according to analysis are the mix of anchoring, charm pricing and “irrational value” or alternatively “prestige pricing”. The analysis shows that despite the low cost of production, the company chooses to set their prices high and anchored itself as expensive in comparison with competitors. The prestige pricing and strong consumer loyalty influenced price elasticity of demand to become inelastic, therefore by increasing the price

the company mange to increase total revenue as well, since the greatest revenue share comes from iPhone sales predominantly.

Of course, it is not only the behavioural pricing strategy that helped, but on top of neo-classical policies, it enriches the marketing portfolio and created a powerful tool for influencing decision-making in the company's favour.

The usage of decoy effect was not confirmed since according to a survey conducted by CIRP the ratio of consumers who bought new devices were divided almost equally with no prevalence on of the models, which is a crucial condition towards symmetrical/asymmetrical dominance or non-dominance.

The downgrade of behavioural economics, which needs to be addressed is that only limited studies are available on this subject because the field is quite young and still evolving and more research needs to be conducted. The studies which have been conducted, were usually done on Ivy League universities or labs. To create a field that is recognised by professionals, more research needs to be done to broaden the spectrum of individuals and situations so the outcomes can be acknowledged.

The importance of further study of behavioural economics is following. First, it focusses on revealing how decision-making works and questions human rationality. It helps uncover subconscious motives that individuals are driven by. Understanding the way individuals are making decisions and are biased can help not only the company increase its revenue, but also consumers be more aware of their behaviour, since most of the behaviour are learned patterns that have little to do with unbiased decision-making. The potential of behavioural economics is also to nudge individuals to make the "right" decisions about health care, savings, education, jobs, etc., easier. Second, knowledge obtained from behavioural economics could predict the future in the financial sector. Information about how individuals usually respond to certain situations can be helpful when planning future steps. For instance, the economic crises could have been revealed in advance thanks to insight regarding bias behaviour like overconfidence biases that partly triggered the economic crisis in 2008. But it can be used also for predicting the consumer behaviour towards price acceptance, so the companies can more easily use right price strategies.

In conclusion, behavioural economics should get more attention from public and educational institutions. The insight gained from the field might be helpful for companies to improve pricing strategies and influence consumer decision-making. As this study reveals, the proper usage of behavioural policies does increase revenue and therefore help improve the performance of businesses.

Bibliography

ANDERSON, James and James NARUS, 2017. Business Marketing: Understand What Customers Value. *Harvard Business Review* [online]. USA: Harvard Business School Publishing [cit. 2018-03-22]. Available from: https://hbr.org/1998/11/business-marketing-understand-what-customers-value

ANGNER, Erik, 2012. *A Course in Behavioral Economics*. New York: Palgrave Macmillan. ISBN 9780230304543.

Apple [online], 2018. USA [cit. 2018-05-13]. Available from: https://www.apple.com

ARIELY, Dan, 2009. *Predictably irrational: the hidden forces that shape our decisions*. 1st. rev. and expanded ed. New York: Harper Collins Publishers. ISBN 978-0-06-185454-5.

ASAMOAH, E.S. and M. CHOVANCOVÁ, 2011. *The Influence of Price Endings on Consumer Behavior: An Application of the Psychology of Perception* [online]. 7. University of Tomas Bata in Zlin [cit. 2018-05-07]. Available from: https://acta.mendelu.cz/media/pdf/actaun_2011059070029.pdf

BAR-GILL, Oren, 2008. *The Behavioral Economics of Consumer Contracts* [online]. Minn. L. Rev., **92**, 749-1966. [cit. 2018-04-10].

Behavioural Pricing: Rational Marketing for Irrational Consumers, 2012. *The Journal of Professional Pricing* [online]. (3), 5 [cit. 2018-05-07]. Available from: http://media.pricingsociety.com/publications/Behavioural_Pricing_Rational_Marketing_for_Irrational_Consumers.pdf?elq=15d0cb09625e4a3d9949bfe86d89c4cd&elqCampaignId=56

BHASIN, Hithesh, 2017. : Skimming price. *Marekting 91* [online]. [cit. 2018-03-22]. Available from: https://www.marketing91.com/skimming-price/

BOACHIE, Pius, 2016. 5 Strategies of 'Psychological Pricing'. *Entrepreneur* [online]. [cit. 2018-03-09]. Available from: https://www.entrepreneur.com/article/279464

COMMITTEE, Nobel, 2017. Richard H. Thaler: Integrating Economics with Psychology. *Nobel Prize in Economics documents* [online]. (1), 39 [cit. 2018-03-06]. Available from: https://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/2017/advanced-economicsciences2017.pdf

DealNews [online], b.r. [cit. 2018-05-13]. Available from: https://www.dealnews.com

DHAMI, Sanjit, 2016. *The Foundations of Behavioral Economic Analysis*. First edition. New York: Oxford University Press. ISBN 978–0–19– 871553–5.

DHOLAKIA, Utpal, 2016. A Quick Guide to Value-Based Pricing. *Harvard Business Review* [online]. USA: Harvard Business School Publishing [cit. 2018-03-22]. Available from: https://hbr.org/2016/08/a-quick-guide-to-value-based-pricing

DIECIDUE, Enrico and Jeroen VAN DE VEN, 2006. *Aspiration Level, Probability of Success and Failure, and Expected Utility* [online]. Amsterdam: University of Amsterdam [cit. 2018-03-21]. Available from: https://faculty.insead.edu/diecidue/papers/al-sept-06.pdf
Economic Irrationality, 2012. *Conceptual Mathematics* [online]. [cit. 2018-03-08]. Available from: http://conceptualmath.org/philo/econ_irrationality.htm

GIGERENZER, Gerd, ed. and Reinhard SELTEN, ed., 2001. *Bounded Rationality: The Adaptive Toolbox*. Cambridge, Mass.: MIT Press. Dahlem workshop reports. ISBN 978-0-262-57164-7.

HARLEY, Aurora, 2016. Prospect Theory and Loss Aversion: How Users Make Decisions. *Nielsen Norman Group* [online]. USA [cit. 2018-03-21]. Available from: https://www.nngroup.com/articles/prospect-theory/

HARTZLER, Beth, 2012. *Decoy Effects in a Consumer Search Task* [online]. In: . s. 141 [cit. 2018-05-07].
HEDA, Sandeep, Stephen MEWBORN and Stephen CAIN, 2017. How Customers Perceive a Price Is as Important as the Price Itself. *Harvard Business Review* [online]. USA: Harvard

Business School Publishin [cit. 2018-03-22]. Available from: https://hbr.org/2017/01/how-customers-perceive-a-price-is-as-important-as-the-price-itself

HORST, Frank and Ester MATTHIJSEN, 2013. The Irrationality of Payment Behaviour. *Occasional Studies* [online]. **2**(4), 64 [cit. 2018-03-14]. Available from: https://www.dnb.nl/binaries/OS%201104%20WEB_tcm46-294816.pdf

CHEN, Haipeng, 2012. *When More is Less: The Impact of Base Value Neglect on Consumers' Preferences for Bonus Packs over Price Discounts*. **76**, 64 s.

KAHNEMAN, Daniel, 2011. *Thinking, Fast and Slow*. 1st ed. New York: Farrar, Straus and Giroux. ISBN 978-0-374-27563-1.

KAHNEMAN, Daniel and Amos TVERSKY, 1979. *Prospect Theory: An Analysis of Decision Under Risk: An Analysis of Decision Under Risk* [online]. Econometrica, **47**(2), 263 s. [cit. 2018-04-23]. DOI: 10.2307/1914185. ISSN 1468-0262. Available from: http://courses.washington.edu/pbafhall/514/514%20Readings/ProspectTheory.pdf

MAWSTON, Niel, 2018. Apple iPhone X Becomes World's No.1 Smartphone Model in Q1 2018. *Strategy Analytics* [online]. [cit. 2018-05-07]. Available from: https://www.strategyanalytics.com/access-services/devices/mobile-phones/smartphone/smartphone-model-tracker/reports/report-detail/apple-iphone-x-becomes-world-s-best-selling-smartphone-model-in-q1-2018#.WvCCfOqsY2w

MCCANNELL FINANCIAL GROUP, 2016. Increase Profitability Through Market Penetration. *The Marketing Report* [online]. [cit. 2018-03-25]. Available from: http://www.mfg.ca/documents/increase_profitability.pdf

MONTGOMERIE, Johnna and Samuel ROSCOEB, 2013. Owning the Consumer: Getting to the Core of the Apple Business Model. *Accounting Forum* [online]. UK, **4**(37), 290-299 [cit. 2018-05-13]. DOI: https://doi.org/10.1016/j.accfor.2013.06.003. Available from: https://www.sciencedirect.com/science/article/pii/S015599821300032X

ORDWAY, Phil, 2017. *Prospect Theory and Loss Aversion* [online]. [cit. 2018-05-13]. Available from: https://moiglobal.com/prospect-theory-and-loss-aversion/

PARKIN, Michael, 2017. *Microeconomics: 101Facts*. 11. Content Technologies. ISBN 9780321178572.

PETTINGER, Tejvan, 2018. Diminishing Marginal Utility of Income and Wealth. *Economics Help* [online]. [cit. 2018-04-23]. Available from: https://www.economicshelp.org/blog/12309/concepts/diminishing-marginal-utility-of-income-and-wealth/

RAWLINSON, Nik, 2017. History of Apple: The Story of Steve Jobs and The Company He Founded. *Macworld* [online]. [cit. 2018-04-10]. Available from: https://www.macworld.co.uk/feature/apple/history-of-apple-steve-jobs-mac-3606104/

REDDEN, Joseph, b.r. Hyperbolic Discounting. *Journal of Economic Literature* [online]. **40**(2), 6 [cit. 2018-03-20]. Available from: http://www.behaviorlab.org/Papers/Hyperbolic.pdf

REHMAN, Tansif, 2016. Historical context of behavioral economics. *Intellectual Economics* [online]. **10**(2), 128-132 [cit. 2017-12-05]. DOI: 10.1016/j.intele.2017.03.006. ISSN 18228011. Available from: http://linkinghub.elsevier.com/retrieve/pii/S1822801116300297

SELTEN, Reinhard, 1999. *What is Bounded Rationality?* [online]. 25 [cit. 2018-03-08]. Available from: https://pdfs.semanticscholar.org/8237/d1a44256daddab131078bd09d622216c90d8.pdf

SHIRAEV, Eric and David LEVY, 2016. *Cross-Cultural Psychology: Critical Thinking and Contemporary Applications*. 6. Routledge. ISBN 1138668389.

SCHINDLER, Robert, 2012. *Pricing Strategies: A Marketing Approach*. USA: Sage Publications. ISBN 9781412964746.

STEVENSON, Angus, 2010. *Oxford Dictionary of English*. 3rd ed. /. New York, NY: Oxford University Press. ISBN 978-0199571123.

Strategy Analytics: Apple iPhone X Becomes World's Best-Selling Smartphone Model in Q1 2018, 2018. *Strategy Analytics* [online]. [cit. 2018-05-13]. Available from: https://www.strategyanalytics.com/access-services/devices/mobile-phones/smartphone/smartphone-model-tracker/reports#.WvgGweqsY2x

SUNSTEIN, Cass, 2012. Show Me the Money. *The New Republic* [online]. USA [cit. 2018-03-21]. Available from: https://newrepublic.com/article/108153/show-me-the-money

TABINI, Marco, 2013. How Apple Sets Its Prices. *Macworld* [online]. [cit. 2018-04-10]. Available from: https://www.macworld.com/article/2024257/how-apple-sets-its-prices.html

THALER, Richard, 2016. Behavioral Economics: Past, Present, and Future. *American Economic Review* [online]. **106**(7), 1577-1600 [cit. 2017-12-05]. DOI: 10.1257/aer.106.7.1577. ISSN 0002-8282. Available from: http://pubs.aeaweb.org/doi/10.1257/aer.106.7.1577

THE PRICING ADVISOR, 2010. *The Pricing Advisor: Price Anchoring for 'New to Market' Products* [online]. 3 [cit. 2018-05-07]. Available from: https://pricingsociety.com/wp-content/uploads/2016/07/Price_Anchoring_for_New_to_Market_Products.pdf

The Statistics Portal, 2018. *Statista: The Statistics Portal* [online]. [cit. 2018-04-25]. Available from: https://www.statista.com/statistics/382136/quarterly-segments-revenue-of-apple/

TIBKEN, Shara, 2018. Smartphone sales fall for first time ever, says Gartner. *CNET magazine* [online]. [cit. 2018-05-13]. Available from: https://www.cnet.com/news/smartphone-sales-fell-for-the-first-time-ever-in-q4-apple-samsung-gartner/

TONI, Deonir De, Gabriel Sperandio MILAN, Fabiano LARENTIS and Evandro Busata SACIOLOTO, 2016. *Pricing strategies and levels and their impact on corporate profitability*. Universidade Caxias do Sul, Bento Gon¸calves, RS, Brazil.

WHITE, Walter, 2017. Prestige Pricing: Pros & Cons and Examples. *Inevitable Steps* [online]. [cit. 2018-03-22]. Available from: http://inevitablesteps.com/marketing/prestige-pricing/

List of Figures

List of Tables

Evidence výpůjček

Prohlášení:

Dávám svolení k půjčování této bakalářské práce. Uživatel potvrzuje svým podpisem, že bude tuto práci řádně citovat v seznamu použité literatury.

Jméno a příjmení: Kristýna Knorová

V Praze dne: 18. 05. 2018 Podpis:

Jméno	**Oddělení/ Pracoviště**	**Datum**	**Podpis**