



CATÓLICA
LISBON
BUSINESS & ECONOMICS

HaaS: Drivers that customers value in a smartphone subscription model base

João Bacalhau

Dissertation written under the supervision of Professor Miguel
Rita

Dissertation submitted in partial fulfilment of requirements for the
MSc in Management with Specialization in Strategic Marketing, at the
Universidade Católica Portuguesa, June 2023.

Abstract

Title: Haas: Drivers that customers value in a smartphone subscription model base.

Author: João Bacalhau

Subscription models are more and more well-liked by consumers as smartphone usage rises. For a smartphone subscription model program to maintain long-term client loyalty and profitability, it is crucial to comprehend the motivations that customers appreciate. The present paper aims to understand customers' motivations in a smartphone subscription model.

This paper investigates the factors that motivate consumers to subscribe to smartphone subscription models. Data was collected through surveys and in-depth interviews. The main goal of this research was to develop a thorough understanding of consumer values and preferences with regard to smartphones and potential future smartphone subscription models. The survey and interviews revealed information about the features and factors that customers value in smartphones and revealed their preferences for subscription-based business models.

Through interviews and surveys, it uncovers key factors influencing consumer choices in the smartphone market and provides valuable insights into potential features of smartphone subscription models. According to the research, factors such as smartphone build quality, camera quality, and ecosystem compatibility have a big impact on buying decisions. In addition to appreciating the convenience and financial advantages of recurring upgrades without significant upfront costs, consumers value upgrade options and early access to new products. Competitive pricing and brand loyalty play crucial roles in selecting a smartphone subscription service.

Keywords: Smartphone; subscription models; hardware as a service; loyalty; consumer behaviour; customer relationship.

Sumário Executivo

Título: *Haas: Drivers* que os consumidores valorizam num modelo de subscrição de smartphone.

Autor: João Bacalhau

Modelos de subscrição estão cada vez mais populares entre os consumidores à medida que o uso de smartphones aumenta. De forma que um modelo de subscrição de smartphones mantenha os consumidores fiéis a longo prazo, é crucial compreender as suas motivações. O presente

relatório tem como objetivo estudar as motivações dos consumidores num modelo de subscrição de smartphones.

Este *paper* visa estudar os fatores que motivam os consumidores a aderir a um modelo de subscrição de smartphones. Os dados foram recolhidos através de questionário e entrevistas. O objetivo principal desta pesquisa foi desenvolver uma compreensão aprofundada dos valores e preferências dos consumidores em relação aos smartphones e potenciais futuros modelos de subscrição. O questionário e as entrevistas revelaram informações sobre as características e os fatores que os clientes valorizam nos smartphones e revelaram as suas preferências por modelos de negócio baseados em subscrições.

Através das entrevistas e do questionário, são identificados fatores-chave que influenciam as escolhas dos consumidores no mercado de smartphones e fornecem informações valiosas sobre as características potenciais dos modelos de subscrição de smartphones. De acordo com o estudo, fatores como a qualidade do smartphone e compatibilidade com o ecossistema têm um grande impacto nas decisões de compra. Além de apreciarem a conveniência e as vantagens financeiras de atualizações periódicas sem custos iniciais significativos, os consumidores valorizam a possibilidade de atualizar o hardware e o acesso antecipado a novos produtos. Preços competitivos e fidelidade à marca desempenham papéis cruciais na seleção de um serviço de subscrição de smartphone.

Palavras-chave: Smartphone; modelos de subscrição; hardware como um serviço; fidelidade; comportamento do consumidor; relacionamento com o consumidor.

Table of Contents

Abstract	2
Sumário Executivo	2
1. Introduction	8
1.1. Research Question	8
1.2. Thesis Structure	8
2. Literature Review	9
2.1. Smartphone industry	9
2.1.1. Consumer Behaviour	9
2.1.1.1. Brand Loyalty	9
2.1.1.2. Social Influence	10
2.1.1.3. Challenges and Opportunities	10
2.2. Subscriptions Models	10
2.2.1. Hardware-as-a-Service	11
2.3. Customer Relationship	12
2.3.1. Customer Loyalty	12
2.3.2. Convenience	13
2.3.3. Brand Community	13
2.4. Environmental Impact	14
2.5. Utilitarian VS Hedonic Goods	14
3. Hypothesis Development	14
3.1. Hedonic or utilitarian smartphones	15
3.2. Loyalty	15
3.3. Environmental implications	15
3.4. Consumer behaviour	16
3.5. Lock-in strategy / network effects	16
4. Research Methodology	16

4.1. Research Method	16
4.1.1. Primary Data	16
4.1.2. Secondary Data	17
4.2. In-depth Interviews	17
4.2.1. Interview Protocol	17
4.2.2. Interview Sampling Strategy	18
4.3. Survey	18
4.3.1. Survey Sample Characterization	19
4.3.2. Scale Reliability	19
4.3.3. Descriptive Statistics	19
4.3.3.1. Conjoint Analysis	23
4.3.4. SPSS Analysis	25
5. Main Findings	27
5.1. In-depth Interview	27
5.2. Survey	29
6. Limitations	30
7. Conclusions	31
8. Appendix	33
8.1. Interview	34
8.1.1. Interview Script	34
8.1.2. Interview Transcriptions	36
8.2. Survey	50
8.2.1. Survey Sample Characterization	55
8.2.2. Descriptive Statistics	58
9. References	65

Table Index

Table 1 - Interview Sample	34
Table 2 - Gender	55
Table 3 - Employment Status	56
Table 4 - Age	56
Table 5 - Level of education.....	56
Table 6 - Country of residence	57
Table 7 - Scale Reliability	57
Table 8 - What brand of smartphone do you currently use	58
Table 9 - Under what circumstances do you use your smartphone.....	58
Table 10 - Rank the following features from the most important to the less important	58
Table 12 - "For me a smartphone must have ..."	59
Table 11 - What made you choose your current smartphone.....	59
Table 14 - What is the primary purpose of your smartphone \diamond would you sign-up for a smartphone subscription	60
Table 13 - What would lead you to terminate your smartphone subscription service	60
Table 15 - How important is the environment for you.....	60
Table 16 - When choosing a new smartphone how important is the sustainable business model of the company.....	60
Table 19 - Overall, how satisfied are you with your smartphone brand \diamond Would you sign-up for a smartphone subscription	61
Table 18 - What factors do you value the most in an ideal subscription service	61
Table 17 - Would you be willing to pay a bit more if the brand had a significant positive impact for the environment.....	61
Table 20 - Brand.....	61
Table 21 - Smartphone Model.....	62
Table 22 - Camera Quality	62
Table 23 - Price	62
Table 24 - Battery Life	62
Table 25 - Storage Capacity	63
Table 26 - Chi-square tests for H1 and H1a.....	63
Table 27 - Symmetric measures for H1 and H1a	63
Table 28 - Chi-square test for H4.....	63
Table 29 - Chi-square test for H4a	64
Table 30 - Chi-square test for H8.....	64
Table 31 - Symmetric measures for H8.....	64

Graphic Index

Graphic 1 - Number of smartphone subscriptions worldwide from 2016 to 2021, with forecasts from 2022 to 2027 ...	33
Graphic 2 - Top reasons customers cite for preferring subscriptions over perpetual offerings.....	33
Graphic 3 - What made you choose your current smartphone.....	59

1. Introduction

With the growing usage of smartphones, subscription models have become increasingly popular among customers. However, it is essential to understand the drivers that customers value in their smartphone subscription model program to ensure long-term customer loyalty and profitability.

1.1. Research Question

The following research questions will be addressed:

“What are the drivers that customers value in their smartphone subscription-model program.”

“What are the barriers to not subscribe in a smartphone subscription-model program.”

In order to address this question, the focus of analysis will be on the main drivers that customer value in a subscription model program. The study’s purpose is to understand customers’ motivations in a smartphone subscription model. Additionally, is relevant to understand what the barriers for customers are to not subscribe a smartphone subscription model program. Consumer perception is an important area of discussion when choosing a right way to market a business model (Laukkanen, 2016; Robertson, 2017) but it has not yet been sufficiently studied in relation to subscription models (Baek & Kim, 2022). There is limited knowledge of whether consumers’ behaviour differs across different types of subscription services (Chen & Shang, 2018; Bischof et al, 2020; Bray et al, 2021).

1.2. Thesis Structure

The present study will be organised in six different chapters. The first chapter covers the review of literature. Here, topics such as the smartphone industry, brand loyalty, subscription models, customer loyalty, and environmental impact, among others, were thoroughly addressed with the goal of first, providing a context to the research, developing a theoretical framework, and giving support and strengthening the hypothesis. The second chapter covers the hypothesis development. In this chapter a hypothesis development was created with the purpose of developing alternative assumptions to be able to forecast the relationship that exists between two or more variables. Chapter 3 covers the research methodology. Chapter 4 present the

discussion regarding the empirical findings of the two parts of the methodological study. Finally, chapters 5 and 6 give a conclusion, outlining its limitations.

2. Literature Review

2.1. Smartphone industry

Devices offering telephony and computing features were developed in the 1970s, it was not until the end of 2006, when the Blackberry was introduced onto the market by RIM, that the smartphone became a commercially successful product (Battaglia et al., 2014). Apple entered the market in 2007 with the sale of the first iPhone model, and soon after (June 2008), Samsung produced the Samsung Instinct, a direct iPhone rival. Since then, market rivalry has been fierce both among incumbents and between incumbents and new entrants.

Since 2008, the smartphone business has been constantly evolving and expanding, both in terms of market size and the number of models and manufacturers. By the end of 2020, 78.05 percent of the world's population were smartphone users. With many people using more than one smartphone, the actual number of smartphone subscriptions exceeds the number of smartphone users. According to O'Dea (2022), as of 2021, smartphone users are using an estimated 6.23 billion smartphone subscriptions¹, which is expected to climb to 7.7 billion by 2027 (Graphic 1).

2.1.1. Consumer Behaviour

2.1.1.1. Brand Loyalty

Research exploring the drivers of brand-purchasing intentions in the cell phone industry is now taking shape (Petruzzellis, 2010; Riyath and Musthafa, 2014), and therefore according to the literature, the general consensus is that branding becomes progressively relevant as an abundant supply of cell phone products become available in the market (Petruzzellis, 2010).

A brand's image is an essential factor of brand equity, (Aaker, 1991). Keller, (1993) defined brand image as a summation of brand associations in the memory of the consumer which leads him towards brand perception and brand association including brand attributes, brand benefits and brand attitude. Safitri & Purnamasari (2018) states that brand loyalty is the customer relationship that is measured against a brand. The study of Supertini et al. (2020) found that loyalty has a significant effect on customer satisfaction. From customer commitment, loyalty

¹ <https://www.statista.com/statistics/330695/number-of-smartphone-users-worldwide/>

relates to the main choice to buy (Panigrahi et al., 2021). Furthermore, loyal customers spend more over a longer period of time. In the case of apparel resellers, customers buy twice as much after 2-3 years compared to their first orders as a new customer (Reichheld & Schefer, 2000).

2.1.1.2.Social Influence

Peer pressure and social influence may also impact customer attitudes about the smartphone industry. Social influence related to an individual may cause another person to change his or her feelings, attitudes, and behaviour, intentionally or unintentionally (Rashotte, 2007). Their expectations for future purchase behaviour will be affected by their past experience as they are heavily dependent on smartphones because of the underlying motives (Kuhlmeier and Knight, 2005).

2.1.1.3.Challenges and Opportunities

The smartphone industry is extremely competitive, making it difficult for new entrants to establish themselves. The growing cost of smartphones is also an issue since many users are opting to keep their phones for extended periods of time. For instance, according to Bhatia (2022), the average replacement cycle for iPhone users has increased to more than 30 months. Growing smartphone demand in emerging nations, as well as the increased use of 5G technology, provide substantial potential for the smartphone industry.

2.2.Subscriptions Models

There is not a clear, widely agreed-upon definition of a subscription-based business model because of the lack of academic research on this type of business model (Letht, 2016). Lumpkin & Dess (2004) describe a subscription-based model as an Internet business model in which businesses charge a flat fee for providing a service or proprietary content.

Customers can acquire access to a product or service by paying a monthly or annual charge (Cslik, et al., 2014). Subscription-based business models can be seen as a new business model innovation (Tani, et al., 2022), as a game changer or breakthrough which can reshape the traditional market models and drastically influence consumers' behaviour.

The most obvious benefit of the subscription model is that it increases the lifetime value of a customer (Warrillow, 2015). According to McKinsey, during the last few years, the choice for on-premise software subscription has risen from 63 percent to 82 percent. The simplicity and

flexibility (Graphic 2) of the subscription model are the main reasons cited for this shift (Chao, et al., 2017).

Today's consumers go beyond purchasing what the company has made and want the company to take a closer look at what the consumer wants (Baek & Kim, 2022). Companies are changing their business model from "users for free" to "customers for a fee" (Nguyen, 2005).

The global outbreak of Covid-19 has further accelerated the spread of subscription-based businesses across the globe (Kestenbaum, 2020). According to a recent industry report, subscription-based businesses have grown by an enormous 437% in the last decade (Zuora, 2021).

A subscription model may have a context effect that can sufficiently stimulate customers' perceptions and affect their purchase behaviour such that their experiences with existing products and services are converted into lasting relationships rather than one-time sales (Baek & Kim, 2022). In order for subscriptions to work in the long term, it is important that customers perceive the benefits of the system and never feel that they have been tricked (Cslik, et al., 2014). Harris & Goode (2004) suggest that trust is the most important driver. According to Han & Hyun (2013), trust is considered a key to maintaining sustainability in the relationship between customers and suppliers.

2.2.1. Hardware-as-a-Service

Hardware-as-a-Service or HaaS, is a business model in which a company delivers hardware products/services to consumers for a monthly subscription rather than requiring a substantial upfront purchase.

The benefits of HaaS include lower upfront costs, predictable monthly expenses, access to cutting-edge hardware technology, and the ability to scale up or down as needed. Moreover, a recurring revenue model like this will add stability and foster long-term customer-relationships.²

This kind of business model is particularly powerful when combined with Lock-in effects. The Lock-in strategy in which a company "locks in" customers by creating a high barrier to switching to a competitor has, over the past decade, gained new ground with New Economy companies (Kaplan & Norton, 2003). For instance, Gillette was one of the first companies to employ a Lock-in business model successfully. Customers are obliged to purchase Gillette-brand blades, which carry a higher margin. The disposable razor blades (consumables) generate

² <https://predictabledesigns.com/hardware-companies-with-recurring-revenue-business-model/>

recurring revenue with high margins and offset any losses incurred by the initial low-priced offer of the handle (Cslik, et al., 2014). Farrell & Klemperer (2007) points out that lock-in has two important factors which hinder customers from switching to other suppliers: switching costs and network effects.

Another benefit is the minimization of the replacement cycle. Smartphone replacement cycles are getting longer due to hardware improvements. For example, as mentioned before, the average replacement cycle for iPhone users has increased to more than 30 months. A hardware subscription is one way of ensuring that consumers upgrade to the latest and best equipment on a regular basis.

2.3.Customer Relationship

A subscription model presupposes a long-term provider-customer relationship (Liu, et al., 2020). Moreover, according to Warrillow (2015), a subscription business gives a direct relationship with customers and an ability to track their preferences in real time.

By adding a subscription offering, companies create a legion of customers who interact with their businesses each month. Every interaction point creates an additional chance for businesses to sell more to existing consumers. Furthermore, corporations have the opportunity to up-sell other products and services to their consumers beyond their basic subscription, being this a great occasion to talk and maintain the relationship with customers.

2.3.1. Customer Loyalty

According to subscription-logistics supplier CaaStle statistics, one apparel player revealed that its rental members spent 2.5 times more than their conventional brand (non-subscription) customers.

In the Customer Loyalty model, customers are retained, and loyalty is achieved by providing value over and above the basic products or services (e.g. through incentive-based programmes). An example of an incentive-based program is gamification. Gamification appears to be an emerging trend in many sectors, including business, organizational management, in-service training, health, social policy, and education. (Caponetto et al, 2014). The term refers to the “*use of game mechanics in non-gaming contexts*” (Deterding et al, 2011) or, rather, to “*the phenomenon of creating gameful experiences*” (Koivisto & Hamari, 2014).

The goal is to develop a relationship with customers and foster their loyalty by rewarding them with special offers or discounts. (Cslik, et al., 2014).

Customers are frequently motivated by a 'bargain hunting' instinct, which is often more important than an offer of financial rewards for joining a loyalty program. Furthermore, another alternative is to operate a cashback program, which is similar to the preceding loyalty programs except that clients receive money back on their purchases rather than tangible prizes or rebates. As mentioned before, trust plays an important role in loyalty, therefore according to Augustin & Singh (2005) trust can be linked to loyalty regardless of the size of the relationship between the company and the customer. Moreover, when examining the effect of trust on online repetitive purchasing behaviour, Chiu et al. (2012) confirmed that customer confidence had a significant impact on the intention to repurchase online products. Trust contributes positively to customer retention (Sirdeshmukh et al. 2002).

2.3.2. Convenience

“The convenience of a service is a judgment made by consumers according to their sense of control over the management, utilization and conversion of their time and effort in achieving their goals associated with access to and use of the service.” (Farquhar & Rowley, 2009).

Convenience has been found an important component of online consumer satisfaction (Schaupp and Bélanger, 2005). According to Lepkowska-White & Page (2002) it is not surprising consumers are willing to pay even more in exchange for high quality service and convenience. Subscription models provide value to consumers who appreciate the convenience, novelty, and curated experiences. In fact, the average American now has four subscriptions.³

2.3.3. Brand Community

Another way to strengthen the brand presence is by creating communities around products (Leth, 2016). Customers may be interested in other people's activities or in becoming a part of the community itself. We have the example of Netflix, who provides exclusive content. Only Netflix subscribers can discuss the latest season of House of Cards with others. Customers who have a positive relationship with a brand are more likely to participate in a brand community. This engagement can have positive benefits for the company like loyalty to the brand and recommendation of the products (Algesheimer et al, 2005).

³ <https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/sign-up-now-creating-consumer-and-business-value-with-subscriptions#/>

Another approach for other customers to influence online consumers is to display reviews or recommendations. When a product on a website is recommended, customers will buy it twice as often compared to products without a recommendation (Senecal & Nantel, 2004).

2.4.Environmental Impact

A smartphone subscription model will have a significant environmental impact since it will affect the secondary market, and more specifically, the smartphone's secondary life. Instead of purchasing a new smartphone every year, subscribers have the motivation and incentive to return the smartphone to the vendor/manufacturer at the end of its cycle.

Products can be kept longer in circulation when the company that makes the product takes ownership of the product. Taking ownership of the product means that the consumer is not the owner of the product but only the user. And when the consumer doesn't want to use the product anymore, the consumer returns the product back to the vendor/manufacturer (Erdrügger, 2022).

2.5.Utilitarian VS Hedonic Goods

Consumers purchase products in different ways and in the high-tech market is not different. Is, therefore, important understand what are the factors that influence consumers to buy different products/services. Consumers may purchase a brand in the high-tech market based on several factors, which could be hedonic or utilitarian oriented (Amanor et al., 2021). Consumers buy utilitarian goods for practical purposes and hedonic goods to increase their happiness (Dhar & Wertenbroch, 2000). Utilitarian products have practical characteristics that serve functional tasks, but hedonic goods include pleasure-seeking characteristics, such as sensory pleasures. As a result, functioning is a crucial feature for items perceived as utilitarian goods, but consumers place a higher value on the joy, satisfaction, and happiness gained from products perceived as hedonic commodities.

3. Hypothesis Development

As mentioned before the research questions in this research paper are:

“What are the drivers that customers value in their smartphone subscription-model program.”

“What are the barriers to not subscribe in a smartphone subscription-model program.”

To answer these questions, a hypothesis development was created with the purpose of developing alternative assumptions to be able to forecast the relationship that exists between two or more variables.

There are different topics covered in this section, from hedonic and utilitarian goods to lock-in strategy and its network effects. All the topics for each hypothesis were thoroughly addressed in the literature review.

3.1.Hedonic or utilitarian smartphones

H1: *“Consumers who perceive smartphones as hedonic are more likely to sign-up for a subscription-based program”.*

H1a: *“In a subscription model base, customers tend to perceive smartphones as hedonic goods rather utilitarian”.*

3.2.Loyalty

H2: *“Consumers who are subscribed to a smartphone subscription model with a higher level of flexibility and customization options are more likely to exhibit loyalty towards the brand compared to those subscribed to a more rigid subscription model”.*

H2a: *“The level of personalization possibilities provided by a smartphone subscription model will have a greater impact on brand loyalty than the monthly fee.”*

H2b: *“Brand loyalty will be positively connected with the frequency of device upgrades, implying that customers who are happy with their subscription model are more inclined to switch to newer devices from the same brand”.*

H3: *“Consumers who subscribe to a smartphone subscription program are more loyal to the brand and more willing to stay with the company for a longer time.”*

H3a: *“A subscription model program will increase customer loyalty to the company”.*

3.3.Environmental implications

H4: *“Customers value a smartphone subscription model that is environmentally responsible, such as through the use of recyclable materials or carbon offsetting programs”.*

H4a: *“Consumers will be willing to pay more for a subscription model based on environmental impact (e.g., use of recycle materials or carbon offsetting programs”.*

3.4.Consumer behaviour

H5: *“Consumers value a smartphone subscription model with a low monthly charge or flexible payment alternatives (e.g., monthly, annual, etc).”*

H6: *“User subscribers are willing to pay more in exchange for convenience”.*

H6a: *“Saving time and effort is something very valued in this type of customers”.*

H6b: *“Transaction convenience, in terms of automatically payments, is something appreciated by this type of customers”.*

H7: *“Trust is positively associated with customer retention”.*

H8: *“Customers who have a positive relationship with a brand are more likely to subscribe”.*

3.5.Lock-in strategy / network effects

H9: *“Customers are more likely to subscribe to a subscription model program when products are integrated”.*

H9a: *“Network effects have a positive effect towards potential subscription users”.*

4. Research Methodology

The purpose of this study is to understand the drivers that customers value in their smartphone subscription model program to ensure long-term customer loyalty and profitability.

A secondary data was gathered previously in this report with the goal of understand the topics towards the main subject. A survey was also used to collect primary data on people's attitudes, views, beliefs, and actions in order to determine the prevalence of various occurrences in a population.

The methodological sections that follow go into further information about how data for this dissertation was gathered.

4.1.Research Method

4.1.1. Primary Data

Primary data is data gathered by the investigator on a first-hand basis (Rabianski, 2003). For this thesis, data was collected through a survey and interviews. A questionnaire is regarded as a series of question, each one providing a number of alternative answers from which the

respondents can choose (Rayner & White, 2014). An online survey was conducted using Qualtrics Survey Software. The survey was running during a period of 13 days from April 17th to April 29th.

Regarding the in-depth interviews, people aged between 20 and 51 years old were interviewed. The interviews were gathered between the 7th and 11th of April 2023.

4.1.2. Secondary Data

Throughout the data gathering stage, secondary data, which refer to information compiled by third parties (Rabianski, 2003), was also collected. The goal of collecting secondary data in this study was to gather existing information that could be used to answer the research question or hypothesis(es). Several articles from different journals were analysed in order to study different hypothesis towards the theme. Moreover, books and renowned web pages were also analyzed to improve the overall analysis.

4.2. In-depth Interviews

Individual interviews with a small number of respondents to explore their perspectives on a particular idea, program, or situation (Boyce & Neale, 2006) were carried out with the goal of confirming the hypothesis previously mentioned.

The semi-structure interviews were conducted face-to-face and through video. Semi-structured because it helps to create an understanding between the research and participants and reduces the bias towards focusing on socially desired answers (Patton, 1990).

4.2.1. Interview Protocol

Considering the type of research question helps define a starting point for the interview protocol.

The interview consists of six different sections, with each section serving a particular purpose in producing findings. Starting with knowledge of a smartphone subscription aimed to gain a general impression of the interviewees' understanding of subscription models, more specifically about smartphone subscription models. The following four sections are essential to acknowledge certain motivations and what customers would value in their smartphone subscription. Lastly, environmental impact is a crucial section of this interview in order to understand the interviewees' beliefs regarding the environment and their willingness level to acquire a service/product according to the brand's sustainable business model. The interview script can be found in 8.1.2 Interview Transcriptions.

4.2.2. Interview Sampling Strategy

The sampling strategy behind the interview was based on a quota sample, convenience sample that can be ‘improved’ with some socio-demographic quotas (e.g. region, gender, age) in order to reflect the population (Steinmetz et al., 2016).

People aged between 20 and 51 years old were interviewed with the aim of identifying the motivations of the population that could potentially acquire a smartphone subscription model. Table 1 shows the sample studied in this qualitative research method.

4.3. Survey

The quantitative research paradigm sometimes referred to as *positivist*, is also perceived widely as scientific in approach. It aims to be objective and collects and uses numerical data (Rayner & White, 2014).

The study uses an experimental research with the aim of understanding if a specific treatment has an impact on an outcome, by randomly assigning individuals to specific treatment conditions (Creswell, 2014).

A structured survey was developed. The structured survey is nothing more than a set of questions formalized to collect information from respondents (Lopes, 2010). It allows higher response rates, higher readiness to reach participants, is more convenient as allows automated data collection, consequently, reduces time and effort.

This quantitative study aided in gaining a better understanding of the factors/motivators of consumers to subscribe a smartphone subscription. Thus, the purpose of this primary data collection was to have a deep understanding of what people value in their smartphones, and what they’d value in a future smartphone subscription model. The survey was built with different section, each one with a different purpose. The survey started with several questions regarding smartphones, in this section the purpose was to understand people’s most preferable smartphone features and their smartphone branding options. Then, was asked to participants to select from a different selection of features, such as brand, operating system, smartphone model, storage capacity, amongst others. The reason why for asking this type of question was to understand how consumers make choices or trade-offs when selecting products/services with different features or attributes. After this, questions regarding an ideal smartphone subscription model were asked, in order to understand their willingness to subscribe this kind of service and understand the attributes valued in this service. Last, but not least, in order to understand the relevance of the environment for the decision-making process questions about sustainable

business models were also asked. The purpose here was to get insights about how people see businesses dealing with the environment and understand how important the environment is and if people are willing to pay an extra if the brand has a significant impact for the environment. To finalize the survey, some demographic questions were asked, mainly regarding gender, age, nationality and more.

4.3.1. Survey Sample Characterization

Throughout the data collection period (April 17th to April 29th), 162 responses were recorded, with a dropout rate of 17,3%, which implies a total of 134 fully completed responses. A descriptive statistical analysis was performed on all demographic indicators to characterize the attributes of the analyzed sample. From the 134 participants who completed the survey, male was the majority with 54,5% (Table 2) and most predominant age range was between 18 to 24 years, 44,8% (Table 4).

In terms of education level, the degree with the highest incidence was master's degree with 50% (Table 5). The majority of the participants were employed full-time, 61,9% (Table 3).

4.3.2. Scale Reliability

Because the scales used in this study were not derived from the literature, it is critical to ensure the reliability as well as consistency of the items used. Cronbach's alpha (Table 7) was used to examine the data's reliability.

According to several studies, appropriate Cronbach's alpha values should range from 0.70 to 0.95 (Tavakol and Dennick 2011), supporting the data's dependability.

4.3.3. Descriptive Statistics

In this first section a statistical description of the study will be provided, then each hypothesis will be tested in order to study the statistical significance.

According to the research, of the 134 who responded to the survey, 86 (64,2%) are Apple customers, and 21 (15,7%) are Samsung customers, being this the second brand with more customers in this survey (Table 8).

Respondents were questioned about the context in which they use their smartphones in order to better understand the features that users appreciate and utilize most frequently. Social media is the situation where respondents use their smartphone the most, followed by calling and text and listen to music (Table 9). Respondents were also questioned to rank smartphone features from

the most important to the less important. Analyzing the mean through the Table 10 we can observe that the most important feature is messaging and calling, followed by camera and internet browsing. This way it's possible to affirm that smartphone users still consider important basic features, such as messaging and calling, present in more basic mobile phones. Moreover, camera is also a valued feature confirming the recent upgrades on smartphones in terms of camera quality.

In order to understand why people choose their smartphones, it was asked, among several options, what led them to choose their current smartphone (Table 11). The most common answer was "Quality" followed by "camera" (Graphic 3). Through this is possible to understand that consumers value a smartphone with high quality as well as high quality camera. Furthermore, it's also relevant to enhance the third most given answer which was "Connection between devices". For instance, Apple consistently uses its own operating system across all of its products, which is one of the potential explanations for why more than 64% of those surveyed are Apple customers.

One of the objectives of this study is to understand what potential customers value in a smartphone subscription model, therefore was asked what a smartphone subscription should have. According to the Table 12, most people select "The possibility to upgrade devices", 26,6% followed by "Access to new products", 22%. One of the advantages of this service is in fact the possibility to upgrade the smartphone every year (in the event that this is the will of consumers) for a fee on regular basis.

When questioned what would lead consumers to terminate their smartphone subscription service, there are two clear possible reasons (Table 13). The first one is the price per month. Price plays an important role in this kind of service, being one big reason for consumers terminate their smartphone subscription service. It's crucial to set a competitive price in order to attract and keep customers attach to the service. The second possible reason that could lead to terminate the service is "Value for money". Consumers desire a balance between the price of a service and the value received due to several facts such as budget constraints or in order to maximize their benefits. The data confirm the insights drawn from the interviews. When looking for a service some interviewees mentioned "High quality service", "[service that] adds value", "Good service for a reasonable price". Many individuals don't purchase smartphones every year, they look for a dependable option that offers quality for an affordable price.

H1: *“Consumers who perceive smartphones as hedonic are more likely to sign-up for a subscription-based program”.*

H1a: *“In a subscription model base, customers tend to perceive smartphones as hedonic goods rather utilitarian”.*

Entering now the discussion of the willingness to sign up for a smartphone subscription model, one of the hypothesis was *“Consumers who perceive smartphones as hedonic are more likely to sign-up for a subscription-based program”*. Two different variables were crossed, more precisely the primary purpose of the smartphone, and if the respondents would be willing to sign-up for a smartphone subscription. 54.8% said that the primary purpose of their smartphone was for personal use, and of that percentage, 54.1% would be willing to subscribe to a smartphone subscription (Table 14). As stated in the literature review, consumers buy utilitarian goods for practical purposes and hedonic goods to increase their happiness (Dhar & Wertenbroch, 2000). In comparison to utilitarian consumption, hedonic consumption may be perceived as relatively more discretionary (Okada, 2004).

Functioning is a crucial feature for items perceived as utilitarian goods, but consumers place a higher value on the joy, satisfaction, and happiness gained from products perceived as hedonic commodities. Regarding hypothesis H1a: *“In a subscription model base, customers tend to perceive smartphones as hedonic goods rather utilitarian”*, even though is not possible to validate through the previous question, is possible extract the data through the question *“Under what circumstances do you use your smartphone”*, where options such as *“Social Media”*, *“Listen to Music”* were selected over the *“Work”* option (Table 9). Those options are often related with hedonic purposes, in other words, related to pleasure and joy, having in consideration Dhar et al. (2004), who said, purchasing a smartphone to access help in times of trouble makes a smartphone a utilitarian product. Buying the same smartphone to chat with friends makes it hedonic

H4: *“Customers value a smartphone subscription model that is environmentally responsible, such as through the use of recyclable materials or carbon offsetting programs”.*

H4a: *“Consumers will be willing to pay more for a subscription model based on environmental impact (e.g., use of recycle materials or carbon offsetting programs)”.*

A smartphone subscription model can have a huge impact on the environment. Consumers instead of purchasing a new smartphone every year (in the case of those who do that),

subscribers have the motivation and incentive to return the smartphone to the vendor/manufacturer at the end of its cycle. That said, it's relevant to understand how people perceive sustainable business models. First, in order to understand the level of importance the environment has, each individual was asked how important the environment is to them. 70,1% classify the environment as very important or extremely important, as we can see in Table 15. Furthermore, when asking how important the sustainable business model of the smartphone company is most people, 41%, said "Moderately Important". 27.6% also said "Very important" when asking the same questions (Table 16), suggesting that customers value a smartphone brand or a smartphone subscription model that is environmentally responsible. However, it's relevant to keep in mind what people said in the interview. Some mentioned that manufacturers are not doing enough for the environment, or they don't even know what they are doing to protect it, therefore, it's suggested that smartphone brands create even stronger sustainable initiatives with the goal of creating awareness for their audience.

Regarding H4a a simple question was asked in the survey in order to test if respondents would be willing to pay an extra for a subscription model based on environmental impact. Through Table 17 is possible to observe that 77,9% said that they would be willing to pay a bit more if the brand had a significant positive impact for the environment.

H6: *"User subscribers are willing to pay more in exchange for convenience".*

H6a: *"Saving time and effort is something very valued in this type of customers".*

H6b: *"Transaction convenience, in terms of automatically payments, is something appreciated by this type of customers".*

With the goal to find out if convenience is something appreciated by customers, through the question "What factors do you value the most in an ideal subscription service?" (Table 18), was possible to identify that 12,4% picked "Convenience" and 6,3% picked "Less time and effort" which in this context will be analysed similar to convenience. Due to a small sample is not totally possible to affirm that, first subscribers are willing to pay more for convenience, and second, that convenience is not on top of mind for consumers when selecting a smartphone subscription service, since and according to the data, price is the most important factor, confirming once again what was mentioned above.

H8: *"Customers who have a positive relationship with a brand are more likely to subscribe".*

Brand loyalty is the customer relationship that is measured against a brand, therefore customers who have a positive relationship with a certain brand are more likely to be loyal to the same brand. In this case, the goal was to measure each customer's degree of satisfaction, correlate that data, and determine whether or not they would be willing to subscribe to a smartphone. Even though the data is slightly biased due to an unrepresentative sampling, comparing satisfied and extremely satisfied customers that responded “Yes” and “No” 54,6% are customers satisfied or extremely satisfied that would be willing to sign-up for a smartphone subscription (Table 19). This data suggests that customers who have a positive relationship with a brand are more likely to subscribe to a smartphone subscription model, although further research is recommended in the future in order to further prove this hypothesis.

4.3.3.1. Conjoint Analysis

In this study, the method of conjoint analysis was employed to comprehend customer preferences and decision-making processes.

In the survey, respondents were challenged to imagine that they were in the market for a new smartphone. Different scenarios were given with different smartphone features, such as: brand, operating system, smartphone model, camera quality, price, battery life and storage capacity. This question aimed to understand how likely a person would buy a smartphone according to the battery life or storage capacity, for example. Six different scenarios were given⁴, all of them following this type of features, however each scenario was different. For instance, respondents could indicate how likely they would buy an Android Pixel 7 Pro, or how likely they would buy a smartphone with 12 hours of battery life.

Starting with the first question regarding the likelihood of buying a smartphone from different brands. The mean for Apple is 63,1493, suggesting that, on average, respondents are slightly more likely to buy an Apple smartphone, comparing with other brands (Table 20).

In terms of smartphone model, several models were displayed in the survey. According to Table 21 is possible to analyse that respondents are more likely to purchase an iPhone 14 Pro Max (Mean=62.4478) instead of other options presented in the questionnaire. The second option would be iPhone 13 with a mean equal to 62.4403. This data suggests a strong demand for Apple products.

⁴ Four scenarios were about Apple and Samsung (two each) with different features to analyse in each scenario. The reason why to choose these two brands is because Apple and Samsung dominate the smartphone industry.

Moving to the third feature, which is camera quality, earlier in this paper he saw that camera is something valued in a smartphone for consumers. For each scenario, and according to the smartphone model the camera quality was shown in MP (megapixels). The options were varied from 12 MP to 50 MP. Analyzing the mean of each option, it is clear that for respondents the smartphone iPhone 14 Pro Max with 50 MP is the smartphone most likely to be purchased by respondents. Interestingly, there were three other options with even more megapixels, more precisely 50 MP, however, through Table 22 is possible to affirm that even though there are better options on the market respondents tend to purchase the iPhone 14 Pro Max with 48 MP. It gets even more interesting when comparing options such as 12 MP vs 50 MP. In some cases, the iPhone 13 with 12 MP has more probability to be bought comparing to the Huawei Galaxy Mate50 Pro with 50 MP. This data suggests that brand is relevant in the decision making process to purchase a new smartphone.

Regarding price, this is a sensitive topic when thinking about buying a new smartphone. As shown earlier, price is an important factor not only when purchasing a smartphone, but also when deciding on a service with a subscription. Table 23 suggests that the Google Pixel 7 Pro with a price of 740€ is more likely to be bought comparing for example with the Samsung Galaxy Z Fold 4 with a selling price of 1 599,99€. Respondents value low prices when buying a new smartphone, but not forgetting the quality of the product, which is something extremely valued as seen previously.

A smartphone's overall performance and usability are greatly influenced by its battery life. A longer battery life allows users to use their smartphones for extended periods without needing to recharge. For many professionals, smartphones have become indispensable tools. Longer battery life makes sure the device is functional all day long, enabling users to complete tasks. According to Table 24, is possible to state that more battery life more likely to buy the smartphone. Analyzing the mean is possible to observe that options with more battery life, such as Huawei Galaxy Mate50 Pro with 38 hours of battery or iPhone 14 Pro Max with 29 hours are the options most likely to be purchased by respondents. Therefore, the data suggests that battery life is something highly valued by consumers when purchasing a new smartphone.

Finally, the last feature to be tested was storage capacity. Similar to battery life, the storage capacity is an important features for most users. For instance, for accessing and managing documents, presentations, spreadsheets, and other files while on the go, many professionals rely on smartphones. Users can store important files directly on their device with sufficient storage capacity, making them readily accessible whenever needed without relying on cloud storage or internet connectivity.

Several storage options have been given, starting from 128 GB to 512 GB. Once again, similar to battery life, more storage capacity more likely to buy the smartphone. Analyzing the mean on Table 25, on average, respondents are slightly more likely to buy a iPhone 14 Pro Max with 512 GB. It is once again interesting to analyze that the iPhone 13 option with 128 GB has roughly the same purchase probability as a Samsung Galaxy S21 5G with twice the storage capacity, again suggesting the premise that the brand is something extremely relevant when buying a smartphone.

4.3.4. SPSS Analysis

In this section, as stated before each hypothesis will be tested in order to study the statistical significance.

H1: *“Consumers who perceive smartphones as hedonic are more likely to sign-up for a subscription-based program”.*

H1a: *“In a subscription model base, customers tend to perceive smartphones as hedonic goods rather utilitarian”.*

Looking for Table 26 and Table 27 is possible to observe that both Chi-Square and Cramer’s V are equal to 0.974, this indicates a moderate association between the two variables under investigation. Regarding more specifically Person Chi-Square, an association between the variables is possible, but not very strong, according to a value of 0.974. A strong linear trend or association between the categories of the two variables is shown by the Linear-by-Linear Association value of 0.934. This implies that there is a corresponding trend or change in the likelihood of subscribing to a smartphone subscription as the categories of the independent variable change in a particular direction (for example, from hedonic to utilitarian). Analysing the value of Cramer’s V, which is a measure of the strength of association between two categorical variables. A value of 0.974 indicates a moderate association between the variables. In summary, the variables "What is the primary purpose of your smartphone" and "Would you sign-up for a smartphone subscription" are statistically significant and have a moderate association, according to the Pearson Chi-square and Cramer's V values of 0.974.

H4: *“Customers value a smartphone subscription model that is environmentally responsible, such as through the use of recyclable materials or carbon offsetting programs”.*

H4a: *“Consumers will be willing to pay more for a subscription model based on environmental impact (e.g., use of recycle materials or carbon offsetting programs)”.*

For this hypothesis three different questions were study in the previous chapter. In order to study their statistic relevancy a Chi-Square Test was conducted. Regarding the question “When choosing a new smartphone how important is the sustainable business model of the company”, through Table 28 is possible to verify a chi-square value of 57,493 and degrees of freedom (df) of 4. The "Asymp. Sig." value, which is reported as "<.001" in this case, corresponds to the p-value associated with the chi-square test. This finding leads to the conclusion that there is a significant difference in the significance of the sustainable business model when selecting a new smartphone, rejecting the hypothesis.

Regarding H4a another Chi-Square Test was conducted (Table 29). Based on these results, it is possible to conclude that there is a significant association between respondents' willingness to pay more and their stated responses. The information offers compelling evidence that the two variables are not unrelated and that respondents' willingness to pay more is connected to their stated answers.

H8: *“Customers who have a positive relationship with a brand are more likely to subscribe”.*

Observing the Table 30 and Table 31, the degree of association or dependence between the two variables is shown by the Pearson chi-square value, which is 0.769. An increased chi-square value indicates a more significant correlation between the variables. The value of 0.769 in this instance denotes a moderate association. A higher likelihood ratio, similar to the chi-square value, denotes a stronger relationship. A moderate association is suggested by the value of 0.749. The linear-by-linear association value of 0.492 indicates the strength and direction of the relationship between the variables using a linear association test. While a value close to 0 suggests no linear association, a value close to 1 would suggest a strong linear association. The value of 0.492 in this instance points to a moderate linear association. The strength of association between categorical variables is determined by Cramer's V. It has a scale from 0 to

1, with 0 denoting no association and 1 denoting the ideal association. A moderate to strong association between the variables is indicated by the value of 0.769.

According to these findings, there seems to be a modest correlation between willingness to subscribe to a smartphone and overall satisfaction with the smartphone brand.

5. Main Findings

5.1. In-depth Interview

As mentioned before, the interviews were conducted in order to find out about people's perspectives and to confirm the hypothesis presented in section 3 of this paper.

Starting with the beginning, was clear that almost everyone didn't know or never heard what's a smartphone subscription.

Almost everyone, except one person, have subscription models being video and music streaming, more precisely Netflix, the most common among all those mentioned.

When asked if they'd use their smartphone as hedonic or utilitarian purposes most of the interviewees said they use for both purposes. However, when asked for the favourite features some mentioned features related to work, such as email or calendar "serving as a personal assistant", messaging in order to "communicate with people online for work" or even making calls, since "the smartphone is great because I basically can have a workspace everywhere and anytime". Even with all these insights is not enterally possible to confirm or deny one of the proposed hypothesis "*Consumers who perceive smartphones as hedonic are more likely to sign-up for a subscription-based program*".

Loyalty plays a big role in this topic, therefore several questions regarding loyalty were asked. Half of the respondents said that they are not brand loyal and other half said that they are loyal to their current smartphone brand. Interestingly, every single one of those who characterized themselves as brand loyal have Apple as the brand of their smartphone.

In order to understand the motivations towards a smartphone was asked what's the decision-making process to get a new smartphone. The responses varied, yet the following answers can help clarify the main decision process. The reasons are: "running out of quality"; "getting too slow"; "quality of the camera"; "the smartphone's battery is compromised" among others.

When asked what the main reasons to sign-up for a smartphone subscription would be, once more the opinions were diversified. Some mentioned the possibility to always have the latest smartphone; a "significant benefit on price when compared with the same objective (upgrading the smartphone) with no subscription"; "Not having the obligation to make a big

up-front investment. I can see this working really well for corporations”; “No need to worry too much about the damages”; “no longer worrying in checking for new phones”.

Most of the interviewees responded positively when asked about the convenience of making a regular payment each month versus a bigger amount in exchange of a smartphone. Some added they’d be willing to do it if it would make sense financially. Still in the topic of convenience, most of the people value saving time and effort in searching for a new smartphone, and even some of them mentioned that they’d be willing to pay a bit more for this extra convenience. With this input is possible to confirm the following hypothesis: *“User subscribers are willing to pay more in exchange for convenience”*; *“Saving time and effort is something very valued in this type of customers”*.

According to the respondents, flexibility and customization is something desirable in this type of subscription. When asked to choose between a service with no flexibility and no customization and other with those characteristics, everyone said they’d prefer a flexible and customizable service. Hypothesis such as *“Consumers who are subscribed to a smartphone subscription model with a higher level of flexibility and customization options are more likely to exhibit loyalty towards the brand compared to those subscribed to a more rigid subscription model”*; *“The level of personalization possibilities provided by a smartphone subscription model will have a greater impact on brand loyalty than the monthly fee.”* were also confirm through the interview.

As stated before, lock-in has two important factors which hinder customers from switching to other suppliers: switching costs and network effects. Hypothesis regarding network effects were developed in order to understand if *“Customers are more likely to subscribe to a subscription model program when products are integrated”*. Given that, is relevant to understand if *“Network effects have a positive effect towards potential subscription users”*. Through the interviews is not entirely possible to confirm this hypothesis, however some respondents mentioned the following: “at Apple they have a great connection between their devices because of their operating system. That system is something that I appreciate even though it’s expensive”; “The first product I had from Apple was an iPod, few years later I got my first iPhone, a 6s model, since then I’ve never changed the brand of my smartphone. The fact that I like so much the brand influenced me to purchase the laptop and other accessories”; “(...) I love apple and I have also a MacBook, so I will always look for an I Phone”.

Finally, a smartphone subscription can have a significant environmental impact, therefore is relevant to understand the interviewee’s opinion. Almost everyone mentioned that they don’t believe that smartphone manufactures are doing enough for the environment. Nevertheless,

they'd value a smartphone subscription model that is environmentally responsible, and most of the respondents are even willing to pay a bit more for a subscription model that demonstrates to be environmentally friendly. These inputs also confirm the previously mentioned hypotheses: *“Customers value a smartphone subscription model that is environmentally responsible, such as through the use of recyclable materials or carbon offsetting programs”*; *“Consumers will be willing to pay more for a subscription model based on environmental impact (e.g., use of recycle materials or carbon offsetting programs)”*.

5.2.Survey

As stated before, this study aided in gaining a better understanding of the elements and drivers that influence customer decisions to subscribe a smartphone subscription. Thus, the purpose of this primary data collection was to have a deep understanding of what people value in their smartphones, and what they'd value in a future smartphone subscription model.

The study's key conclusions offer insightful information about consumer preferences and choices with regard to smartphones and smartphone subscription models. The study included 134 participants, and statistical analysis of the data produced the key findings listed below:

With 64.2% of the respondents being Apple customers, Apple emerged as the most well-liked brand among the respondents. The brand's high level of customer loyalty is probably a result of its consistent operating system across all of its products. Calling, messaging, and listening to music were the next most popular uses of respondents' smartphones, followed by social media. The most crucial features were found to be messaging and calling, followed by the camera and internet browsing. The most frequently mentioned factor in choosing a specific smartphone was quality, followed by camera features. Consumers placed a lot of importance on how devices interacted with one another, such as through Apple's ecosystem. The ability to upgrade devices and access to new products were the two most desired features in a smartphone subscription model. The study emphasizes the benefit of a subscription model that offers recurring upgrades in exchange for a fee. The monthly cost and the perceived value for money were the two main factors in choosing to stop using a smartphone subscription service. Customers are looking for a competitive price that offers both quality and value. Smartphone users were more likely to consider joining a subscription-based program if they thought of them as hedonic goods. Social media and music usage are examples of hedonic usage patterns, whereas work-related usage is an example of utilitarian usage. The environment was mentioned as being important by the majority of respondents, and many thought that a smartphone company's sustainable business

model was moderately important or very important. The majority additionally demonstrated a willingness to pay more for a subscription model that has a notable favorable effect on the environment. When choosing a smartphone subscription service, respondents did not place convenience as their top priority. Price was determined to be the most crucial element, proving its importance in consumer choice. According to the study, there is a link between customer satisfaction and willingness to use a smartphone subscription model. It appears that brand loyalty has an impact because satisfied consumers were more likely to consider subscribing. The results of the conjoint analysis provided insightful information about consumer preferences for various smartphone features. The iPhone 14 Pro Max was among the most popular models made by Apple. The purchase decision was also influenced by the camera's quality, battery life, and storage capacity. Since smartphones age, degrade in quality, and have worse battery performance every year, this can be a huge advantage for services like subscription models for smartphones. Customers who subscribe to a service have the option of updating their smartphones once a year, continuously improving the battery and overall product quality. Overall, the study provides insight into the variables influencing consumer decision-making in the smartphone market as well as their preferences for subscription-based smartphone models. The results highlight how important brand perception, feature importance, pricing, convenience, sustainability, and customer satisfaction are in shaping consumer behavior in this developing market.

6. Limitations

While conducting this master's thesis, certain limitations have been encountered that warrant acknowledgment and consideration. These restrictions include things like the sample size, participants' knowledge of smartphone subscriptions, and the difficulty of gathering complex responses in a survey devoid of interactive features. As these restrictions may affect the generalizability and thoroughness of the research findings, it is crucial to address them. This section aims to go into more detail about these restrictions, highlighting how they affect data analysis and the research process.

The first, and most obvious limitation was the size of the sample. Due to time and resources constraints a sample of 134 was gathered. This sample size is not representative of the universe. Through the interviews and later confirmed by the survey, people were not fully aware of what a smartphone subscription model was, although an explanation was provided. This caused some data to be biased due to lack of knowledge on the topic on the part of some respondents.

Some hypotheses developed based on an international literature review were unable to be fully tested because the majority of survey participants in this study were from Portugal. This restriction results from the characteristics of the market, a possible bias in the sample, or the inapplicability to a larger population. This may limit the findings' ability to be applied outside of the Portuguese context. The specific dynamics and cultural quirks within Portugal may have a different impact on the results, despite the fact that international literature offers insightful information. Despite these limitations, the data collected from the Portuguese sample provides valuable insights into the specific context and contributes to the existing body of knowledge in this area.

7. Conclusions

In conclusion, this paper aimed to understand the drivers and explore consumer perspectives and preferences regarding smartphone subscriptions. The results of the interviews and surveys shed light on a number of factors that affect consumer choice in the smartphone market and offered insightful information about potential features and traits of smartphone subscription models.

The decision to purchase of a smartphone was primarily influenced by aspects like build quality, camera capabilities, and compatibility with other devices in a brand's ecosystem. One key driver for thinking about a smartphone subscription model was the need for upgrade options and early access to new products. Participants praised the model's ease of use and financial advantages, especially the possibility of recurring upgrades without a sizable initial outlay.

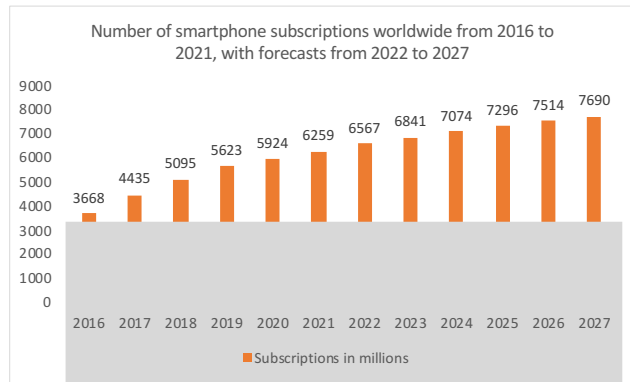
Consumers sought a competitive price that offered both quality and value, and price was identified as a key consideration when selecting a smartphone subscription service. Brand loyalty was discovered to be important because satisfied consumers were more likely to think about signing up for a smartphone subscription service.

Conjoint analysis offered more details on consumer preferences for particular smartphone features, identifying the iPhone 14 Pro Max as one of the most popular models because of its storage capacity, battery life, and camera performance. The deterioration and aging of smartphones over time were emphasized as possible benefits of subscription models, as they permit routine upgrades to maintain product quality.

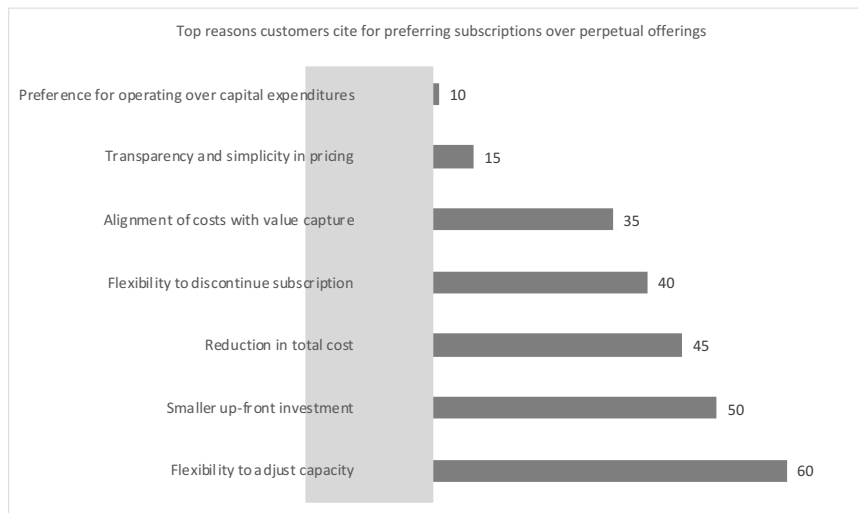
Overall, this study adds to the understanding of the factors that affect consumer choice in the smartphone market and offers insightful information about consumer preferences and expectations for smartphone subscription models. In this market that is constantly changing,

the study emphasizes how important brand perception, feature importance, pricing, convenience, sustainability, and customer satisfaction are in influencing consumer behaviour.

8. Appendix



Graphic 1 - Number of smartphone subscriptions worldwide from 2016 to 2021, with forecasts from 2022 to 2027



Graphic 2 - Top reasons customers cite for preferring subscriptions over perpetual offerings

8.1. Interview

Interviewee Code	Gender	Age
MC	Male	25
CL	Female	24
MB	Female	20
VB	Male	51
BM	Male	34
AM	Female	33
DC	Male	43
AA	Male	27
JR	Female	24
CB	Male	25

Table 1 - Interview Sample

8.1.1. Interview Script

Hi, my name is João, and I am finishing my master in management with specialization in strategic marketing. The following interview aims to find out what motivates individuals to sign up for a smartphone subscription service.

If it is okay with you, I will be recording our conversation. The purpose of the interview is to allow me to get important insights but at the same time be able to carry on an attentive conversation with you. I assure you that all your comments will remain confidential. I will be compiling a report which will contain all comments without any reference to individuals. If you agree to this interview and the recording, please state your consent.

I'd like to start by explaining first what a smartphone subscription is. A smartphone subscription is a subscription model, similar to Netflix or Spotify, in which users can for example update their smartphone for a price on a regular basis.

I'm now going to ask you some questions that I would like you to answer to the best of your ability. If you do not know the answer, please say so. There's no right or wrong answer, just give your honest opinion.

Knowledge of a smartphone subscription

1. Did you know what a smartphone subscription model was? Or is it the first time you hear about it?
2. Do you subscribe any subscription service, such as Netflix, Apple music or other?
3. What are the main reasons for you to subscribe that/those services?

Smartphone as hedonic or utilitarian

As you know, consumers purchase products in different ways. For instance, consumers buy utilitarian goods for practical purposes and hedonic goods to increase their happiness.

Utilitarian products have practical characteristics that serve functional tasks, but hedonic goods include pleasure-seeking characteristics, such as sensory pleasures.

4. Do you have or use a smartphone on a regular basis?
5. Would you consider your smartphone as utilitarian or hedonic? Do you use your smartphone for practical purposes or with the intention of desiring pleasure?
6. What are your favorite smartphone features?

Drivers

7. For how long do you have your current smartphone?
8. Do you usually buy a new smartphone every year?
9. How's your decision-making process towards a smartphone?
10. Would you consider yourself loyal to your smartphone brand?
11. What would make you change brands?
12. Imagine that the competitor of your smartphone brand offers a subscription service where you can get a new smartphone every year for a fee each month ... Would you consider moving to the competitor?

Loyalty

13. Which subscription service have you used the longest?
14. For what reasons?
15. Would you be willing to pay a bit more if the service had a personalized offer specially for you?
16. Do you care if the subscription service has flexible and customizable options?
17. Comparing a service with no flexibility and/or without customization ... Which of the two options would you choose and why?

Consumer Behaviour

18. What would be the main reasons to sign-up for a smartphone subscription?
19. Would you say that saving time and effort in searching for a new smartphone every year (or when you need a new one) is something that you value?
20. Convenience in terms of making a regular lower payment each month versus a bigger amount every year in exchange of a smartphone, is something that you would value?
21. Do you see a positive correlation between a previous good relationship with the brand and the decision to subscribe their subscription services?

Environment Impact

A smartphone subscription can have a significant environmental impact. For instance, instead of purchasing a new smartphone every year, subscribers have the motivation and incentive to return the smartphone to the vendor/manufacturer at the end of its cycle.

22. Do you believe smartphone manufacturers and subscription service providers do enough to address the environmental impact of their products and services?
23. Do you value a smartphone subscription model that is environmentally responsible, such as through the use of recyclable materials or carbon offsetting programs?
24. Would you be willing to pay a bit more for a subscription model that demonstrated to be environmentally friendly (e.g., use of recycle materials or carbon offsetting programs)?

Final

Is there any other information regarding the subject that you'd like to add?

Thank you very much for your participation.

8.1.2. Interview Transcriptions

1. Did you know what a smartphone subscription model was? Or is it the first time you hear about it?

MC → It is my first time hearing about it.

AM → I Know what it is, instead of buying the smartphone, you pay a monthly fee for having it.

BM → Yes, I know what it is.

VB → Yes, I understand the concept.

DC → No I didn't.

CL → I had already seen advertisements in NOS and Vodafone stores, but I don't really know how it works because I was never interested in joining.

MB → No. I have never heard about what smartphone subscription was.

AA → Yes, I did know it existed. I've seen it in other countries where that is common practice.

CB → It's the first time I hear.

JR → I didn't now. I'm aware of different subscription models but not specifically for smartphones.

2. Do you subscribe any subscription service, such as Netflix, Apple music or other?

MC → I do. I have a Netflix account.

AM → Yes, Netflix, HBO, Apple Music and Disney Plus.

BM → Yes, Netflix, HBO.

VB → Yes, currently I have Netflix, Apple one, so Apple Music and Apple TV+, among others.

DC → Yes, I have Netflix and also have my car's subscription.

CL → No, personally I don't like to have that kind of expense.

MB → Yes. I have subscribed Netflix and Apple One (Apple Music, Apple TV).

AA → Yes, Spotify, Netflix, Disney+ and HBO.

CB → Netflix, yes.

JR → Yes, I have Netflix, HBO, and Disney plus.

3. What are the main reasons for you to subscribe that/those services?

MC → In my opinion, they have very high-quality content, especially their documentaries, and series. Besides that, unlike other similar services, they are constantly updating their content list. There's not a single week where there isn't anything new to watch.

AM → They had value to my daily life. Love the series of HBO and Netflix, love the movies from Disney plus and can't live without music.

BM → They had value. Love to watch series at HBO and Netflix, I travel a lot and they are useful.

VB → Get good services for a reasonable price.

DC → I'd say, the possibility to update the hardware when possible and convenience is also something important for me that I value very much for example in my car subscription.

MB → Netflix is a good service to watch movies or series and Apple One is also very good because we can listen to every song or also watching movies and series.

AA → Convenience and value proposition.

CB → I chose this one because it's easy to use in smart tv and I share the subscription with friends which make it cheap.

JR → The reason to subscribe these services are mainly the wide choice, constant news and current content. I can't find new content on other platforms.

4. Do you have or use a smartphone on a regular basis?

MC → I do.

AM → Yes, every day.

BM → Yes, every day.

VB → Yes, I use it on a regular basis.

DC → Yes.

CL → Yes, I have, and I use it very regularly.

MB → Yes.

AA → Yes, today is hard not to.

CB → Yes.

JR → Yes, I do.

5. Would you consider your smartphone as utilitarian or hedonic? Do you use your smartphone for practical purposes or with the intention of desiring pleasure?

MC → I would say both. Because I have so many apps on my smartphone, I basically have all my personal use apps, and work apps all in the same place. Even the app that I use to talk with my friends, which is WhatsApp, now I also use to talk with clients. When I'm not working, I use it mostly with the intention of desiring pleasure, for example, to listen to music or watching videos.

AM → I use it for everything, for work, and for pleasure.

BM → I'd that I use it in both ways for work, and for pleasure.

VB → I use it as both: mostly as an utilitarian, but can also be considered an hedonic.

DC → I'd say both, but I use it a lot as a working tool.

CL → I consider it both. Utilitarian for professional and hedonic purposes because I like to listen to music through my smartphone, whether in the car or at the gym. I love photography and having a mobile phone with photographic quality is relevant to me and I like it, whether to record small moments with friends or to save photographic memories of trips, which I like to see from time to time.

MB → I use my smartphone in both ways. I use it for school but also for playing games or social media.

AA → Nowadays I consider a smartphone a utilitarian. It became a work and life management tool. One could consider it hedonic in the sense that the simplification of the day-to-day tasks brings more happiness but taking that simplification out I consider it utilitarian because actually I wish I was less dependent on it.

CB → Both, I use a lot WhatsApp to talk with my clients and Google sheets to see the work I do in my computer. My social media has a lot of content that I use to educate myself and develop as a professional. Apart of that I use the same social media to hedonic stuff.

JR → I think it's both. Nowadays it would be very difficult to live without a smartphone, without being able to always be connected (messages, calls, WhatsApp, internet) among other features that we have on our smartphones. However, when it comes to design or extra features, I'd say it's more of a desire and status.

6. What are your favorite smartphone features?

MC → Youtube, Instagram, and WhatsApp. By this specific order.

AM → Camera – video and photo, Social Media apps and Music apps and GPS.

BM → Probably gaming, YouTube app, and also camera for videos and photos.

VB → Access to Internet, messaging, e-mail.

DC → I use it a lot to make calls. The smartphone is great because I basically can have a “workspace” everywhere and anytime.

CL → No doubt design, color, size and camera.

MB → My social media apps and games.

AA → Serving as a personal assistant (allowing to manage email, finances, calendar) and having instant access to all kind of information.

CB → Easy to communicate with people online for work and hedonic purposes.

JR → My favorites are WhatsApp, Spotify, YouTube and Instagram.

7. For how long do you have your current smartphone?

MC → Around 2,5 years.

AM → 2 years.

BM → 3 years.

VB → Around 4 years.

DC → Year and a half.

CL → It's very recent ... I'm not sure, but probably since October or November of last year.

MB → For 5 months now.

AA → 3 months more or less.

CB → 3 years.

JR → One year and a half.

8. Do you usually buy a new smartphone every year?

MC → No.

AM → No, maybe in each 3 to 5 years.

BM → No, in average maybe in each 3 to 4 years.

VB → No.

DC → No.

CL → No because I don't feel the need. Besides that they are expensive ... at least the ones I like/prefer.

MB → No. Normally in my family, when someone buy a new smartphone, the older one goes to another member of the family.

AA → Not anymore. I no longer see the need in buying a phone every year. The improvements that are brought each year are not as differentiating and relevant for me as they used to be (i.e., previously each year a smartphone would receive big improvements on the battery and significant improvements on the software and memory, nowadays the current setting fulfils all my needs without need to improve it).

CB → No.

JR → No.

9. How's your decision-making process towards a smartphone?

MC → It is usually when my smartphone is running out of quality. If it is getting too slow or if it is not as practical as once was, I start looking for a new one. If I don't break it, which has happened before, I usually switch smartphones every 2,5/3 years.

AM → First of all I check the quality of the camera, because I use my phone as a work tool, so I need it to have a good camera. Then ... I love apple and I have also a MacBook, so I will always look for an I Phone.

BM → Technology and Design. I am a tech person, and I value good tech smartphones.

VB → When the smart phone's battery is compromised or when new features on the new smartphones could be useful.

DC → I usually buy a new smartphone when it gets slower or when the quality is not good enough.

CL → Well, my last one was running out of quality, the battery wasn't good enough, it couldn't take more than 3 hours. Those factors influenced and forced me to upgrade to the most recent model, even though I was already thinking to buy the newest one.

MB → I like the newest models because they're normally the best ones, but I also like the ones with better camera qualities.

AA → Battery life no longer good for a day-to-day usage, considerably slow of usage or software very outdated without new updates.

CB → I see a lot of reviews and try to buy a smartphone that I think it works for my regular basis and at the same time has a good quality-price ratio.

JR → I only change my smartphone when I feel that the battery is getting addicted, lack of space or when I look for / start to value another feature (e.g. image quality).

10. Would you consider yourself loyal to your smartphone brand?

MC → No.

AM → Yes.

BM → Not really.

VB → Yes.

DC → Definitely. I have an iPhone since model one.

CL → Yes, absolutely. The first product I had from Apple was an iPod, few years later I got my first iPhone, a 6s model, since then I've never changed the brand of my smartphone. The fact that I like so much the brand influenced me to purchase the laptop and other accessories.

MB → Yes. For me the Apple smartphones are the better ones and I always had them.

AA → No.

CB → I like Samsung smartphones because I had two of them and it worked very well. However, if I see some smartphone that has better features, I'd think about change.

JR → No, I had a Samsung for 5 years, then a iPhone for other 5 and now a Xiaomi.

11. What would make you change brands?

MC → The thing I take most into consideration when buying a new phone is the camera quality. If in the price range I'm looking into, there's a better option with a better camera and the same or better specifications, I would have no problem in changing brands. I look at specific phones at a time, not particularly the brand.

AM → Technology and usability. At this point as I have everything on apple, the user experience is amazing. Everything is connected so I don't dare to change.

BM → Technology and usability.

VB → At the moment, I could not think of anything.

DC → Would be very hard because I feel stuck, in a good way, with the brand.

CL → Not sure ... I hardly would change, because so far I can't complain.

MB → I don't really think there's a reason for me to make me change the brand that I use because until now I'm happy with it.

AA → Probably better smartphone quality.

CB → Seeing multiple reviews that make me realize that some brand works well for my crucial points. For example, at Apple they have a great connection between their devices because of their operating system. That system is something that I appreciate even though it's expensive.

JR → For me it is something that is now so appealing because I don't buy phones so many times and I don't value the little changes/updates that are made every year.

12. Imagine that the competitor of your smartphone brand offers a subscription service where you can get a new smartphone every year for a fee each month ... Would you consider moving to the competitor?

MC → As I said before, I usually switch phones every two and a half / three years. If that offer ended up being more expensive than buying the phone itself I wouldn't, but if it made sense financially and I would still get a better phone I would say yes.

AM → I would need more information, but probably not because of this sensitive topic that is the experience Apple gives you along different devices connected.

BM → Probably yes, although I'd need more information regarding the topic.

VB → No. I would not consider it sufficient to move to a different brand.

DC → The only thing I see is if they guarantee that I can update the smartphone every year, that would be the only reason for me to consider moving to the competitor.

CL → No, I wouldn't change brands.

MB → Maybe. Has I said I really enjoy the brand I use regularly but if I see that the smartphone of my competitor brand is better in terms of quality, camera or more aesthetic there's a chance for me to switch brands.

AA → If the monthly fee is worth it, taking into account the price I pay for a new phone and how much it lasts on average (+-3y).

CB → I think I wouldn't because I don't think I need a new smartphone every year.

JR → Not really, I don't think I would change.

13. Which subscription service have you used the longest?

MC → Netflix.

AM → Apple Music.

BM → Netflix, I believe.

VB → Maybe Microsoft Office licensing.

DC → Maybe the car.

MB → Netflix.

AA → Spotify.

CB → Netflix.

JR → Netflix.

14. For what reasons?

MC → The content on Netflix is unmatched. Especially in the content categories I like to watch the most, which are true crime and documentaries, there is no other platform that has many great shows like Netflix. The price is also fair for what they offer.

AM → Content and quality.

BM → Mostly because of their content and quality.

VB → Price and quality of the product

DC → I'd say the price is one big reason. I don't have to make a big initial investment when I can't pay small portions each month. Other reason is that I have an update version of the car without a big investment, and also, I don't have to worry, because if I have any problem, they'll take care for me because is in the contract and in the fee that I pay.

MB → The Apple One subscription was the most recently subscription that my family have. For that reason, we have Netflix the longest and we use it regularly.

AA → Low price and I use it every day and a lot.

CB → Price (shared subscription) and a lot of content on it.

JR → Because of the variety of series, films, documentary - always with new content to see.

15. Would you be willing to pay a bit more if the service had a personalized offer specially for you?

MC → Yes. If for example there was a platform that was only focused on the specific genres that I like to watch, I would have no problem paying more.

AM → Yes, I would be willing to pay a bit more, but it depends on the offer.

BM → Yes, I would be willing to pay a bit more, but it depends on the offer.

VB → No.

DC → Yes, I'd be willing to pay.

CL → No.

MB → That depend on the price that I would have to pay more but probably yes.

AA → Yes.

CB → At this moment I don't think so, because the subscription I have is for hedonic purposes and I don't use that much so they have a lot of good content that I didn't watch yet.

JR → Yes, for example, it would reduce a lot of time searching for the right content.

16. Do you care if the subscription service has flexible and customizable options?

MC → Yes, I do. For example, with Netflix before they banned having different users on the same account it was great to have different profiles so everyone could have their content feed personalized to their own taste and to what they usually watch.

AM → Sure.

BM → Yes, is something that I care.

VB → Yes.

DC → Yes for sure. The more flexible the better.

CL → I'm not interest in that type of services, therefore I don't see the point.

MB → Yes. I think that options are good for the customers so that we have more options.

AA → Yes, the easiness of payment options makes the initial set up better, then if the content is diversified and complete.

CB → Yes.

JR → Yes, I think that improves a lot the experience while we are using these types of services. You increase the time spending in actually thing that you want to see, instead of losing a lot of time searching and trying to discover what to see.

17. Comparing a service with no flexibility and/or without customization ... Which of the two options would you choose and why?

MC → I would choose the one with customization. This is a time saver. Instead of opening Netflix and wasting 20 minutes scrolling and looking into the different genres and categories to choose a movie I think I would like to watch, I feel like Netflix already knows my taste, so usually the shows I get recommended on my feed end up being great suggestions.

AM → The customized one. We are living in an era where details matter, and people tend to appreciate customization, it makes you feel special.

BM → The customized one.

VB → A trade-off between flexibility and the price would be on the decision through process.

DC → With flexibility and customization 100%. I'd appreciate to have a word in the service that I'm signing up.

MB → I would prefer with flexibility and customization because it's something for me and made for me and I would enjoy that.

AA → The flexibility and custom. It brings me more value if the product is more targeted to my needs and likes.

CB → It depends, customization it's better but for some purposes I prefer to pay less and has no flexibility.

JR → With customization. As I said, the flexible and customize offer help a lot when we are searching. We feel less frustrated, so the customer experience is better.

18. What would be the main reasons to sign-up for a smartphone subscription?

MC → I feel like it would be like a trial of the phone. I can watch as many reviews as I want on a smartphone, but similar to reading restaurant reviews on the "the fork" I will only know if a restaurant is actually good /bad once I go there myself. With a new phone it is the same thing. Some people might love it, some might hate it. I will only actually know how I feel about it once I try it myself.

AM → Having always the latest I phone.

BM → Having always the latest One Plus for example...

VB → Significant benefit on price when compared with the same objective (upgrading the smartphone) with no subscription.

DC → Not having the obligation to make a big up-front investment. I can see this working really well for corporations.

MB → With this service, we would acquire an update of the smartphone every year and I think that's really good deal for the customer.

AA → No need to worry too much about the damages to a phone and no longer worrying in checking for new phones.

CB → See if it brings me advantages after a period of time.

JR → I think that the subscription is valuable if someone really love the brand and search and buy this product a lot, otherwise, it doesn't make sense for me. The target is really specific and should be someone that also value high tech.

19. Would you say that saving time and effort in searching for a new smartphone every year (or when you need a new one) is something that you value?

MC → I don't do this that often so not really.

AM → Not every year, but yes.

BM → I'd say yes.

VB → Yes, I would think so.

DC → Yes, for sure, for me is a huge advantage.

CL → No because I don't buy a new smartphone every year.

MB → Probably not because I value other things in my daily basis and searching for a new smartphone is not one of them because I only search for a new smartphone when I see that I need one.

AA → Yes exactly, I would not need to worry anymore.

CB → No.

JR → I only buy smartphones between a long period of time, so I don't value this so much.

20. Convenience in terms of making a regular lower payment each month versus a bigger amount every year in exchange of a smartphone, is something that you would value?

MC → If it made sense financially in the end, then yes.

AM → Yes, I would. It becomes more accessible.

BM → Yes, sure, It would be much more accessible.

VB → Yes. But not only convenience, I would value a discounted price.

DC → Yes.

CL → Maybe so, but I'd rather not have a fixed monthly expense. That's why I prefer to pay in one shot.

MB → I would prefer to pay every month than pay annually because in that way I wouldn't forget to pay the subscription and I would be easier.

AA → Not really, for me it does not make much difference if I pay monthly or up-front. If I pay monthly for a service like that I would do the calculations of what it would cost in total for the year so my decision would not be affected if it is monthly versus year.

CB → I wouldn't buy a smartphone every year so, no.

JR → Yes, I think that is always a good idea because sometimes you don't have a lot of money available, so is better to pay less but more times.

21. Do you see a positive correlation between a previous good relationship with the brand and the decision to subscribe their subscription services?

MC → I do. The smartphone market has some big players in it. I can think of Apple and Samsung for example. I'm a user of both. By releasing a new service, I would have no problem in trying this subscription service as these are brands that I already know and that are at such a big scale that I would doubt they would release something to the market without making sure it was working perfectly before.

AM → Yes of course if I already have a good relationship with the brand, it's easier for me to subscribe a service. I already trust the brand.

BM → If the relationship with the brand is already good, I believe it would be easier for me to subscribe the services, because my trust in the brand would be higher, since I was already connected to the brand.

VB → Yes, I think so. Thinking in my case if Apple had a similar service I'd probably subscribe because the brand, for me, is trustworthy.

DC → Yes. Being honest, I can see the opposite, a smartphone subscription changing the relationship with the brand just because of this new service.

CL → Yes, in my perspective is necessary to have trust in the brand to subscribe this kind of services.

MB → Yes. I believe that having a good relationship with the brand make easy for us, costumers, to subscribe any service from them because we know that they do a good job.

AA → Yes, that brings trust that the service will be kept.

CB → Yes.

JR → Totally, I think that a subscription of this type is only valuable for "star clients", people that are really loyal to the brand.

22. Do you believe smartphone manufacturers and subscription service providers do enough to address the environmental impact of their products and services?

MC → I don't believe they are doing enough no. Now, we start to see something going on but nothing considerable.

AM → I'm actually not aware of what manufacturers are doing in order to reduce environment impact.

BM → Not enough, but I believe they are trying.

VB → I don't know enough but I trust they could always do better.

DC → Of course they're not doing enough.

CL → Not really.

MB → There are some brands that are using more environmental products on manufacturing their smartphones, like for instance Apple that use recyclable materials on their smartphones.

AA → Not really. The industry of replacement every year phones nowadays is followed by the persons keeping their old phones at home and not recycling them. There are no incentives to recycling.

CB → I don't know that much about smartphone manufacturers.

JR → No.

23. Do you value a smartphone subscription model that is environmentally responsible, such as through the use of recyclable materials or carbon offsetting programs?

MC → To be honest, I don't.

AM → Yes.

BM → Yes.

VB → Yes.

DC → 100% I believe it (this new service) can be a great starting point.

CL → If I'd subscribe yes, it was one of the points I'd value.

MB → I would prefer a smartphone subscription model that use recyclable materials or any other products that don't harm our planet because we would be helping our environment.

AA → Yes! That would compensate the fact that we would replace phones every year.

CB → Yes.

JR → Yes, I think that sustainability is always an important topic. However, by having a subscription, you are increasing the consumption/production, so I think that sustainability is something difficult to be a flag of this type of service.

24. Would you be willing to pay a bit more for a subscription model that demonstrated to be environmentally friendly (e.g., use of recycle materials or carbon offsetting programs)?

MC → No, I wouldn't pay more for a subscription model that is allegedly environmentally friendly.

AM → Maybe, it depends on what is a bit more.

BM → I'm not sure because I don't know how much more would be, but probably yes. Again depends on the amount.

VB → Yes.

DC → Yes, I would. I think the business model itself is or can be very sustainable.

CL → Depending on the extra value in question, but most likely yes.

MB → Yes, because I would know that I would be making a difference in our world, making it a better place.

AA → Yes.

CB → I would consider.

JR → No, because of the reason that I just explain, I don't see the sustainability as a core of the service.

8.2.Survey

Dear participant,

This survey is being conducted as part of my master's thesis at Católica Lisbon School of Business and Economics. I kindly ask you to take 5 minutes of your time to read and complete this survey thoroughly. There are no right or wrong answers here, as it is only about your personal assessment. Your data will be treated anonymously and will not be passed on to third parties.

Thank you in advance for your participation.

If you have any questions regarding the survey, please do not hesitate to contact me at the following e-mail address:
s-jdbacalhau@ucp.pt

With the growing usage of smartphones, subscription models have become increasingly popular among customers. The present survey will be crucial to understand the driver that customers value in their smartphone subscription model program to ensure long-term customer loyalty.

Q1

Do you currently have any active subscription service?
(Can be any type, e.g., Video streaming, music streaming, etc)

- Yes
 No

Q2

What active subscription model do you have?

- Video
 Music
 Smartphone
 Beauty
 Gaming
 Groceries
 Computer software
 News
 Other

Q3

 Skip to

End of Block if No Is Selected

Do you have a smartphone?

- Yes
 No

Q4

What brand of smartphone do you currently use?

- Apple
 Samsung
 Huawei
 Nokia
 Xiaomi
 Other

Q5

Under what circumstances do you use your smartphone?
(Select 3 options)

- Watch Videos
- Work
- Listen to Music
- Calling
- Text
- Social Media
- Search on the internet
- Other

Q6



Rank the following smartphone features from the most important to the less important.

Messaging and Calling	1
Camera	2
Storage	3
GPS related features (Google Maps, Waze, etc)	4
Internet Browsing	5
Connectivity to work apps	6
Security	7

Q7

What is the primary purpose of your smartphone?

- Personal Use / Pleasure
- Work
- Both options

Q8



Overall, how satisfied are you with your smartphone brand?

- Extremely dissatisfied Somewhat dissatisfied Neither satisfied nor dissatisfied Somewhat satisfied Extremely satisfied

Q9

What made you choose your current smartphone?

- Price
- Quality
- Camera
- Storage
- Battery
- Connection between devices
- Sustainable business model
- Other

In this part of the questionnaire, I would like you to imagine that you are in the market for a new smartphone.

Q10



Please indicate how likely you would be to purchase a smartphone according to the following attributes.

	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
Brand: Apple	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Operating System: IOS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Model: iPhone 13	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Camera Quality: 12 MP	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Price: 929€	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Battery Life: 19 hours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Storage Capacity: 128 GB	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q11



Please indicate how likely you would be to purchase a smartphone according to the following attributes.

	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
Brand: Samsung	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Operating System: Android	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Model: Galaxy S21 5G	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Camera Quality: 32 MP	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Price: 909,99€	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Battery Life: 20 hours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Storage Capacity: 256 GB	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q12



Please indicate how likely you would be to purchase a smartphone according to the following attributes.

	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
Brand: Huawei	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Operating System: Android	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Model: Galaxy Mate50 Pro	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Camera Quality: 50 MP	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Price: 1 249,99€	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Battery Life: 38 hours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Storage Capacity: 256 GB	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q13



Please indicate how likely you would be to purchase a smartphone according to the following attributes.

	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
Brand: Apple	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Operating System: IOS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Model: iPhone 14 Pro Max	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Camera Quality: 48 MP	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Price: 1 889€	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Battery Life: 29 hours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Storage Capacity: 512 GB	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q14



Please indicate how likely you would be to purchase a smartphone according to the following attributes.

	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
Brand: Samsung	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Operating System: Android	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Model: Galaxy Z Fold 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Camera Quality: 50 MP	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Price: 1 599,99€	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Battery Life: 12 hours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Storage Capacity: 256 GB	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q15



Please indicate how likely you would be to purchase a smartphone according to the following attributes.

	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
Brand: Google	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Operating System: Android	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Model: Pixel 7 Pro	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Camera Quality: 50 MP	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Price: 740€	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Battery Life: 15 hours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Storage Capacity: 128 GB	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In this section of the survey, participants are questioned about smartphone subscription models.

A smartphone subscription model is meant as a subscription model, similar to Netflix or Spotify, in which users can update their smartphone for a price on a regular basis.

I would like you to imagine the following scenario: The smartphone subscription offered is based on a one-year renewal service where you could get a new smartphone with the basic features (camera and storage options) always at the end of the one-year renewal cycle.

Q16

Would you sign-up for a smartphone subscription?

- Yes
 - No
-
-

Q17

Finish the following sentence: "For me a smartphone subscription must have ..."
(Select 3 options)

- Flexible payment options
 - Custom service
 - Access to new products
 - The possibility to upgrade devices
 - Access to exclusive content
-

Q18

What would lead you to terminate your smartphone subscription service?

- Too many subscriptions
 - Price per month
 - Not having a family bundle
 - Value for money
 - Trust in the brand
 - Sustainable business model
 - Bad customer service
-

Q19

What factors do you value the most in an ideal subscription service? (Please select up to options)

- Price
 - Convenience
 - Customer Service
 - Product Recommendation
 - Be part of Community
 - Exclusive Content
 - Early access to products
 - Subscription flexibility
 - Personalised Experience
 - Device upgrade
 - Less time and effort
 - Transparency
 - Other
-
-

Q20

How would you prefer to pay for your smartphone subscription?

- Weekly
- Monthly
- Quarterly
- Bi-annual
- Annually

Q21

Would you be willing to pay \${rand://int/50:110}€ per month for your smartphone subscription?

- Yes
- No

A smartphone subscription model will have a significant environmental impact. Instead of purchasing a new smartphone every year, subscribers have the motivation and incentive to return the smartphone to the vendor/manufacturer at the end of its cycle.

In this section of the survey you will be asked question about sustainability and the connection between a smartphone subscription model and its environmental impact.

Q22



Rate the following statements in terms of importance to you ...

	Not at all important	Slightly important	Moderately important	Very important	Extremely important
How important is the environment for you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When choosing a new smartphone how important is the sustainable business model of the company?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In your opinion how important is recycling smartphone components?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In your opinion how important are carbon offsetting programs?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q23

Have you ever recycled your smartphone after buying or upgrading to a new one?

- Yes
- No

Q24

Would you be willing to pay a bit more if the brand had a significant positive impact for the environment?

- Yes
- No
- I don't know

Demographics

Q25

What gender do you identify as?

- Male
- Female
- Non-binary / third gender
- Prefer not to say

Q26

How old are you?

- Under 18
- 18 - 24
- 25 - 34
- 35 - 44
- 45 - 54
- 55 and above

Q27

In which country do you live?

Q28

What is the highest degree or level of education you have completed?

- Less than high school
- High school grade or similar
- Bachelor degree
- Master's degree
- Doctorate
- Other

Q29

What is your current employment status?

- Employed full time
- Employed part time
- Unemployed
- Retired
- Student
- Disabled

Q30

How many children do you have?

- No children
- 1 children
- 2 children
- +3 children

8.2.1. Survey Sample Characterization

What gender do you identify as?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	73	54.5	54.5	54.5
	Female	59	44.0	44.0	98.5
	Prefer not to say	2	1.5	1.5	100.0
Total		134	100.0	100.0	

Table 2 - Gender

How old are you?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 18	2	1.5	1.5	1.5
	18 - 24	60	44.8	44.8	46.3
	25 - 34	39	29.1	29.1	75.4
	35 - 44	12	9.0	9.0	84.3
	45 - 54	13	9.7	9.7	94.0
	55 and above	8	6.0	6.0	100.0
	Total	134	100.0	100.0	

Table 4 - Age

What is your current employment status?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employed full time	83	61.9	61.9	61.9
	Employed part time	7	5.2	5.2	67.2
	Unemployed	7	5.2	5.2	74.4
	Student	37	27.6	27.6	100.0
	Total	134	100.0	100.0	

Table 3 - Employment Status

What is the highest degree or level of education you have completed?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than high school	2	1.5	1.5	1.5
	High school grade or similar	9	6.7	6.7	8.2
	Bachelor degree	51	38.1	38.1	46.3
	Master's degree	67	50.0	50.0	96.3
	Doctorate	2	1.5	1.5	97.8
	Other	3	2.2	2.2	100.0
	Total	134	100.0	100.0	

Table 5 - Level of education

		In which country do you live?			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Denmark	1	.7	.7	.7
	England	1	.7	.7	1.5
	Europe	1	.7	.7	2.2
	France	1	.7	.7	3.0
	Germany	16	11.9	11.9	14.9
	Hungary	1	.7	.7	15.7
	India	2	1.5	1.5	17.2
	Ireland	1	.7	.7	17.9
	Italy	3	2.2	2.2	20.1
	Mexico	1	.7	.7	20.9
	Morocco	1	.7	.7	21.6
	Norway	1	.7	.7	22.4
	Portugal	93	69.4	69.4	91.8
	Saudi Arabia	1	.7	.7	92.5
	Spain	1	.7	.7	93.3
	turkey	1	.7	.7	94.0
	Turkey	1	.7	.7	94.8
	Uk	3	2.2	2.2	97.0
	UK	1	.7	.7	97.8
	United Kingdom	2	1.5	1.5	99.3
United States	1	.7	.7	100.0	
Total	134	100.0	100.0		

Table 6 - Country of residence

Reliability Statistics	
Cronbach's Alpha	N of items
.858	42

Table 7 - Scale Reliability

8.2.2. Descriptive Statistics

What brand of smartphone do you currently use?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Apple	86	64.2	64.2	64.2
	Samsung	21	15.7	15.7	79.9
	Huawei	5	3.7	3.7	83.6
	Xiaomi	15	11.2	11.2	94.8
	Other	7	5.2	5.2	100.0

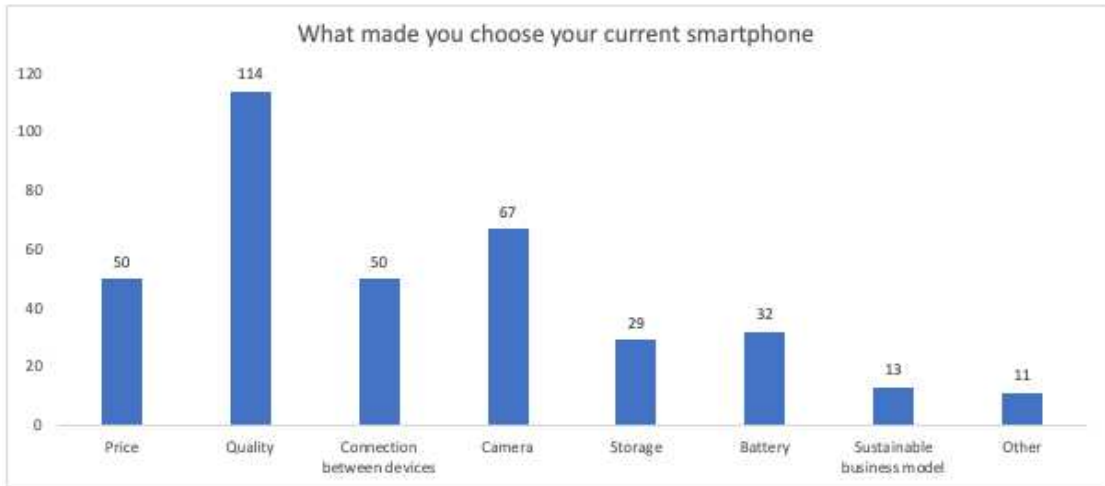
Table 8 - What brand of smartphone do you currently use

Under what circumstances do you use your smartphone						
	N	Minimum	Maximum	Mean	Std. Deviation	
Watch videos	81	1	1	1.00	.000	
Work	68	1	1	1.00	.000	
Listen to music	95	1	1	1.00	.000	
Calling	104	1	1	1.00	.000	
Text	95	1	1	1.00	.000	
Social media	113	1	1	1.00	.000	
Search on the internet	93	1	1	1.00	.000	
Other	15	1	1	1.00	.000	
Valid N (listwise)	9					

Table 9 - Under what circumstances do you use your smartphone

Rank the following smartphone features from the most important to the less important									
		Messaging and calling	Camera	Storage	GPS related features	Internet browsing	Connectivity to work apps	Security	
N	Valid	134	134	134	134	134	134	134	134
	Missing	0	0	0	0	0	0	0	0
Mean		1.99	3.34	4.47	4.44	3.44	5.06	5.25	

Table 10 - Rank the following features from the most important to the less important



Graphic 3 - What made you choose your current smartphone

	N	Mean	Std. Deviation
Price	50	1.00	.000
Quality	114	1.00	.000
Camera	67	1.00	.000
Storage	29	1.00	.000
Battery	32	1.00	.000
Connection between devices	50	1.00	.000

		Flexible payment options	Custom service	Access to new products	The possibility to upgrade devices	Access to exclusive content
N	Valid	74	69	78	94	39
	Missing	60	65	56	40	95
Mean		1.00	1.00	1.00	1.00	1.00
Std. Deviation		.000	.000	.000	.000	.000
Variance		.000	.000	.000	.000	.000

Table 11 - "For me a smartphone must have ..."

What would lead you to terminate your smartphone subscription service?

		Too many subscriptions	Price per month	Not having a family bundle	Value for money	Trust in the brand	Sustainable business model	Bad customer service
N	Valid	37	94	12	91	38	15	60
	Missing	97	40	122	43	96	119	74
Mean		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Std. Deviation		.000	.000	.000	.000	.000	.000	.000
Variance		.000	.000	.000	.000	.000	.000	.000

Table 14 - What would lead you to terminate your smartphone subscription service

Would you sign up for a smartphone subscription?

		Yes	No	Total
What is the primary purpose of your smartphone?	Personal use / Pleasure	40	33	73
	Work	3	2	5
	Both options	31	25	56
Total		74	60	134

Table 13 - What is the primary purpose of your smartphone <> would you sign-up for a smartphone

How important is the environment for you

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all important	4	3.0	3.0	3.0
	Slightly important	6	4.5	4.5	7.5
	Moderately important	30	22.4	22.4	29.9
	Very important	55	41.0	41.0	70.9
	Extremely important	39	29.1	29.1	100.0
Total		134	100.0	100.0	

When choosing a new smartphone how important is the sustainable business model of the company?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all important	9	6.7	6.7	6.7
	Slightly important	24	17.9	17.9	24.6
	Moderately important	55	41.0	41.0	65.7
	Very important	37	27.6	27.6	93.3
	Extremely important	9	6.7	6.7	100.0
Total		134	100.0	100.0	

Table 16 - When choosing a new smartphone how important is the sustainable business model of the company

Would you be willing to pay a bit more if the brand had a significant positive impact for the environment?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	81	60.4	77.9	77.9
	No	23	17.2	22.1	100.0

What factors do you value the most in an ideal subscription service?

		Price	Convenience	Customer Service	Recommendation	Be part of community	Exclusive content	Early access to products	Subscription flexibility	Personalised experience	Device upgrade	Less time and effort	Transparency	Other
N	Valid	114	59	42	14	7	42	34	33	31	42	30	27	1
	Missing	20	75	92	120	127	92	100	101	103	92	104	107	133
Mean		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Std. Deviation												.000	.000	.000
Variance												.000	.000	.000

Overall, how satisfied are you with your smartphone brand <> Would you sign-up for a smartphone subscription

		Would you sign-up for a smartphone subscription		
		Yes	No	Total
Overall, how satisfied are you with your smartphone brand	Extremely dissatisfied	2	2	4
	Somewhat dissatisfied	4	1	5
	Neither satisfied nor dissatisfied	3	3	6
	Somewhat satisfied	28	20	48
	Extremely satisfied	37	34	71
Total		70	64	134

Table 17 - Overall, how

smartphone subscription

How likely you would be to purchase a smartphone according to the following attributes

	Brand			
	Apple	Samsung	Huawei	Google
Valid	134	134	134	134
Missing	0	0	0	0
Mean	63.1493	61.9179	61.1119	61.4478
Std. Deviation	1.4553	1.7171	1.4875	1.5607
Variance	1.2064	1.3104	1.2196	1.2493

Table 20 - Brand

How likely you would be to purchase a smartphone according to the following attributes

Smartphone Model

	iPhone 13	iPhone 14 Pro Max	Samsung Galaxy S21 5G	Samsung Galaxy Z Fold 4	Huawei Galaxy Mate50 Pro	Google Pixel 7 Pro
N	Valid	134	134	134	134	134
	Missing	0	0	0	0	0
Mean	62.4403	62.4478	61.8284	61.6045	61.3060	61.5224
Std. Deviation	1.5897	2.2920	1.3959	1.4928	1.5748	1.4204
Variance	1.2608	1.5140	1.1815	1.2218	1.2549	1.1918

How likely you would be to purchase a smartphone according to the following attributes

Camera Quality

	S1: 12 MP	S2: 48 MP	S3: 32 MP	S4: 50 MP	S5: 50 MP	S6: 50 MP
N	Valid	134	134	134	134	134
	Missing	0	0	0	0	0

How likely you would be to purchase a smartphone according to the following attributes

Price

	iPhone 13 – 929€	iPhone 14 Pro Max – 1 889€	Samsung Galaxy S21 5G – 909,99€	Samsung Galaxy Z Fold 4 – 1 599,99€	Huawei Galaxy Mate50 Pro – 1 249,99€	Google Pixel 7 Pro – 740€
N	Valid	134	134	134	134	134
	Missing	0	0	0	0	0

How likely you would be to purchase a smartphone according to the following attributes

Battery Life

	iPhone 13 – 19 hours	iPhone 14 Pro Max – 29 hours	Samsung Galaxy S21 5G – 20 hours	Samsung Galaxy Z Fold 4 – 12 hours	Huawei Galaxy Mate50 Pro – 38 hours	Google Pixel 7 Pro – 15 hours
N	Valid	134	134	134	134	134
	Missing	0	0	0	0	0
Mean	62.6119	63.2090	62.3060	60.9552	62.6791	61.3507
Std. Deviation	1.1778	1.1056	1.3616	0.9084	1.9392	1.4886
Variance	1.0853	1.0515	1.1669	0.9531	1.3926	1.2201

Table 24 - Battery Life



How likely you would be to purchase a smartphone according to the following attributes							
Storage Capacity							
	iPhone 13 – 128 GB	iPhone 14 Pro Max – 512 GB	Samsung Galaxy S21 5G – 256 GB	Samsung Galaxy Z Fold 4 – 256 GB	Huawei Galaxy Mate50 Pro – 256 GB	Google Pixel 7 Pro – 128 GB	
N							
Valid	134	134	134	134	134	134	134
Missing	0	0	0	0	0	0	0
Mean	62.8284	63.2612	62.8433	62.6045	62.6119	62.6119	62.0821
Std. Deviation	0.9929	0.9989	1.4307	1.4928	1.8134	1.8134	1.7363
Variance	0.9965	0.9995	1.1961	1.2218	1.3466	1.3466	1.3177

Table 25 - Storage Capacity

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	.052	2	.974
Likelihood Ratio	.052	2	.974
Linear-by-Linear Association	.007	1	.934
N of Valid Cases	134		

Symmetric Measures			
		Value	Approximate Significance
Nominal by Nominal	Phi	.020	.974
	Cramer's V	.020	.974
N of Valid Cases		134	

Table 27 - Symmetric measures for H1 and H1a

Chi-Square Test	
When choosing a new smartphone how important is the sustainable business model of the company	
Chi-Square	57.493
df	4
Asymp. Sig.	<.001

Table 28 - Chi-square test for H4

Chi-Square Test	
Would you be willing to pay a bit more if the brand had a significant positive impact for the environment	
Chi-Square	32.346
df	1
Asymp. Sig.	<.001

Table 29 - Chi-square test for H4a

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.817	4	.769
Likelihood Ratio	1.928	4	.749
Linear-by-Linear Association	.473	1	.492
N of Valid Cases	134		

Table 30 - Chi-square test for H8

Symmetric Measures			
		Value	Approximate Significance
Nominal by Nominal	Phi	.020	.974
	Cramer's V	.020	.974
N of Valid Cases		134	

Table 31 - Symmetric measures for H8

9. References

- Aaker, D. A. (1991). *Managing Brand Equity*, New York, Maxweel Macmillan-Canada. *Inc. 1991*.
- Algesheimer, R., Dholakia, U. M., & Herrmann, A. (2005). The social influence of brand community: Evidence from European car clubs. *Journal of marketing*, 69(3), 19-34.
- Agustin, C., Singh, J. (2005). Curvilinear effects of consumer loyalty determinants in relational exchanges. *Journal of Marketing Research*, 42(1).
- Baek, H., & Kim, K. (2022). An Exploratory Study of Consumers' Perceptions of Product Types and Factors Affecting Purchase Intentions in the Subscription Economy: 99 Subscription Business Cases. *Behavioral Sciences*, 12(6), 179.
- Bhatia, H. (2022). Apple's hardware subscription plan a game changer. *Counterpoint*. <https://www.counterpointresearch.com/apples-hardware-subscription-plan-game-changer/>
- Bischof, S. F., Boettger, T. M., & Rudolph, T. (2020). Curated subscription commerce: A theoretical conceptualization. *Journal of Retailing and Consumer Services*, 54, 101822.
- Boyce, C., & Neale, P. (2006). *Conducting in-depth interviews: A guide for designing and conducting in-depth interviews for evaluation input* (Vol. 2). Watertown, MA: Pathfinder international.
- Bray, J., Kanakarathne, M. D. S., Dragouni, M., & Douglas, J. (2021). Thinking inside the box: An empirical exploration of subscription retailing. *Journal of Retailing and Consumer Services*, 58, 102333.
- Caponetto, I., Earp, J., & Ott, M. (2014, October). Gamification and education: A literature review. In *European Conference on Games Based Learning* (Vol. 1, p. 50). Academic Conferences International Limited.
- Cecere, G., Corrocher, N., & Battaglia, R. D. (2015). Innovation and competition in the smartphone industry: Is there a dominant design?. *Telecommunications Policy*, 39(3-4), 162-175

- Chen, Y., & Shang, Y. F. (2018). Factors influencing users' word-of-mouth intention regarding mobile apps: An empirical study. *The Journal of Industrial Distribution & Business*, 9(1), 51-65.
- Chiu, C. M., Hsu, M. H., Lai, H., & Chang, C. M. (2012). Re-examining the influence of trust on online repeat purchase intention: The moderating role of habit and its antecedents. *Decision Support Systems*, 53(4), 835-845.
- Creswell, J. W. (2014). *A concise introduction to mixed methods research*. SAGE publications.
- Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011, September). From game design elements to gamefulness: defining "gamification". In *Proceedings of the 15th international academic MindTrek conference: Envisioning future media environments* (pp. 9-15).
- Dhar, R., & Wertenbroch, K. (2000). Consumer choice between hedonic and utilitarian goods. *Journal of marketing research*, 37(1), 60-71.
- Erdbrügger, V. (2022). *Why subscriptions? - A subscription model supports your sustainability strategy*. LinkedIn. <https://www.linkedin.com/pulse/why-launch-subscription-model-your-product-victoria-erdbruegger/>
- Farquhar, J. D., & Rowley, J. (2009). Convenience: a services perspective. *Marketing theory*, 9(4), 425-438.
- Farrell, J., & Klemperer, P. (2007). Coordination and lock-in: Competition with switching costs and network effects. *Handbook of industrial organization*, 3, 1967-2072.
- Forsido, M. Z. (2012). Brand loyalty in Smartphone.
- Gassmann, O., Frankenberger, K., & Csik, M. (2014). *The business model navigator: 55 models that will revolutionise your business*. Pearson UK.
- Han, H., & Hyun, S. S. (2013). Image congruence and relationship quality in predicting switching intention: Conspicuousness of product use as a moderator variable. *Journal of Hospitality & Tourism Research*, 37(3), 303-329.
- Harris, L. C., & Goode, M. M. (2004). The four levels of loyalty and the pivotal role of trust: a study of online service dynamics. *Journal of retailing*, 80(2), 139-158.

- Kaplan, S. R., Norton, P. D., (2003). Lock-in Strategies: A new value proposition. *Harvard Business Publishing*, 15 September.
- Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of marketing*, 57(1), 1-22.
- Kestenbaum, R. (2020). It's Never Been Easier to Sell Subscription': The Surprise Winners of the Coronavirus Shutdown. *Forbes*. May, 11, 2020.
- Khan, U., Dhar, R., & Wertenbroch, K. (2004). A behavioral decision theoretic perspective on hedonic and utilitarian choices. *Yale University*.
- Koivisto, J., & Hamari, J. (2014). Demographic differences in perceived benefits from gamification. *Computers in Human Behavior*, 35, 179-188.
- Kuhlmeier, D., & Knight, G. (2005). Antecedents to internet-based purchasing: a multinational study. *International Marketing Review*.
- Laukkanen, T. (2016). Consumer adoption versus rejection decisions in seemingly similar service innovations: The case of the Internet and mobile banking. *Journal of Business Research*, 69(7), 2432-2439.
- Liu, Y., Gützlaff, A., Cremer, S., Grbev, T., & Schuh, G. (2021). Design of tailored subscription business models—a guide for machinery and equipment manufacturers. In *Production at the leading edge of technology: Proceedings of the 10th Congress of the German Academic Association for Production Technology (WGP), Dresden, 23-24 September 2020* (pp. 717-727). Springer Berlin Heidelberg.
- Lopes, J. L. P. (2010). Fundamental dos estudos de mercado—teoria e prática. *Lisboa: Edições Sílabo*.
- Lumpkin, G. T., & Dess, G. G. (2004). E-business strategies and internet business models: How the internet adds value. *Organizational Dynamics*, 33(2), 161-173.
- O'Dea, S. (2022, Nov 17). *Smartphones – Statistics and facts*. Statista. <https://www.statista.com/topics/840/smartphones/#topicOverview>
- Okada, E. M. (2004). “Justifying the Hedonic and the Effects on Fun versus Practical Consumption”, *Journal of Marketing Research*.

- Owusu Kwateng, K., Yobanta, A. L., & Amanor, K. (2021). Hedonic and utilitarian perspective of mobile phones purchase intention. *Journal of Contemporary Marketing Science*, 4(1), 44-68.
- Page, C., & Lepkowska-White, E. (2002). Web equity: a framework for building consumer value in online companies. *Journal of consumer marketing*, 19(3), 231-248.
- Panigrahi, S. K., Azizan, N. A., & Shamsi, I. R. Al. (2021). “Product Innovation, Customer Satisfaction, and Brand Loyalty of Using Smartphones Among University Students : PLS – SEM Approach.” *Indian Journal of Marketing*, 51(1), 17. <https://doi.org/10.17010/ijom/2021/v51/i1/156931>
- Patton, M. Q. (1990). *Qualitative evaluation and research methods*. SAGE Publications, inc.
- Petruzzellis, L. (2010), “Mobile phone choice: technology versus marketing the brand effect in the Italian market”, *European Journal of Marketing*, Vol. 44 No. 5, pp. 610-634.
- Rabianski, J. S. (2003). Primary and secondary data: Concepts, concerns, errors, and issues. *The Appraisal Journal*, 71(1), 43.
- Rashotte, L. (2007). Social influence. *The Blackwell encyclopedia of sociology*.
- Reichheld, F. F., & Schefter, P. (2000). E-loyalty: your secret weapon on the web. *Harvard business review*, 78(4), 105-113.
- Riyath, M.I.M. and Musthafa, L. (2014), “Factors affecting mobile phone brand preference: empirical study on Sri Lankan university students”, *Proceedings of the 4th International Symposium*, 31 July 2014, South Eastern University.
- Robertson, T. S. (2017). Business model innovation: a marketing ecosystem view. *AMS Review*, 7, 90-100.
- Safitri, R. M., & Purnamasari, S. E. (2018). “Development of Student Brand Loyalty to Higher Education Based on Study Period.” *Insight. ISSN 1693-2552, Vol.19(No.1)*, Hal 57-70. <https://doi.org/10.26486/psikologi.v19i1.599>
- Schaupp, L. C., & Bélanger, F. (2005). A conjoint analysis of online consumer satisfaction1. *Journal of electronic commerce research*, 6(2), 95.

Senecal, S., & Nantel, J. (2004). The influence of online product recommendations on consumers' online choices. *Journal of retailing*, 80(2), 159-169.

Sirdeshmukh, D., Singh, J., & Sabol, B. (2002). Consumer trust, value and loyalty in relational exchanges. *Journal of Marketing*, 66(1), 15–37. doi:10.1509/jmkg.66.1.15.18449

Supertini, N. P. S., Telagawati, N. L. W. S., & Yulianthini, N. N. (2020). "The influence of customer trust and satisfaction on customer loyalty at Kebaya Heritage in Singaraja." *Prospects: Journal of Management and Business*. ISSN 2685-5526, Vol 2(No.1), Pgs 61-73. <https://doi.org/10.23887/pjmb.v2i1.26201>

Tani, M., Triose, C., & O'Driscoll, A. (2022). Business model innovation in mobile apps market: Exploring the new subscription plans with a behavioural reasoning perspective. *Journal of Engineering and Technology Management*, 63, 101674.

Tavakol, M., and R. Dennick. 2011. "Making sense of Cronbach's alpha." *Int J Med Educ* 2: 53-55. <https://doi.org/10.5116/ijme.4dfb.8dfd>.

Van Leth, T. P. (2016). *Typologies of Subscription-based Business Models*.

Vehovar, V., Toepoel, V., & Steinmetz, S. (2016). *Non-probability sampling* (Vol. 1, pp. 329-45). The Sage handbook of survey methods

Wang, C. L., Zhang, Y., Ye, L. R., & Nguyen, D. D. (2005). Subscription to fee-based online services: What makes consumer pay for online content?. *Journal of electronic commerce research*, 6(4), 304.

Warrillow, J. (2015). *The automatic customer: creating a subscription business in any industry*. Penguin.

White, B. P., & Rayner, S. (2014). *Dissertation Skills for Business and Management Student*. Cengage Learning.

Zuora. The Subscription Economy Index. Technical Report. 2021. Available online: <https://www.zuora.com/resource/subscription-economy-index> (accessed on 10 January 2021).