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Ingredient branding influence on Purchase Intention and Willingness to Pay: The Smartphone Case in Portugal

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“Education is not something you can finish.”

Isaac Asimov

ABSTRACT

Title: Ingredient branding influence on Purchase Intention and Willingness to Pay: The Smartphone Case in Portugal.

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The smartphone industry has been through a drastic revolution. Recent smartphones greatly outperform outdated models, offering a wide range of new functionalities. However, the once fast-growing industry is now facing a slower growth, despite continuous significant investment in R&D.

Consequently, even the biggest players are losing market share and striving to differentiate themselves in such a competitive market. Now, more than ever in the industry, it is very important to understand what exactly consumers are looking for in a smartphone, what they give value to and what features they are willing to pay for.

The aim of this Research is to test the potential of the Ingredient Branding strategy on Smartphones as well as provide Brands with insights on the most valued characteristics. First, the Factors that influence Smartphone Purchase Intention are validated. Then, two scenarios are compared, with and without a branded ingredient, and the differences are analyzed.

The methodology used comprised both qualitative and quantitative data from In-Depth Interviews of 5 different Smartphone User Profiles, gathered in a survey with 240 valid respondents. All the analysis was supported with a detailed analysis of the existing literature on the Factors affecting Smartphone Purchase Intention and Ingredient Branding: its positive and negative effects.

The main findings suggest that consumers are willing to pay a Price Premium for smartphones with Branded ingredients and that the association of a smartphone with an high quality Brand increases its evaluation, giving strength to the theory of the positive spillover effects of ingredient branding when using high quality Brands, that have been studied over the years in different products and industries.

Keywords: Smartphone; Ingredient Branding, Co-Branding; Purchase Intention; Willingness to Pay; Trust; Brand Image, Functional Value, Emotional Value; Social Value

RESUMO

Título: Influência da estratégia de *Ingredient Branding* na Intenção de Compra e Disposição a Pagar: Caso dos smartphones no mercado português.

Autor: Pedro Rodrigues Vaz.

A indústria dos smartphones tem sofrido uma revolução drástica. O desempenho dos smartphones mais recentes ultrapassa largamente o desempenho dos modelos mais antigos, oferecendo hoje novas funcionalidades. Contudo, a indústria que recentemente se encontrava em larga expansão enfrenta agora um abrandamento no crescimento, apesar do investimento contínuo e significativo em I&D.

Como consequência, até os grandes da indústria estão a perder quota de mercado e a lutar para se diferenciarem da competição num mercado feroz. Agora mais do que nunca, é extremamente importante perceber o que procuram os consumidores num smartphone, o que mais valorizam, e quais as características pelas quais estão dispostos a pagar

Este estudo tem como objetivo avaliar o potencial da estratégia *Ingredient Branding*, em smartphones bem como providenciar informação útil às marcas, relativamente às características mais valorizadas. Primeiro, os fatores que influenciam a Intenção de Compra de um smartphone são validados e, posteriormente, são comparados dois cenários, um telemóvel sem e com um *branded ingredient*, permitindo a análise das diferenças entre os cenários.

A metodologia usada consistiu em recolher dados qualitativos, através de 5 entrevistas profundas a utilizadores com perfis diferentes, e quantitativos, através da análise de um questionário que contou com 240 respostas válidas. Toda a análise efetuada teve como suporte a literatura existente tanto sobre os fatores que afetam a intenção de compra de smartphones bem como dos estudos passados sobre os efeitos positivos e negativos da estratégia de *Ingredient Branding*.

As principais conclusões do estudo são que a maioria dos consumidores demonstrou recetividade e intenção de pagar um montante superior pela versão do smartphone com um *branded ingredient* bem como as avaliações das duas alternativas foram significativamente superiores no segundo cenário (com o *branded ingredient*), comprovando que os efeitos de associação positivos revelados em estudos anteriores se estendem ao mercado dos smartphones.

Palavras-Chave: Smartphone; *Ingredient Branding*, *Co-Branding*; Intenção de Compra; Vontade de Pagar; Confiança; Imagem da Marca; Valor Funcional; Valor Emocional; Valor Social

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1. INTRODUCTION

1.1. Background

The smartphone industry has been through a drastic revolution. Recent smartphones greatly outperform outdated models, offering a wide range of new functionalities. However, the once fast-growing industry is now facing a slower growth, despite continuous significant investment in R&D.

This can be translated into one phenomenon: fierce competition. Companies strive to differentiate and offer more value to their customers. Due to economies of scale and aggressive competition, the margins are pushed to the limit and companies are fighting each other on a daily basis. It is very important to understand what exactly are consumers looking for, which attributes, and how much they value each attribute.

Whilst companies might be fighting this battle on their own, there is one considerably unexplored option which might be the key for success: Ingredient Branding.

1.2. Problem Statement

The main objective of this dissertation is to understand to what extent Smartphone Brands can differentiate themselves using an Ingredient Branding strategy on one of their components. Although for instance in computers it is common, in smartphones the reality is different and it seems to be a strategy that is only now starting to be considered by some manufacturers (an example is the somewhat recent partnership of Huawei with Leica).

Hence, it is necessary to first find out if consumers will value the strategy and lastly if they will actually pay a Price Premium for it. Therefore, the following problem statement was defined for this study:

“Does Ingredient Branding positively influence perceptions of consumers and consequently willingness to pay a Price Premium?”

1.3. Aim of the Research

The aim of this Research is to individually assess the most representative Factors in previously studied smartphone purchase intention models and, after validating that they are indeed relevant, verify if and how sensitive these Factors are to an Ingredient Branding strategy.

The objective is to show consumers two products, one with a Branded characteristic that is valued by consumers and one without, and compare the evaluation between those two products. Potential spillover effects will then be examined. To perform this test the following Research Questions will be addressed on this Study:

RQ1: Which Smartphone Features/Characteristics are consumers valuing at the moment?

RQ2: Which Factors influence purchase intention of Smartphones?

RQ3: Does Purchase Intention influence willingness to pay?

RQ4: Does Ingredient Branding enhance the evaluations of the Factors that influence Purchase Intention as well as Purchase Intention?

RQ5: Does Ingredient Branding increase Willingness to Pay for a smartphone?

1.4. Research Method

In this study both exploratory, explanatory and descriptive research was conducted. The study focuses in the Portuguese population so primary data was collected both from in-depth interviews form five Portuguese people, of different ages and gender and from a quantitative Online Survey.

To better assess this information, the secondary data collected previously in the Literature Review was used as a support, enabling a comparison between previous findings on the effects of the Ingredient Branding strategy.

1.5. Academic and Managerial Relevance

Although many scholars have identified the potential of the strategy of Ingredient Branding there are not actual and up-to-date studies on it, especially on specific and applied cases, as for example the smartphone industry.

Additionally, Ingredient Branding Literature usually focus on the evaluation of perception and does not quantify its impact. Therefore, in this study, the objective was to go further and not only reach a conclusion of whether the strategy seemed to be beneficial but actually verify if consumers would reflect that on their willingness to pay. As mentioned before, in such a competitive market as the Smartphone one, where not even the market leaders can afford to stay idle, it is extremely relevant to continue improving and showing more value to consumers, especially because that is what they got used to over the last years: constant innovation.

1.6. Dissertation Outline

Five Chapters comprise this Dissertation. The first elaborates on the problem statement and research question that will be the main focus during the whole study. The second presents an overview of the existing Literature on the effects identified to date of Ingredient Branding and Factors that affect Smartphone Purchase Intention. Chapter three introduces the methodology and concept behind the study as well as a Conceptual Model. Next, in Chapter four several statistical and non-statistical analyzes take place that intend to answer the Research Questions. In the end, Chapter five summarizes the main conclusions, identifying the limitations of the study and pointing towards potential next research on the field.

2 LITERATURE REVIEW

1. SMARTPHONES

"We have all gotten so used to having these appendages, these devices that are almost like our other limb, that when they're not there we start to panic."

Lori Leibovich
(HuffPost's Executive Lifestyle Editor)

Smartphones have revolutionized our lives. And they did it in such a smooth and gradual way that most of us did not even realize it. It just feels like the smartphones were always part of our lives. Going back to 2012, a study made by Google in 40 of the main markets found that in every three people, one had a smartphone. Just four years later this number rocketed to 70%. Although it started with the younger generations, it is now spreading to the older generations as well (Google Consumer Barometer, 2016).

Smartphones are mobile devices whose spectrum of functionalities comprises more than just making and receiving calls, text messages and voice mails. Core features of a Smartphone are its capacity to access the Internet as well as digital media such as pictures, videos and music. Additionally, smartphones require the ability to run small computer programs, usually referred to as applications or merely apps (Weinberg, 2012).

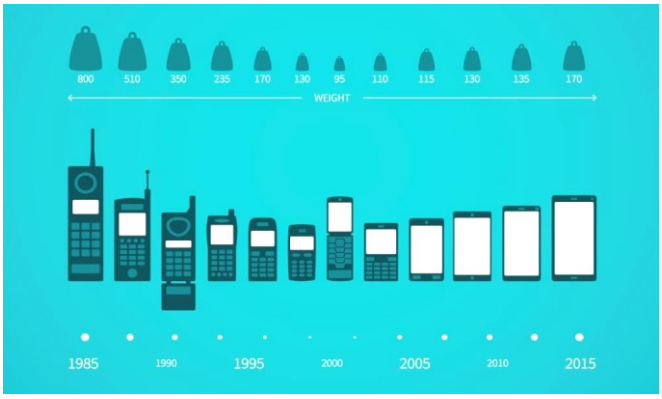
Since its creation in the first half of the 2000s to bring some innovation to an industry whose sales were decreasing annually (Giachetti, C and Marchi, G, 2010), the way they have been growing in the last few years, mainly this decade, is notorious. Not only the increase in the units sold, but also the way in which it is spreading around the whole world. Nowadays, almost every person has a smartphone, with instant access to the internet and the social networks, such as Facebook, Instagram, Snapchat, Twitter, etc as well as many other functionalities.

The Google Report previously mentioned, "The Internet in Numbers", presents very interesting and surprising statistics which show a new reality. Conclusions range from the fact that the smartphone is the main and favorite camera for all age groups, that between 2012 and 2016 smartphone adoption has doubled, that for 6 in 10 people the first thing done in the morning is to reach their smartphone and that 63% of users under 25 years claim their smartphone is the primary way to listen to music. Additionally, that they are used for a plethora

of tasks such as checking the news and the weather, playing games, tracking health and diets, travelling (orientation and maps), agenda, to-do lists, shopping and much more.

1.1 Mobile Growth

Figure 1 – Evolution of Mobile Phones

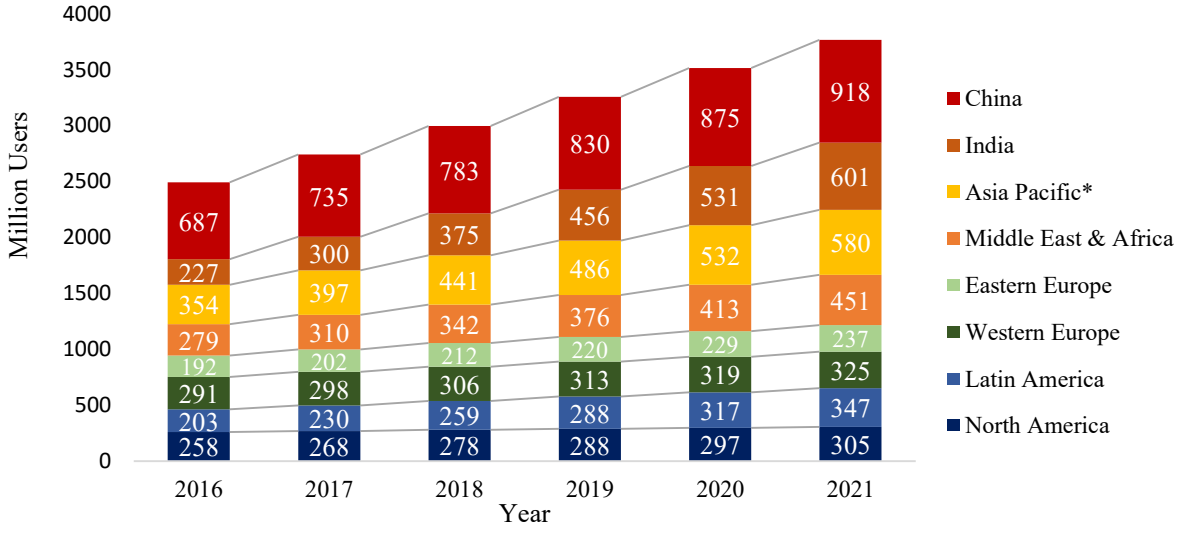


Source: www.cashify.in/blog/the-last-decade-evolution-of-smartphones/

Although the first smartphone was created back in 1993 with the IBM Simmon, first attempt from the industry to create an all-in-one device that could join together the mobile telephony with the PDA functionality (Personal Digital Assistant) only in 2002 smartphones started having browsing functionalities and built-in cameras. Color screens arrived the following year in 2003. In 2007 after significant improvements and advancements, three companies controlled the market, namely Microsoft, Palm and Blackberry, until a big disruption in the market: the arrival of the Apple iPhone which quickly became dominant in the upcoming years (Rothman et al, 2017).

As of today, after considerable and constant improvements, as Rothman et al (2017) stated, the market is focusing on "storage capacity, battery technology, processing power, screen enhancements, wireless technology, miniaturization, and to an extent, the operating systems as they are maturing". Below, it is possible to see the evolution of Smartphone Users from 2016 to 2021 across the different regions. For most, the tendency is to grow.

Graphic 1 - Active Smartphone Users Globally per Region

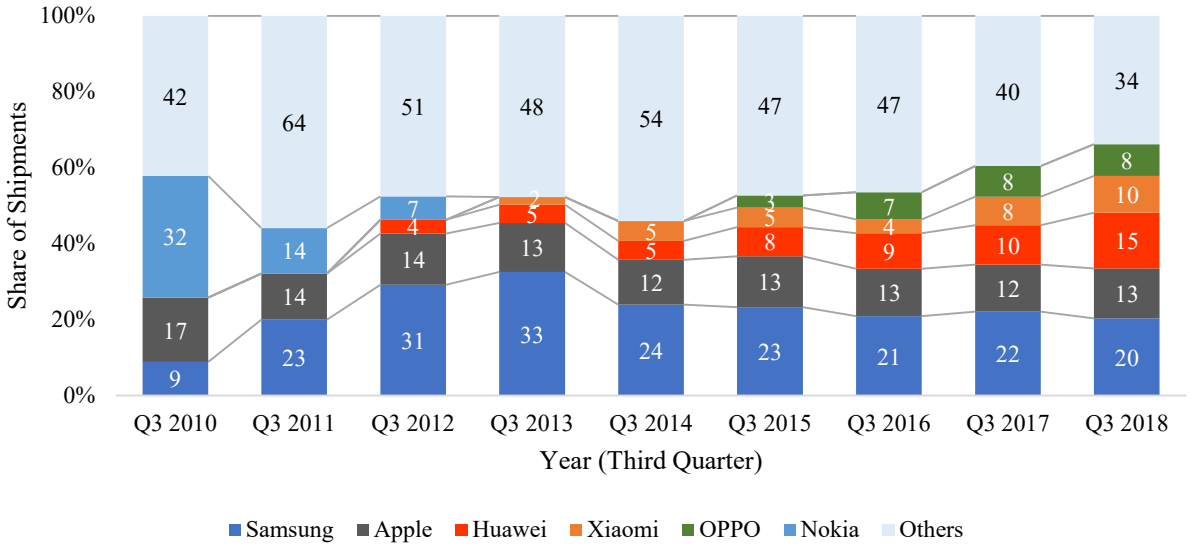


*Excludes India and China

Source: Global mobile market report, Sep. 2018 - newzoo.com/global-mobile-report

1.2 Main Players

Graphic 2 - Global market share held by smartphone vendors worldwide.
(Data is from the 3rd Quarter of each year)



Source: https://www.statista.com/statistics/271496/global-market-share-held-by-smartphone-vendors-since-4th-quarter-2009/

The most recent data places the south Korean brand Samsung as the current leader in terms of market share (20,3% in Q3 of 2018), despite the recent expansion of Chinese brands such as Huawei, Xiaomi and Oppo (third, fourth and fifth placed in the world ranking, with 14,6 %, 9,7 % and 8,4%, respectively, only behind the previously mentioned Samsung and Apple (13,2%)).

This shows the gigantic growth of Chinese brands over this last few years, in some cases doubling their share comparing to the previous year. They have plans to expand its dominance in the European and Latin America markets, which will certainly increase their market share in the next couple of years and, who knows, give them the smartphone market dominance in the short term.

In the graph above is evidenced how dynamic and competitive the smartphone market is. Samsung and Apple are the two vendors that have been fightinging for the leadership of the market since 2011. In this fight, not all smartphones makers have survived. An example is the surprising case of Nokia. In Q3 of 2010 Nokia was positioned in the 1st position with 32% market share. In Q3 of 2011 it saw its marketing share decrease to 13,6% and just two years later is sales were marginal. Other vendors such as LG, Lenovo, ZTE, Sony have also been very important in the industry but never managed to differentiate and grow at the same level as the Chinese Brands already mentioned.

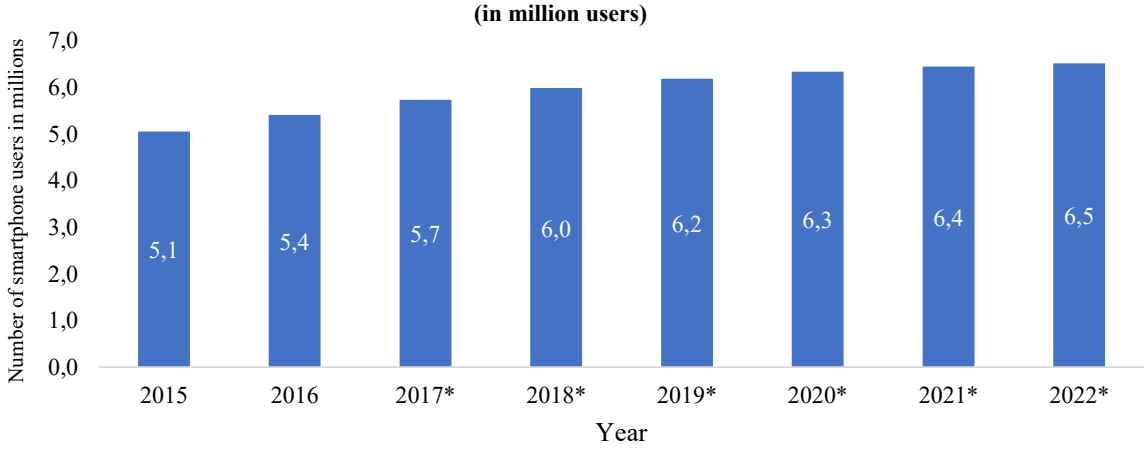
Samsung is worthy of further attention, as the global market leader and it is also present in several other markets, from financial services, to entertainment systems and chemicals, among others.

Focusing on smartphones, the number one product of Samsung is the Galaxy series, firstly released into the market in April 2009. A look at the increase in smartphone's shipments by Samsung is enough to realize the dimension of its achievements: from 2,4 million shipments in the first quarter of 2010 to 74,1 million shipments in the fourth quarter of 2017. (Statista, 2018).

1.3 Smartphone market in Portugal

On a brief reference to the Portuguese market, it is expected a rise in the number of smartphone users, meaning it is a market that still presents growth potential as shown in the graph below. An IDC analysis found that in the Portuguese market three Brands only comprised 64% of the total market sales in the first quarter of 2018. This quarter was also the first time in the history of Portugal that Huawei surpassed Samsung in a tight fight becoming the leader of the market with 152 000 smartphones sold and a market share of 25%, opposing to Samsung's 147 000 units and 25% equal share. In the third place comes Apple, with 84 000 smartphones sold and a market share of 14%.

Graphic 3 - Forecast of Smartphone User Numbers in Portugal from 2015 to 2022
(in million users)

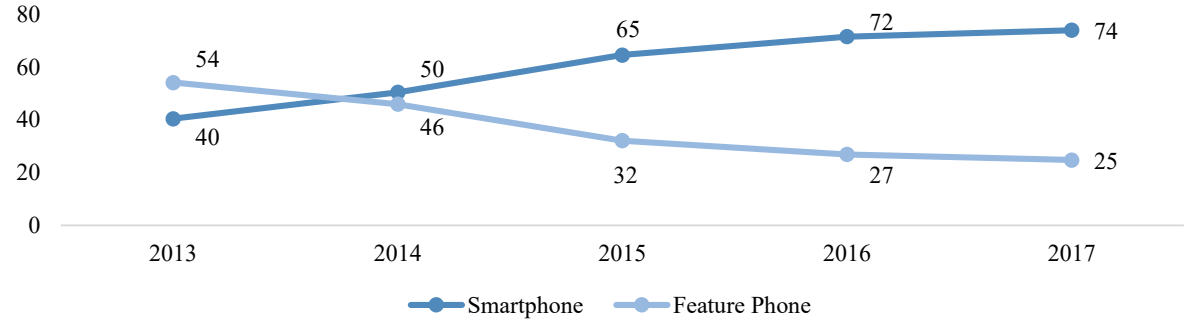


*Forecast
Source: https://www.statista.com/statistics/566177/predicted-number-of-smartphone-users-in-portugal/

Marktest annually evaluates the smartphone penetration in the Portuguese market. Examining the information on Graphic 4, it is possible to conclude that by the end of 2013 Portuguese started using and owning more smartphones than feature phones and also that there

are still many Portuguese who have a feature phone and therefore are potential smartphone users.

Graphic 4 - Smartphone versus Feature Phone in Portugal (in percentage)



Source: BTC Mobile Phone – Marktest (information privately shared for the dissertation)

1.4 "What the Internet is Saying" – Internet Review Complement

A general research was conducted on the internet over some of the most renowned and well-known Online Newspapers, Forums and Tech Blogs, named for the purpose of this dissertation "What the Internet is Saying". A summary and overview of this research with the main insights from each piece considered can be seen on **Appendix II**. It was extremely relevant as it helped in consolidating the information on the Smartphone market.

2. INGREDIENT BRANDING

"Your premium brand had better be delivering something special, or it's not going to get the business."

Warren Buffet
(CEO of Berkshire Hathaway)

In the fast changing market which globalization and technology have created, it is more important than ever for companies to use Marketing to create value and develop Brands fully to their potential. A major marketing strategy which is attracting more and more companies is Ingredient Branding and the results are speaking for themselves (Desai and Keller, 2002). To better understand this strategy, first a deep look was given to Brand Equity, followed by an analysis of Branding and Co-Branding, ending with its analyzed variant, Ingredient Branding.

2.1 Brand Equity

"Products are made in the factory, but Brands are created in the mind."

Walter Landor

(Acclaimed Brand Designer)

First, it is important to understand what a Brand is. Farquhar (1989) defines it as "a name, symbol, design or mark that enhances the value of a product beyond its functional purpose". Brand Equity, on the other hand, is a more complex concept. It is in truth one of the most discussed and studied topics in Marketing. From the several definitions scholars have used over time, some have a consumer based perspective, some a more financial approach, and others take both perspectives in consideration.

From all the definitions, the two core studies that are most relevant still to this day as they are the foundation of a vast set of empirical and conceptual studies on Brand Equity are those of Aaker (1991,1996) and Keller (1993). In this dissertation we will focus on the Model of the first and its four components on Brand Equity: Brand Awareness, Perceived Quality, Brand Loyalty and Brand Associations. Further definitions of Brand Equity and the explanation of each of these components can be found on **Appendix I**.

Favorable and robust Brand Equity gives Brands the openings to explore brand extensions, resilience and defense from other Brands and their promotions and campaigns as well creating barriers to competitive entry (Farquhar, 1989). Below, a more deep insight into the four components of Brand Equity as defined by Aaker (1991).

2.2 Branding & Co-Branding

"Marketing is no longer just about the stuff you make… It's about the story you tell."

Seth Godin

(Writer and Business Executive)

After introducing Brand Equity, it is essential to understand how to develop it in such a complex and global market. One of the ways, which for many companies is the number one priority and has a major role in doing so is Branding (Kapferer, 2005; Burnaz et al.,2011). Focusing on Branding and working towards a solid and efficient Brand strategy is very important and when executed properly likely to be a success factor (Rooney, 1995) because it

has been found that Brands do indeed have a high influence in the consumers decision making process (Bendixen et al., 2004).

In a context of fierce competition, differentiation is key to achieve success. Branding gives companies the capacity to distinguish themselves from competitors, even more in markets with high competition and where the prices and tangible attributes of products do not differ greatly (Leuthesser et al. 2003). Branding efforts result in the creation of a long lasting intangible value and this added value derives from all the marketing investments that have been done over the years (Keller, 2009).

The natural evolution and expansion of Branding led to new strategies as for example Co-branding which has been defended and praised for increasing companies competitiveness (Kalafatis et al. 2012) and at the same time decreasing risk by partnering two or more Brands together (Leuthesser et al. 2003).

Definitions of Co-Branding are not consensual and this is a topic where there has been dispute. Two examples of the existing definitions are the one of Park et al. which back in 1996 introduced Co-Branding as the pairing of two or more products with their corresponding Brands having the goal of creating a product that is more unique and the one of Helmig et al which later in 2008 defined it in a more conceptual way as a strategy with a long-term focus, where two Brands ally together in order to create one branded product that is identified at the same time by two Brands. The common stand point among all definitions is the creation of a new product, originated from the gathering of two different Brands.

The most direct advantage of this strategy is that by advertising together a new bundled product it is achieved more value not only for the consumers but also for the companies (Leuthesser et al.,2003). This is a strategy that helps consumer's evaluation of the product through the use of the past experiences with both Brands (Abratt et al., 2002).

One of the most cited studies of Co-Branding is the one of Park et al. (1996) whose research consisted of joining two Brands together, both fictional and both with high quality attributes, and arrived to the conclusion that just the combination itself of the two Brands resulted in an increase in the perceived attributes of each other, and the Product benefitted from the associations of both Brands, absorbing the high quality attributes.

One question that can come to mind is if the gathering of two Brands will make sense independently of the Brands chosen. Park et al. (1996) defended that a vital requirement for the

success of a co-branding strategy was the logical relation amongst the two Brands. However, Rao et al. (1999) found the opposite claiming that is it only relevant to a certain extent, not mandatory and that it is possible to see successful and recompensing co-branding strategies since the two Brands can gain value from each other's attributes. In the study of the later, it was also found that in the presence of a co-branding strategy and a familiar Brand, the unknown Brand would see its quality perception increase significantly. With the mentioned outcome, the achieved conclusion is that Co-Branding should be seen as a win-win strategy since low equity brands will benefit from the association with a Brand with higher equity and, very important, the Brand with the higher value will not be harmed by the association with the lower value or unknown brand (Washburn et al., 2004).

2.3 Ingredient Branding

"Content is King."

Bill Gates
(Co-founder of Microsoft)

One variation of the mentioned co-branding strategy is Ingredient Branding, main focus of this dissertation. Ingredient branding is a strategy that has been for a long time in the market, in fact started being conceptualized in the late 80's (Kotler et al., 2010) yet recently has seen its popularity rise. Desai et al. (2002) objectively defined it as "the incorporation of the key attributes of one brand into another brand as ingredients".

2.3.1 Ingredient Branding Effects

Through this incorporation, the positive associations will pass into the host brand, also termed as the "spillover effect" (Simonin et al., 1998). The later researchers looked into the spillover effects on consumer brand attitudes originated by brand alliances and concluded that ingredient branding is a strategy able to modify the attributes of the partner brand.

Ingredient branding can also foment a relationship between the two Brands (typically a manufacturer and a supplier) that can create value in terms of knowledge sharing and risk management (Erevelles et al., 2008). The use of a branded ingredient or component facilitates the identification and builds a perception of high quality this way helping differentiate the final product (Desai et al., 2002).

One of the core concepts of Ingredient Branding strategy is the push & pull strategy (Kotler et al., 2010), since both marketing efforts are present at the same time.

Generally speaking, an ingredient branding strategy shares the following objectives: Firstly, to differentiate and create a preference in a specific target group for a specific product. Secondly, to develop loyalty and commitment towards the ingredient Brand. Thirdly, and the most important objective of ingredient branding: increasing sales and market penetration. If a manufacturer uses an ingredient branding strategy and manages to successfully improve its market position as it's the goal and most times result of ingredient branding then it will be possible to charge a premium for the branded attribute and increase the value of both the company and the product (Kotler et al., 2010).

On the supplier level, there are additional advantages such as getting access to new markets, creating barriers for competitors, sharings costs and risks and acquiring new sources of revenues (Pfoertsch et al.,2011).

Ingredient brands are usually specialized in a specific product category improving the competence of the final product on that specific characteristic (Blacket et al., 1999) and provide a significant strategic advantage for the two involved Brands as the ingredient Brand is capable of increasing the perceived value by making a component that would possibly be invisible to the average consumer, visible and branded (Blacket et al., 1999).

Several studies have concluded on the benefits of this strategy (Erevelles et al. 2007; Rao et al., 1994; Park et al., 1996). Research found that high quality ingredient brands can improve host brand equity.

Keller (1993) found brand equity can be increased when the evaluation of a product with a branded component outperforms the same product without the branded component. Studies have concluded that this strategy is more beneficial for lower or middle quality competitors since the potential to gain value from the spillover effects of the high quality ingredient brands are higher. Despite this, it is equally relevant for high quality brands to consider ingredient branding in order to keep their competitive advantages over middle quality brands (Uggla et al., 2008). Also, Desai and Keller (2002) concluded that just the act of adding a branded ingredient could increase both the perceived value and usage of the host brands.

Further empirical studies investigated if following an ingredient branding strategy could influence consumer's reactions, namely their attitudes, perceptions and behavioral intentions.

Concerning increasing the perception of quality of the products, one of the main objectives of ingredient branding, results validated the correlation since consumers claimed the ingredient brand made the final product look more reliable and valuable and passed positive associations towards the host brand. Additionally the perceived trust of the host brand also increased with the inclusion of the ingredient brand (Tiwari et al., 2012). The functional value quality perception of the products also was considered to be higher due to the branded ingredient (Vaidyanathan and Aggarwal, 2000).

In terms of attitudes, Desai and Keller (2002) found that when facing an ingredient branding scenario, consumer attitudes showed more favorable comparing to a scenario with a self-brand. In the same line, spillover effects also showed to be present. An example of this is it was found that depending on how the consumer evaluates the brands and the consequent attitudes they generate will pass to the brands in the partnership (Desai et al., 2002). One important theory not yet mentioned but part of the ingredient branding scenario is the "informational integration theory". Basically, it describes "the process in which two stimuli, or in this case brands, are combined to form consumers' attitudes toward a product" (Luczak et al., 2007).

Additionally, ingredient branding can also impact behavioral intentions as for instance Willingness to pay. In 2010 Kotler suggested that ingredient branding would make consumers be willing to pay a higher price. An example, was a study which concluded that 67% of the respondents would pay more to have their garments made with Lycra fabric, since they associated quality and value to the component. In the same way, also the purchase intention was found to be higher. A similar study also concluded that the purchase intention of a middle quality brand rose significantly after the inclusion of a branded ingredient and the reservation prices of consumers for a product were higher in the scenario with ingredient branding (McCarthy et al., 1999). Lastly, it is also relevant to refer that it was found that using a high quality ingredient brand implicitly increases the performance expectations from the consumers (Luczak et al., 2007).

Parallel to these studies, the use of ingredient branding in the smartphone industry could achieve similar benefic results with even deeper repercussions.

2.3.2 Ingredient Branding Examples

An ingredient brand strategy can be communicated and executed in different ways, such as the use of the logo (whether on the box, the product or the point of sale display) or the promotion in online advertising and communication channels of the inclusion of the Ingredient Brand in the Host Brand. A quick reflection or browse over some products will be sufficient to find several examples.

Intel, Dolby, Bosch, Gore-Text have been some of the most iconic ingredient branding examples over the years (Kotler et al., 2006).

However, Ingredient Branding is present in a vast set of products from cars (Bose Speakers in Audis or BMW Engines in Rolls-Royce cars), to food (Milka chocolate with Oreo/Daim or McFlurries in McDonalds with Maltesers), clothing (North Face jackets with Gore-Tex or Timberland shoes with Vibram technology), house hold goods (Tide with Febreze), consumer electronics (Toshiba computers with Intel processors or Huawei's smartphones with Leica's cameras) and many more cases.

Electronic devices are one of the sectors where this strategy is more evidenced. Just by looking at computers it is possible to see a set of branded ingredients, from the motherboard, to the CPU, the monitor and so on.

2.3.3 Ingredient Branding Precautions

Several studies that highlight the advantages of Ingredient Branding have been mentioned. However, it is important to consider also the necessary precautions and requirements for a successful strategy. Before manufacturers consider or accept an ingredient branding strategy they must first reflect on whether the component will increase value and if so, if this value is expected to be more significant than the cost of the investment. There is a high chance that the ingredient brand will be exposed and play a significant role in the final product. Due to this, the host brand should ensure both brands objectives are aligned and correlated in order that there's a rise in sales and benefits both sides (Blackett et al., 1999).

Another important aspect to consider is the competitive landscape. If competition is adopting ingredient branding strategies then it might be especially relevant to do the same.

One big risk is that the ingredient brand can overshadow the host brand or carry more importance in the decision making process than the host brand. It is important to analyze and study how the relationship will evolve. Ideally, there should be an initial long term alignment so that the potential of the alliance is reached (Blackett et al., 1999). With this said, manufacturers should be selective and consider only brands that are central to leveraging the host brand.

Lastly, one big danger of the strategy is that the consumers already have in their minds negative associations towards the ingredient brand and will pass them to the host brand or the match between the products together harms both products (Desai et al., 2002).

3. FACTORS AFFECTING SMARTPHONE PURCHASE INTENTION

To understand Purchase Intention it is necessary to comprehend what is responsible and capable of influencing consumer's decisions. Several variables collected from previous Purchase Intention Models and studies with the potential to influence smartphone purchase intention are examined in this section.

3.1 Purchase Intention

"You have to want it enough to buy it."

Lailah Akita
(Inspirational Writer)

Purchase Intention is introduced by Dodds et al. (1991) as the possibility and will of consumers to buy a product. It is therefore uncertain and subjective, as it focus on future behavior. Engel et al. (2001) went further and classified it as a key indicator of what will be the real purchase behavior. In what concerns smartphone purchase intention, Factors that have been considered in previous literature will be presented and detailed next.

Studies have also shown that Ingredient Branding positively influences Purchase Intention (Rodrigue et al., 2004). An example is the study conducted by the same mentioned authors where Doritos with and without Kraft cheese were compared. Purchase Intention increased significantly in the second scenario.

3.2 Functional Value

"Great companies are built on great products."

Elon Musk
(CEO of Tesla)

Sheth et al. (1991) define Functional Value as "the perceived utility acquired from an alternative's capacity for functional, utilitarian, or physical performance". He further stated that the way to increase functional value is by enhancing and improving utilitarian, functional or physical attributes and the best way the measure this value is by a "profile of choice attributes".

This is a particularly relevant Value as it has long been considered as the main driver of consumer choice, from the early economic utility theory presented by Marshall (1890) and Stigler (1950) to the more recent definition of functional value as the characteristics and attributes, such as reliability, price, durability and others (Ferber, 1973). An example provided by Sheth to illustrate the scope of attributes in functional value is the purchase of a car. Two functional attributes that are important are the consumption and the average maintenance cost.

Technology wise, functional value is the belief that the performance in one's daily life will improve derived from the specific improvement by technology (Davis, 1989).

Vigneron and Johnson (2004) introduced functional value as the attributes that differentiate products from competition, ranging from consumer perceived superiority, ability to function or perform at a higher level, or underlying craftsmanship. It is a concept that shadows economic utility theory and is related with rationalism as consumer decisions will be based on the attributes of the products and services and the extent to which they match and satisfy needs.

3.3 Emotional Value

"If people believe they share values with a company, they will stay loyal to the brand."

Howard Schultz
(CEO of Starbucks)

Sheth et al. (1991) define Emotional value as "the perceived utility from an alternative's capacity to arouse feelings or affective states". This value creates value for alternatives through the generation of specific feelings and is usually measured based on a "profile of feelings associated with the alternative".

Humans are constantly evidencing emotions and it is normal that often products and services are associated with emotional responses. Emotional value is associated with different affective states, whether positive such as excitement and confidence, whether negative such as anger and fear (Fernández and Bonillo, 2007). Although it is more common to associate emotional value with aesthetic, art, beauty or nature and cases such as sports associations, religion and others it also exists in more utilitarian scenarios and products (Sheth et al., 1991). For instance, when buying a book made with 100% recycled paper or buying a product that reminds family and friends. A more extreme example but accurate, is the so-called "love affairs" that some people have with their cars.

Noncognitive and unconscious motives reveal themselves determinant in some purchases (Dichter, 1947) and research in advertising showed that an objective of promotions and marketing is to make the consumer feel certain emotions so that it associates them later with the product or service (Kotler, 1974; Park and Young 1986).

3.4 Social Value

"Your brand is what other people say about you when you're not in the room."

Jeff Bezos
(Founder of Amazon)

Sheth et al. (1991) defines Social value as "the perceived utility acquired from an alternative's association with one or more specific social groups". Whether it is a demographic, socioeconomic, ethnic or cultural group, positive and negative stereotypes add or take value from different alternatives. Therefore, the most suitable way of measuring this Social value is on a "profile of choice imagery". This value is especially relevant in highly visible products, such as jewelry or clothing and in products and services that are shared or used in group contexts, such as gifts, products used for entertainment and others. Social value influences other

products though. Even more utilitarian and functional products such as mobile devices, kitchen appliances and others are often preferred based on social value.

Back in 1942, Hyman, a pioneer in the research of reference groups, stated that the way people react and purchase goods is influenced by belonging to a specific group.

Another useful insight from Rogers (1962) and Robertson (1967) who studied opinion leadership and diffusion of innovations is that social values are important and influence when buying a product or service and that indeed this is originated by the way information is differently processed and communication interpreted considering different social values.

Firat et al. (1993) approached social value with a slightly different perspective. His idea is that the act of consumption of products and services can itself be a social act where individuals express themselves and their identity, therefore highly valuing symbolic meanings, social codes and relationships, reflected in the social value. On the same line, Kotler and Armstrong (2010) stated that consumers are influenced by their groups, friends, parents, social role or even status. In conclusion, social value comes from the symbolic relevance of a product or service.

Bodker et al. (2011) defends that a considerable amount of people purchases their smartphones with the objective of gaining acceptance from a social group.

3.5 Trust

"A Brand is simply trust"

Steve Jobs
(Former Apple CEO)

Hiscock in 2001 claimed "…the ultimate goal of marketing is to generate an intense bond between the consumer and the brand, and the main ingredient of this bond is trust". Looking at the current most valuable Brands gives support to this statement as generally speaking the majority of these Brands gives high importance to building Trust with their consumers.

In a more humanized approach, Trust is one's generalized expectation in the promise of another and its reliability. In other words, it is the expected match between what people or associations say, and what they actually do or is true. (Rotter, 1967; McAllister, 1995).

Similarly, in 1997 Saunders introduced Trust as the ‘‘confidence that the behavior of another will conform to one’s expectations and in the goodwill of another’’.

Consumers consider Brand Trust as expectancy, grounding their assessment of a Brand with specific qualities such as competency, durability, honesty, sustainability, and others, in line with the previous research on Trust (Andaleeb, 1992; Doney and Cannon, 1997; Larzelere and Huston, 1980; Uggla, and Filipsson, 2008). Following the same standpoint, Chaudhuri and Holbrook (2001) narrowed their definition focusing on the brand promise and the judgement of consumers. Basically, whether the majority of people believe and are willing to rely on the brand promise, in the ability of the brand to perform what it promises with its products or services.

Brand trust has an enormous potential as a mediator, enabling Brands to transfer direct and indirect involvements and past evaluations to the next contact and purchase decision and can therefore be a critical and important way to engage in fruitful agency-client relationships (Labahn and Kohli, 1997).

3.6 Brand Image

“A brand is a reason to choose.”

Cheryl Burgess
(CEO of Blue Focus Marketing)

Brand Image is the opinion consumers have of a Brand, the views and associations, which pass to its products and services. As soon as consumers are exposed to a Brand they start creating understandings, beliefs and perceptions that will be pointed towards the Brand. All in all, Brand Image is the overall impression of a Brand in the consumers’ minds (Daye et al., 2007).

Many scholars have stressed the relevance of Brand Image. In a highly competitive market, Brand Image is a privileged path to create identity and exclusivity towards a product or service. Brand Image creates value in a vast amount of ways such as: generating positive feelings, supporting the processing of information, highlighting a Brand, creating new motives for purchase and more (Aaker, 1991). Keller (1993) defined Brand Image as “perceptions about a brand as reflected by the brand associations held in consumer memory”. Other scholars such as Newman (1957), Dichter (1985), Aaker (1991); Engel et al. (1995) have definitions in line

with the ones presented. Dodds et al. (1991) highlights one of the main aspects of Brand Image, which is that it goes beyond functional attributes to actually consider symbolic features. Feelings and expectations.

On a different perspective, of the consumer, Chu and Keh (2006) state that the Brand affects positively the behavior of consumers, in which is included purchase intention. This is in line with the conclusions of Norazah (2013), that Brand has significant impact on smartphone purchase intention.

Brand Image allows Brands to reach consumers and move them towards wanting that specific Brand. Lin et al (2011) reached the conclusion that more positive Brand Image is directly associated to increased purchase intention. Another conclusion reached by Hwa et al. (2011) is that consumers have preference towards buying Branded products or services. The reason for this is that knowing Brands makes the decision process easier for consumers and assures a known level of quality. Following those conclusions, Hwa states that when considering Smartphones the Brand has a positive relation with purchase intention among the studied population (students).

3.7 Willingness to Pay

"If you pay peanuts, you get monkeys."

James Goldsmith
(French Ex-Politician)

Willingness to pay is a commonly used and tested concept. The definition, widely accepted among scholars, is "the maximum price a given consumer accepts to pay for a product or service" (Gall-Ely, 2009). In other words, the optimal pricing for a product or service that can be asked to the consumers (Masiero et al., 2015). Comparing the willingness to pay in two scenarios it is possible, after the measure of the differences, to reach the Price Premium.

The concept of Willingness to Pay started appearing in the Economics literature already over 100 years ago (Davenport, 1902) and it has grown to be vastly adopted in Marketing Literature in order to evaluate consumer reactions to prices. The reason behind this is that considering the price perception process, Willingness to pay is on one hand proximate to price judgments, such as the acceptable price and the reference price, and on the other hand connected

to variables that are important and essential when considering decision making, such as satisfaction, loyalty or even culture. (Gall-Ely, 2009).

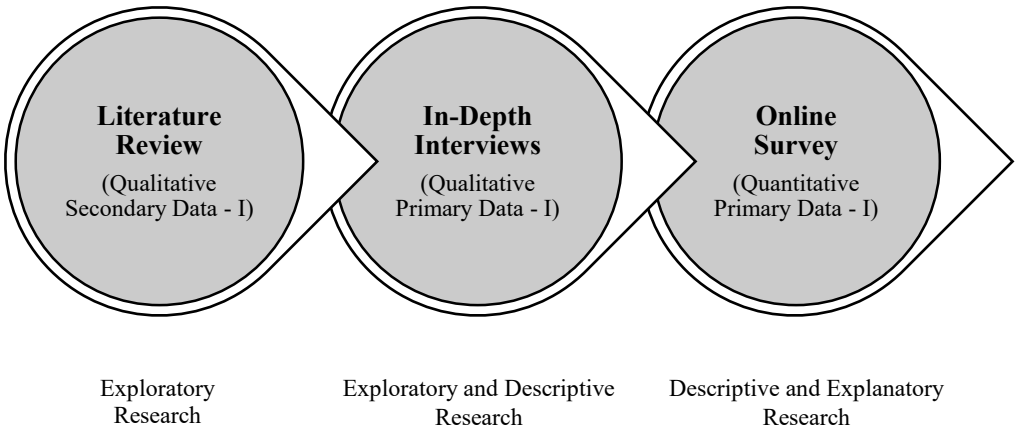
Two price concepts important to distinguish are Willingness to pay and Value. As already mentioned, the first focus on the maximum monetary sacrifice that a consumer is willing to spend to get all the benefits associated with the product or service, the second, according to Aurier et. Al. (2004), is about the "evaluation of experiences with an object or class of objects (usage value), based on all the sacrifices and benefits associated with it (exchange value)". In terms of the approach to judge them, both are periodic estimations but willingness to pay focus on the acquisition moment and its utility and value focus more on the evaluation after the consumption (Gall-Ely, 2009).

3 METHODOLOGY

1. Research Approach and Design

According to Saunders et al. (2009) there are three main types of Research which are the most recurrent, namely Exploratory, Descriptive and Explanatory Research, described in detail in **Appendix III**.

In this research, the three methods were applied, with the objective of reducing uncertainty and enriching the study, which focus on a vast and fast changing market in Portugal, the smartphone market. To conduct these researches several methods were used, in the order that follows: Literature Review, In-Depth Interviews and Online Survey.



1.1. Literature Review: Exploratory Research

The first step of the analysis was the Literature review, which according to Saunders et al. (2009) supports and helps the conception of the research goals while at the same time providing a critical review on the referred matter.

There are three chapters in the Literature Review which summarize the main topics:

1. **Smartphones:** Information about the creation and current state of the smartphone market both globally and in Portugal. Additionally, a complement on the Literature was performed with an **Internet Review.**
2. **Ingredient Branding:** An overview over some of the most acclaimed literature starting on Brand Equity, core concept of Branding to Co-Branding and culminating on Ingredient Branding.
3. **Factors affecting Smartphone Purchase Intention:** From the existing literature, where Smartphone Purchase Intention is heavily reviewed, a set of Factors, that were more recurrent in most Frameworks and previous studies, were selected and analyzed in detail. This part ends with the presentation of a Conceptual Framework that was elaborated and is going to be used and tested in this study, aiming to answers the Research Questions.

Articles and data from respected and top Journals were given priority especially at an initial phase being complemented with additional online publications from scholars.

Internet Review: Due to the lack of actual information on what concerns recent smartphones, natural to its recent and fast paced evolution, a small complement on the Literature Review took place, namely an online analysis of some of the most acclaimed online newspapers and technology blogs which can be seen in **Appendix II**.

This examination named "What the Internet is saying" had the goal to see what technology and smartphone experts are saying and what consumers are, right now, requiring on a smartphone.

1.2. In-Depth Interviews: Exploratory and Descriptive Research

The next step taken was to conduct some In-Depth Interviews. According to Saunders et al. (2009), when aiming for exploratory research, these interviews in particular have the potential to be extremely helpful in finding what is happening and reaching new insights that

were not yet considered or identified yet might be very relevant. Five In-Depth Interviews took place.

The selection of the interviewees was well thought and with criteria, in order to cover the scenarios that were going to be studied in the following quantitative part of the study. It was assured there was at least one interviewee for each of the different scenarios going to be considered, namely Characteristic Preference (Camera, Processor and Design), Willingness to Spend (up to 200€, between 200€ and 400€ and over 400€) as well as different operating systems, smartphones owned, age and professional background.

The interviews, whose complete guidelines and insights can be found on **Appendix IV**, comprised four main parts: 1) Profile Definition (Individual and Smartphone User Profile); 2) Buying Process; 3) Smartphone Features Desired and Requirements 4) Ingredient Branding Strategy and discussion of examples.

1.3. Online Survey – Descriptive and Explanatory Research

Lastly, the third and final analysis consisted of an online Survey on the survey platform Qualtrics. This tool allowed to reach a vast amount of people from different locations in Portugal and collect answers relatively fast. However, there are some limitations associated to it, namely that it is not possible to guarantee that respondents are concentrated and answering honestly and also that representativeness of the population is not assured (Malhotra, 2006). Below, additional information on the survey:

1.3.1. Population and Sample of the Study

The **Population of the Research** in this dissertation includes every Portuguese, with no concern of age, income or gender, only excluding non-smartphone users that were not considered fit to answer the survey properly.

The **Sample of the Study** consists of the elements of the population chosen and elected to participate in the study. According to Saunders et al. (2009) considering a population of 10 Million (approximately the population of Portugal) and a confidence level of 95% the recommended sample size is close to 384 participants. The number of Smartphone Users in Portugal is inferior to the total population. However, especially considering a non-probabilistic convenience sample, this was the objective in mind.

1.3.2. Construction of the Survey

An online and self-managed survey, distributed through Qualtrics was the chosen data collection method. It is a user-friendly platform which allows, free of cost, to create a survey that can then be easily shared and spread over one's networks.

Malhotra (2006) recommends pre-testing surveys so that immediate problems and difficulties can be identified and corrected. Several individuals were asked to fill the survey and provide a critical review of it in the end. From these reviews, where mostly some questions that were not completely clear were identified, several corrections aroused. Only after these corrections the survey was launched and shared over social networks such as LinkedIn and Facebook as well as e-mail and Whatsapp.

NOTE: In the survey there were 15 different Paths. Depending on the respondents answer on three initial Conditions, a specific Path was chosen and presented. A detailed explanation of the Composition of the Survey can be seen on **Appendix V** as well as the representation of the 15 and one example.

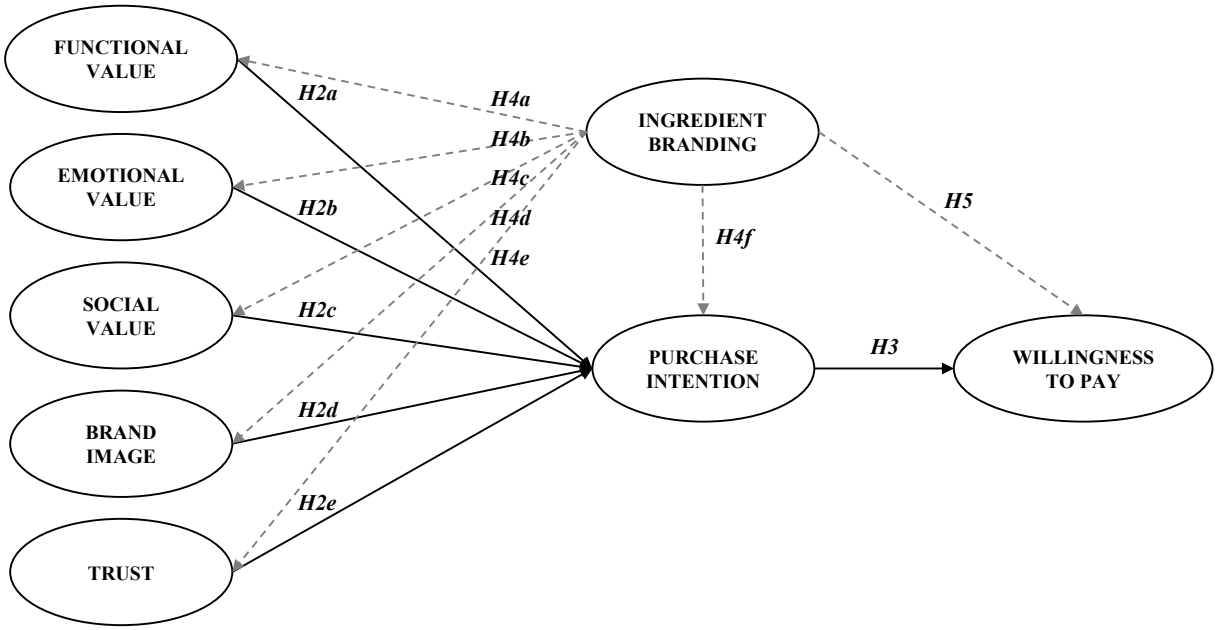
1.3.3. The Measures

Previously the evaluation of a Smartphone in two different scenarios was mentioned. This evaluation comprised different constructs which were all based and extracted from identical constructs that have been developed and utilized in previous studies and literature. While some were replicated, for others it was necessary to adapt them in order to fit the study. The measures used can be consulted on **Appendix VI**.

2. Conceptual Model

To help research, it is useful to link together the variables that were identified as relevant (based on the previous analysis of literature and qualitative research) and represent them in a logic that helps answering the problem being studied (Sekaran et al., 2009). Therefore, a Conceptual Model was created to help conduct this study.

Figure 2 – Conceptual Model created for Dissertation



The examination of previous Literature culminated in the Conceptual Model above. Together with the initial Research Questions, specific Hypotheses are created and represented in the Model and detailed below.

RQ1: Which Smartphone Features/Characteristics are consumers valuing at the moment?

RQ2: Which Factors influence purchase intention of Smartphones?

H2a: Functional Value positively influences purchase intention of Smartphones.

H2b: Emotional Value positively influences purchase intention of Smartphones.

H2c: Social Value positively influences purchase intention of Smartphones.

H2d: Brand Image positively influences purchase intention of Smartphones.

H2e: Trust positively influences purchase intention of Smartphones.

RQ3: Does Purchase Intention influence willingness to Pay?

H3: Purchase Intention positively influences willingness to pay for a smartphone.

RQ4: Does Ingredient Branding enhance the evaluations of the Factors that influence Purchase Intention as well as Purchase Intention?

H4a: Functional Value is positively influenced by the Ingredient Branding Strategy.

H4b: Emotional Value is positively influenced by the Ingredient Branding Strategy.

H4c: Social Value is positively influenced by the Ingredient Branding Strategy.

H4d: Brand Image is positively influenced by the Ingredient Branding Strategy.

H4e: Trust is positively influenced by the Ingredient Branding Strategy.

H4f: Purchase Intention is positively influenced by the Ingredient Branding Strategy.

RQ5: Does Ingredient Branding increase Willingness to Pay for a smartphone?

H5: Ingredient Branding positively influences consumers' Willingness to Pay.

The main goal of this Model is to evaluate and confirm the relation between the selected Factors and Purchase Intention, and then between Purchase Intention and Willingness to Pay for a Smartphone. It is a representation of previous studies, with Factors that have been shown to influence Smartphone Purchase Intention and if proven valid will be important in order to address the Problem Statement.

4. RESULT ANALYSIS

4.1. Literature Review

From the Internet Review, introduced in point 1.5, two main insights were taken in special consideration for the preparation of the following Survey, namely:

Main Insight 1 – Minimum Current Requirements: Smartphones are way more evolved than they used to be and consumers are aware of that. There were several articles that determined that consumers are not settling for some lower characteristics. Consequently, special attention was given to the chosen Characteristics presented in the survey so that the respondent would not feel that the Smartphone did not have the minimum necessary characteristics. Also, the respondent was explicitly told to consider that, considering the remaining non presented characteristics, the smartphone had all the features that were expected from a smartphone of that Price.

Main Insight 2 – Valued Features: One surprising conclusion of this information collection was that consumers are starting to value significantly new features such as Fingerprint Scanner, Dual-Camera, Battery Duration, Dual-SIM among others. Brands should be careful not to stay behind. Despite this, this study confirmed that the Camera, Processor and Design are constantly referred as in the most important features of a Smartphone, validating its choice for this study.

4.2. Qualitative Research

4.2.1. In Depth Interviews

Five In-Depth Interviews were conducted with the criteria mentioned in the Methodology. Insights from these interviews can be consulted on **Appendix IV**. However, below are evidenced the three most relevant insights that were not yet being taken in consideration and resulted in an adaptation of the study.

Main Insight 1 – The high loyalty and appreciation of APPLE: Two of the interviews were with iOS users and it was clear their strong preference and desire to continue using APPLE. Margarida Tomé stated "If I cannot see myself being more happy with a phone than I am now, why would I change?", Gonçalo Simões that "Since I got my first IPhone I did not want anything else.". These are examples of the insight that led to a change in the plan of the survey. Initially, the plan was for all respondents to be shown two Samsung smartphones in the survey. However, due to the mentioned it was decided to incorporate two versions in terms of Brand in the survey. Respondents who said they wanted a smartphone from APPLE as their next smartphone were shown iPhones instead.

Main Insight 2 - Evidence of the Ingredient Brand on the Product: Gonçalo Simões defended that in his opinion a turning point towards the success of such a strategy would be whether the ingredient Brand was visible or not on the Final Product. Consequently, since the goal was to maximize the efficiency of the strategy, the logos of Canon and Intel were visible on the back of the products and the Design Armani people were told to assume that they were satisfied with the design and it felt exclusive.

Main Insight 3 - Difficulty on evaluating different Price Segments: In the discussion part, in the end, interviewees were asked if they thought the Strategy would be more efficient in smartphones of different price segments and the difficulty in positioning themselves in those scenarios was clear. In fact, Diogo Dias even claimed "I do now know because I would never

pay more than 150€ for a smartphone" and Fernanda Rodrigues defended "Would my opinion on this be reliable? I only know how I will react in my case". Consequently, it was decided that respondents were going to be shown only phones of their previously chosen price range.

4.3. Quantitative Research

4.3.1. Preliminary Analysis

The survey conducted gathered a total amount of 352 responses and was live from late November to early December of 2018. In the survey there were four control questions in order to detect and select only honest respondents. From the total responses mentioned, three sets of responses were excluded from the analysis, namely:

1. **Non-smartphone users** (respondents that in the first question claimed they were not smartphone users had their survey terminated at that point);
2. Respondents who **did not pass the control questions**;
3. Respondents who **did not finish the survey**.

In the end, **240** responses were eligible for the analysis and the basis of this dissertation, which were analyzed with the statistical software IBM SPSS Statistics 22.

4.3.2. Sample Characterization

It is important to characterize the respondents in this Sample and get some information about the people who are behind this study. To do so, a range of socio-demographic questions were asked.

In terms of gender, from the 240 respondents, 57,1% are women and 42,9% are men. The majority is aged between [18 to 24] (57,5%), followed by [25 to 34] with 30,8% and [45 to 54] with 8,3%. In what concerns occupation the vast majority, 72,6%, is currently employed followed by students, 22,9%. Regarding education, 49,6% have obtained a Masters Degree, 45,4% a Bachelors degree and the remaining 5% a high school diploma or equivalent. Considering monthly net income, the intervals more represented are between [400€ and 800€[(30,8%) and between [800€ and 1200€] with 22,9%.

Shifting the approach now to the smartphone profiles of the respondents, most users are actually satisfied with their current smartphones 47,1% stated they are satisfied and 43,3% that they are very satisfied. When asked what Brand they had and later which brand they are most

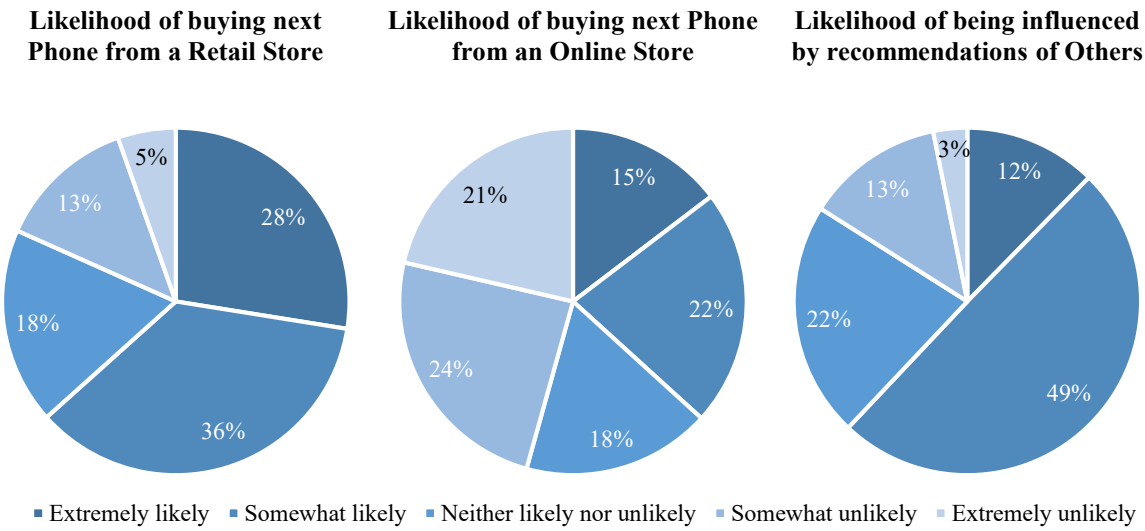
likely to purchase it was possible to see that 43,8% actually want to keep the same Brand and the remaining 56,3% want to change.

In line with the stated, 9,2% of respondents stated they would consider only buying their desired Brand, 66,9% that they would look up to the market but have a preference for the desired Brand and only 24,3% have no preference and will evaluate the different alternatives in the market.

Rank	TOP 5 **OWNED** BRANDS		TOP 5 **DESIRED** BRANDS		Dif:
	Brand	%	Brand	%	
1	APPLE	30%	APPLE	31%	1%
2	HUAWEI	25%	HUAWEI	23%	-2%
3	SAMSUNG	23%	SAMSUNG	22%	-1%
4	XIAOMI	7%	XIAOMI	12%	**4%**
5	ONE PLUS	5%	ONE PLUS	5%	0%
-	OTHERS	9%	OTHERS	7%	-2%

Above, a comparison between the currently owned and most desired Brands (considering next purchase).

The Rank order stays the same yet there is a slight decrease among most Brands. The exceptions are APPLE and XIAOMI, with the later showing the biggest gap (4%).



The three pie charts above reflect respondents intention towards next purchase, namely between acquiring a smartphone from a Retail Store vs Online Store and also how important are others in this process.

When examining how much respondents spent on their actual smartphone, the majority, 39,2%, spent up to 250€, while 34,6% between 250€ and 550€, 22,5% more than 550€ and 3,8% do now know how much their smartphone cost.

4.3.3. Data Reliability

Previous to the start of any analysis, it is important to account for the reliability of the measures, meaning to verify if they consistently reflect the construct which is being measured (Field, 2005). In order to do this validation, a Data Reliability Test was performed by applying the Cronbach's Alpha test, after reverting the two Reverse Items in the survey, on the Constructs created referenced on Appendix VI.

DeVellis in 1991 classified and considered Cronbach's Alpha coefficient to be unacceptable below 0,60, minimally acceptable between 0,65 and 0,70, good between 0,70 and 0,80 and very good above that.

Construct	Initial Nº of Items	Cronbach's Alpha	Item(s) deleted	Alpha with item(s) deleted	Final Nº of Items	Reliability Classification
Functional Value	3	**0,767**	1	**0,804**	2	**Very Good**
Emotional Value	3	**0,864**	-	-	3	**Very Good**
Social Value	3	**0,367**	1	**0,821**	2	**Very Good**
Trust	3	**0,629**	1	**0,790**	2	**Very Good**
Brand Image	3	**0,726**	-	-	3	**Good**
Purchase Intention	3	**0,848**	-	-	3	**Very Good**

As illustrated in the table above, through the Cronbach's Alpha test it was possible to identify some items that were reducing the reliability of the construct and, consequently, remove those items which led to an increase in the respective alpha. Additionally, and most important, it enabled to classify the variables. According to the scale previously mentioned it is concluded that most of the constructs have very good internal consistency (six out of seven) with alphas of over 0,790 while the remaining has good internal consistency with an alpha of 0,726.

4.3.4. In-Depth Analysis

At this stage, the Research questions will be examined and statistically tested in order to, in combination with previous insights from the Qualitative Research conducted before, reach conclusions and assess the validity of the Hypotheses.

4.3.4.1. RQ 1 - Features

RQ1: Which Smartphone Features/Characteristics are consumers valuing at the moment?

Details and individual evaluation of Characteristics can be seen on Tables two and three on **Appendix VII**.

Generally, it can be concluded that for all Features there are respondents who find them extremely important and others not important at all. The Top 5 Features are Storage, Construction Durability, Processor, Camera and Operating System, in this order, with Storage and Camera being the only ones with the evaluation "Extremely important" as the most frequent. It is interesting to note that some of the most recent Features available in new smartphones are less valued and are ranked last, such as Voice Recognition, Fingerprint Scanner and Dual-SIM. Since many consumers are probably not familiar or used to these features they might have been compelled to evaluate them poorly (in relative terms).

The Features which presented a more disperse evaluation, with the highest Standard Deviations, were Fingerprint Scanner, Water Resistance and Dual-SIM.

One important motive for this question was to validate the Feature/Characteristic Choice pursued in this Dissertation, as the goal was to present a Branded Attribute in a Feature that was highly valued.

The results confirm the chosen Features, as Processor, Camera and Design are highly ranked, 3rd, 4th and 7th, respectively, which, taking in consideration that on some of the few Features that have superior evaluations it is very hard to apply an Ingredient Branding Scenario (examples: Storage, Construction Durability,…) the ones selected were indeed good options.

4.3.4.2. RQ 2 - Step 1 - Explanation of Purchase Intention

RQ2: Which Factors influence purchase intention of Smartphones?

In order to validate the Conceptual Framework and understand which drivers more accurately explain smartphone purchase intention a Multiple Linear Regression was run on

Purchase Intention (Dependent Variable) with the Factors presented in the Conceptual Model. The six Constructs and Measures, including Purchase Intention, are explained and illustrated in **Appendix VI**.

The Model (SPSS Outputs on **Appendix VIII**) presents an Adjusted R Square of 0,599 and has a sigma of 0,00 (0,00 < p-value 0,05), making it possible to conclude that the Model has indeed explanatory power and the five Constructs considered (Independent Variables) account for 59,9% of the variation in smartphone purchase intention.

However, not all Factors revealed to be statistically significant. **Emotional Value** (Unstandardized β = 0,432; Sigma = 0,000), **Brand Image** (Unstandardized β = 0,357; Sigma = 0,000) and **Trust** (Unstandardized β = 0,170; Sigma = 0,015) revealed to be statistically significant and the main drivers of this Model whereas Functional Value (Unstandardized β = 0,058; Sigma = 0,416) and Social Value (Unstandardized β = 0,045; Sigma = 0,276) did not reveal statistically significant.

Additionally, it is possible to conclude that the Factors whose influence is more significant are Emotional Value, Brand Image and Trust, in that order and that the there is a positive relation between the Factors and Purchase Intention.

For the purpose of the validation of the Model, the evaluation of the first Neutral Smartphone is being used (no context of Ingredient Branding), since respondents were more focused and are evaluating a real smartphone in the market and not a figurative scenario.

Considering not all constructs were statistically significant the regression was re-run for optimization. With only the significant constructs the Adjusted R Square slightly increased, accounting now the Model for 60% of the variation, with **Emotional Value** (Unstandardized β = 0,469; Sigma = 0,000), **Brand Image** (Unstandardized β = 0,379; Sigma = 0,000) and **Trust** (Unstandardized β = 0,184; Sigma = 0,006), with the later now becoming more significant.

$$\boldsymbol{Smartphone\ Purchase\ Intention} = -0{,}182 + 0{,}469 \times Emotional\ Value + 0{,}379 \times Brand\ Image + 0{,}184 \times Trust$$

Therefore, Hypotheses **H1b, H1d and H1e** are **accepted** and **H1a and H1c** are **rejected**.

4.3.4.3. RQ 3 - Step 2 - Explanation of Willingness to Pay

RQ2: Does Purchase Intention influence willingness to Pay?

The second step to validate the Conceptual Model is to observe if the Purchase Intention influences Willingness to Pay. The measurement of Willingness to Pay was made through the respondents answer to the question: "Consider now the phone has no Price Tag. From the information you have available, what is the maximum amount you would be willing to spend for this smartphone? (in euros). It is important to mention that before this question a reference price was given that could have had an influence.

This question was mandatory and prepared so that respondents had to fill an amount between 0 and 1200€. Since the respondents were taken either to a 150€, 300€ or 600€ smartphone it was necessary to introduce this information in the Linear Regression. This was made through the Introduction of two Dummy Variables that accounted for the three scenarios (Price Ranges).

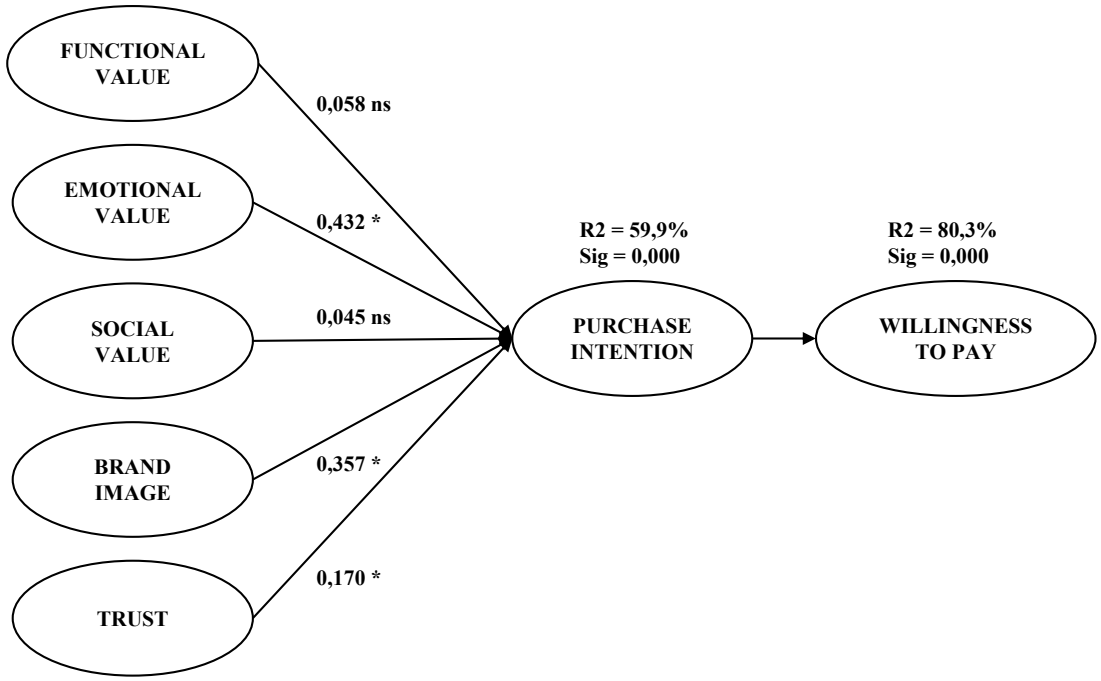
This part of the Model presents an Adjusted R square of 0,803 and a sigma of 0,00 (0,00 < p-value 0,05). It is concluded with the information presented that an explanatory power is present and that Purchase Intention, together with the Dummy Variables that reflect Price Range 2 and Price Range 3 are accountable for 80,3% of the variation in Willingness to Pay. Price Range 2 did not reveal statistically significant, being accounted by the Constant of the Model. Both **Purchase Intention** (Unstandardized β = 43,268; Sigma = 0,000), **Price Range 1** (Unstandardized β = -114,883; Sigma = 0,000) and **Price Range 3** (Unstandardized β = 260,517; Sigma = 0,000) are statistically significant.

$$\boldsymbol{Willingness\ to\ Pay} = 79{,}947 + 43{,}268 \times Purchase\ Intention - 114{,}883 \times Price\ Range\ 1 + 260{,}517 \times Price\ Range\ 3$$

SPSS Outputs can be consulted on **Appendix IX**. Observing a positive statistical significance in the Regression Hypothesis **H3** is **accepted**.

It is now possible to graphically represent the Conceptual Model with the corresponding statistical significance as follows (values from first regression used in order to illustrate the five Factors together):

Figure 3 – Application of Conceptual Model



*p < 0,5

ns = non significant

Between Purchase Intention and Willingness to Pay it does not make sense to show the Beta as it needs to be examined together with the Price Range Dummies.

4.3.4.4. RQ 4 - Ingredient Branding Effect on Purchase Intention

RQ4: Does Ingredient Branding enhance the evaluations of the Factors that influence Purchase Intention as well as Purchase Intention itself?

During the survey respondents were asked to evaluate a Smartphone two times. The difference between these two times was solemnly the Branded Ingredient. In order to verify what differences derived from the Ingredient Branding strategy the Wilcoxon signed-rank test was performed (it is the non-parametric equivalent of the Paired Samples T-Test) that assesses repeated measurements on a single sample to verify if the mean ranks differ (all assumptions were assured).

	Ranks			Wilcoxon Test
	Negative	Positive	Ties	Sigma
Functional Value	55	**101**	84	**0,001**
Emotional Value	64	**101**	75	**0,001**
Social Value	49	**64**	127	**0,260**
Brand Image	60	**112**	68	**0,001**
Trust	**74**	51	115	**0,033**
Purchase Intention	72	**85**	83	**0,147**

The purpose of this Test is not only to check the Negative and Positive Ranks but more importantly to check if they are statistically significant. The variation between the two pairs for the variables Social Value (sigma = 0,260) and Purchase Intention (sigma = 0,147) revealed not statistically significant, whereas the remaining revealed statistically significant, meaning that the relationship between the two measures is not caused by change. Additional SPSS outputs on this Test can be seen on **Appendix X**.

Examining the Ranks, it is possible to see that in all constructs, except Trust, there are more Positive Ranks than Negative, meaning more evaluations that improved in the second scenario. It is also evident that except for Social Value and Brand Image, that had 127 and 155 Ties, respectively, the majority of respondents were influenced by the Ingredient Branding strategy.

The constructs which were statistically significant and the more sensitive to the strategy, having the most Positive Ranks, were **Brand Image** (sigma = 0,001), followed by **Functional and Emotional Value** (sigma = 0,001) and lastly **Trust** (sigma = 0,033), in this order.

Consequently, Hypotheses **Ha, Hb and Hd** are **accepted** and **Hc, He and Hf** are **rejected**. Although for He the construct is statistically significant, it does not evidence a positive relation. From the differences discussed, results tend to show that the Ingredient Branding strategy has a generally positive impact in some of the Factors that influence Smartphone Purchase Intention but not on Purchase Intention itself.

4.3.4.5. RQ 5 - Ingredient Branding Effect on Willingness to Pay

RQ5: Does Ingredient Branding increase Willingness to Pay for a smartphone?

To answer this Research Question three approaches are taken, namely:

1. Wilcoxon Test

	Ranks			Wilcoxon Test
	Negative	Positive	Ties	Sigma
Willingness to Pay Reference Price (Yes/No)*	6	**26**	208	**0,000**
Willingness to Pay Maximum (Open question)	15	**114**	111	**0,000**

In the sequence of the previous Research Question, Willingness to Pay was also tested. The first WTP measures if, with the same Price, consumers changed their mind about paying the Reference Price for the Phone.

The second WTP compares the maximum price consumers were willing to pay for the shown smartphone in the two scenarios (after being told to forget the reference price). In both cases the Test proved to be statistically significant (sigma = 0,000) with almost half of the people claiming they would be willing to spend a higher Price on the Smartphone with the Branded Ingredient. It should be taken in consideration though that consumers that were willing to pay more for the second scenario might still be only willing to pay a price inferior to the Reference Price.

2. Qualitative Statement

After evaluating the two alternatives, respondents were asked how much they agreed with the following statement: "**I am willing to pay a higher price for this Smartphone with the new Brand than for the smartphone exhibited before**". This question, measured on a 7-point Likert Scale (1 - Strongly Disagree, 2 – Disagree, 3 – Somewhat Disagree, 4 – Neither Agree nor Disagree, 5 – Somewhat Agree, 6 – Agree, 7 – Strongly Agree) allowed an additional insight about if consumers were, or not, willing to pay more due to the change in smartphone.

Among the total sample, the answers are presented below:

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree	Total
28	53	16	31	58	43	11	**240**
12%	22%	7%	13%	24%	18%	5%	100%
	40%				**47%**		

From the distribution presented it is possible to see that overall opinion is not linear and there seems to be no specific behavior or trend.

Respondents whose opinion was Strongly Disagree, Disagree and Somewhat Disagree were considered to have a negative opinion and those with Strongly Agree, Agree and Somewhat Agree to have a positive opinion.

Comparing the positive and negative opinions (47% vs 40% respectively) the first conclusion is that the majority of respondents are inclined to pay more (47% vs 40%). However, although the positive opinion has an higher percentage, more than half of the respondents selected just Somewhat Agree whereas in the negative opinion only 7% chose Somewhat Disagree, indicating a stronger negative opinion within the total negative opinion.

3. Quantitative Statement

The last Phone related question was: "**Comparing the two presented smartphones, from the options below, approximately how much more would you pay to have the smartphone with the Canon Camera/Intel Processor/Armani Design?".**

The objective of this question was to measure once again the Price Premium but within a more organized way, with the percentage difference clear (non-open question). The answers are illustrated below.

Would not pay more	5% more	10% more	15% more	20% more or higher	Total
70	43	70	36	21	**240**
29%	18%	29%	15%	9%	100%
		71%			

In what concerns the effectiveness of Ingredient Branding this question shows the most positive outputs. In fact, it shows that **71% of respondents** stated that they were **willing to pay more** for the Branded Ingredient. How much more is evenly distributed among the options, with 10% more being the most frequent answer.

Considering the three questions, which all evidenced the positive influence on Willingness to Pay of Ingredient Branding, **H5** is **accepted**.

The answers shown before comprise the Total sample. However, since the survey took different paths depending on the profile of each consumer, it is now presented a deeper look, by separating the respondents in Groups.

The quantitative Statement will be used since it is the clearest and most direct question regarding whether respondents would, or not, pay more.

1) **Brand Preference: iOS or ANDROID.**

Would not pay more	5% more	10% more	15% more	20% more or higher	Total
		Android			
50	28	54	23	19	**174**
29%	16%	31%	13%	11%	100%
		71%			
		iOS			
20	15	16	13	2	**66**
30%	23%	24%	20%	3%	100%
		70%			240

In terms of favorability of operating system, namely Android using Brands vs APPLE there is no significant difference between the two Groups in terms of paying more or not. However, Android users evidence superior willingness to pay in terms of amount.

2) **Characteristic Preference: Camera, Processor and Design.**

Would not pay more	5% more	10% more	15% more	20% more or higher	Total
		Camera - Canon			
13	15	26	18	12	**84**
15%	18%	31%	21%	14%	100%
		85%			
		Processor - Intel			
42	23	35	15	8	**123**
34%	19%	28%	12%	7%	100%
		66%			
		Design - Armani			
15	5	9	3	1	**33**
45%	15%	27%	9%	3%	100%
		55%			240

In terms of Characteristic Preference differences are more significant. Camera was clearly the characteristic respondents were more willing to pay more for, at all levels. The second most popular characteristic was the Processor. Lastly, the exclusive Armani design.

Althoguh 55% of respondents are willing to pay more, only 12% are willing to pay 15% or more.

Design was not so popular. In fact, some respondents said they associated Armani with clothes and others claimed that partnering with a Brand that was not associated with technology is making them not want the product. Others, just commented that any crossover would not make sense. An example is a respondent that said "I want Apple, not Armani" and another "Exclusive design just gives the feeling you will overpay".

In terms of the processor, some respondents also claimed that there was no actual difference since the characteristics remained the same; "I don't see how it would improve the quality of the processor if the specifications are the same despite the brand partnership". This is an indicator that for some consumers the Brand alone is not sufficient to influence them.

3) **Price Range: Up to 200€, Between 200€ and 400€ and Over 400€.**

Would not pay more	5% more	10% more	15% more	20% more or higher	Total
Price Range 1 - Up to 200€					
18	6	17	7	13	**61**
30%	10%	28%	11%	21%	100%
	70%				
Price Range 2 - Between 200€ and 400€					
26	23	30	14	6	**99**
26%	23%	30%	14%	6%	100%
	74%				
Price Range 3 - Over 400€					
26	14	23	15	2	**80**
33%	18%	29%	19%	3%	100%
	68%				240

Lastly, in terms of Price Range, the interval where the majority of respondents were willing to pay more was the middle scenario. However, looking deeper, in the first scenario is where respondents are willing to pay the highest amount (in terms of variation) for the branded ingredient, with 33% of respondents claiming to be willing to pay 15% or more.

In the comments from respondents, many claimed they were not buying the product since they see it as expensive and think there are cheaper and better alternatives in the market. This could influence the decision independently from the Branded Ingredient.

5 CONCLUSIONS

5.1 Main Conclusions

A summary of Conclusions can be consulted on **Appendix XI**.

Three Factors revealed to positively influence Smartphone Purchase Intention:

First main conclusion is that Brands should focus in finding ways to improve Emotional connection between consumers and smartphones, as Emotional Value was the most significant Factor influencing Purchase Intention. It is in line with the previous studies such as the one of Sheth et al. (1991). It makes sense as it is a product that consumers always have with them.

Secondly, that Brands should work on their Brand Image. As highlighted in previous research (Norazah, 2013; Chu et al., 2006) Brand Image is very important when considering Smartphone Purchase Intention.

Lastly, Brands should transmit and create Trust on their products, by being consistent and assuring quality, especially relevant in competitive markets such as this one, as defended by Doney et al (1997).

Ingredient Branding Effect:

Shifting to Ingredient Branding effect, the study shows that Ingredient Branding is an efficient strategy with a visible spill over effect (Desai et al., 2002) that improved all Factors mentioned before with the exception of Trust. Therefore, it is possible to conclude that the evaluation of a Smartphone improved with the association to a high quality Brand, even though the Host Brand was already a high quality Brand (in line with the conclusions of Desai et al. (2002) and Uggla et al. (2008) and others). The "informational integration theory" mentioned by (Luczak et al., 2007) was also visible as the combination of the stimulus of the two Brands showed statistically significant differences among respondents between the two scenarios.

Lastly, the effect on Willingness to Pay, the most important finding of this study, is that the majority of respondents claimed to be willing to pay more for the second alternative, as found in previous studies, such as the one of Kotler et al. (2010). Although the limitations of the study need to be taken into account, this is a very good indicator to Brands as to invest in this specific kind of co-branding strategy in the Smartphone Industry, in order to be able to charge a price premium and acquire a competitive advantage.

A somewhat peculiar finding was that although 47% agreed with the statement that they would pay more for the second version of the smartphone, 71% said they would pay 5% or more for the second version. This might have been due to how the questions were put, as in the first there was a 7-point Likert Scale, where only the last three options indicated agreement with the statement while in the second from the 5 options only the first, 0, stated that respondents would not pay a Price Premium.

5.2 Limitations

First, it is important to consider the Sample, which raises concerns in its size, 240 valid respondents, which is less than the goal of 384 presented by Saunders et al. (2009), as well as in quality, due to the presence of a non-probabilistic convenience sample that may lack in terms of representativeness of the heterogeneity of the population, showing skewed and less reliable results. The results on what concerns the increase in Willingness to Pay are very positive yet one must consider that each respondent was shown a specific branded characteristic valued by the respondent, leading to superior evaluations.

Functional Value and Social Value did not reveal statistically significant. The first is a Factor that is related to the characteristics and performance. Consumers were not able to try the product and only knew the main characteristics, which may have limited the influence of this Factor. The later, Social Value, according to Kotler et al. (2010) is relevant due to the influence and opinion of one's social groups. On this study there was no interference or specific information of the opinion of others, limiting the effect of this Factor. Also, Trust revealed to be negatively influenced by Ingredient Branding. However, one can argue that it did not improve since high quality Brands were considered. If Brands with lower notoriety were used the results could be different.

It is also important to consider the limitations derived from the lack of reality in the purchase process. First of all, consumers were shown only one Phone, not being able to compare it with alternatives on the market, being also that only the main characteristics were shown. In addition to this, they could not look out for advice from others (which 49% of respondents claimed they were likely to do) and for the cases (majority) that intends to buy at a retail store there was no retail sales associate present at the point-of-purchase, meaning that especially the retail environment showed limitations within the survey, as it was difficult to replicate a real scenario.

Additionally, one must consider that only high quality Brands were chosen which generally evidenced high Brand Equity (both Host and Ingredient Brands) amongst respondents. Consequently, this study cannot predict the effects of the strategy on Brands with lower notoriety (81% or more of respondents evaluated the Brands presented as High Quality (between Low, middle and High) with the exception of Samsung with a percentage of 64%).

Although results were in majority positive, it is necessary to take in account the cost of implementing such a strategy. Associations with high quality Brands such as the presented in this study are likely to be expensive. Brands need to compare the potential benefits with the investment cost.

Finally, this study relies on self-reported data, meaning that it could lead to inaccuracies. A shopping experience is simulated and respondents may have acted as they aspired and not as they actually would (due to a limited budget or other constraints).

5.3 Future Research

In line with the Limitations section, in order to further develop the analysis of this study, Future Research should analyse different ingredient and host brands, in order to comprehend the results originated from different combinations as well as expand the research both in terms of sample and markets, leading to higher reliability and more accurate conclusion. Furthermore, moderators such as Age, Gender and Income that were not analysed can also help better understand the strategy.

A recommendation to further research is a more proper evaluation and validation of the Measures used. Smartphones are today a very different product than they used to be, meaning that the factors that originate smartphone purchase intention should be consolidated.

Additionally, there is significant potential in furthering the analysis into the components of Brand Equity which could be relevant in order to find how exactly the Ingredient Branding affects Brand Equity and consequently Brand Image.

Finally, very important, assessing the conclusions from this study in a real shopping environment where consumers are exposed to different stimulus, online reviews and feedback therefore acting in a more reliable and honest manner.

APPENDICES

APPENDIX I - Brand Equity Definitions and Components

1. Brand Equity Definitions

Table 1 - Definitions of Brand Equity

Definitions of Brand Equity			
Author	Perspective	Year	Definition
Farquhar	Mixed	1989	"The added value to the firm, the trade, or the consumer with which a given brand endows a product"
Brodsky	Financial	1991	"A set of brand assets and liabilities linked to a brand, its name and symbol, that add to or subtract from the value provided by a product or service to the firm and/or to that firm‟s customers"
Aaker	Mixed	1991	"The sales and profit impact enjoyed as a result of prior years‟ marketing efforts versus a comparable new brand"
Simon & Sullivan	Financial	1993	"The difference in incremental cash flows between a branded product and an unbranded competitor"
Keller	Customer-based	1993	"The differential effect of brand knowledge on consumer response to the marketing of the brand"
Srivastava & Shocker	Mixed	1994	"Brand equity subsumes brand strength and brand value. Brand strength is the set of associations and behaviors on the part of the brand‟s customers, channel members, and parent corporation that permits the brand to enjoy sustainable and differentiated competitive advantages. Brand value is the financial outcome of management‟s ability to leverage brand strength via tactical and strategic actions in providing superior current and future profits and lowered risks"
Smith & Schulman	Financial	?	"The measurable financial value in transactions that accrues to a product or service from successful programs and activities"

2. Brand Equity Components according to Aaker (1991)

2.1. Brand Awareness

Brand awareness contributes to brand equity since the Brand name activates the memory nodes in consumer's minds (Aaker, 1991).

In fact, it has been highlighted as one of the main contributing factors in the Brand Equity Model (Aaker, 1991; Kapferer, 1992; and Keller 1993). Keller (2008) states that Brand Awareness refers not only to whether consumers can recall or recognize a brand, but also just knowing of the existence of the Brand. Farquhar (1989) defends it concerns "how quickly a consumer can retrieve brand elements stored in his/her memory". According to Keller (1993) "brand awareness affects consumer decision making by influencing the formation and strength of brand associations in the brand image" and it reflects if the consumer has noticed the brand before. A Brand that is recognized has a considerably higher chance of being picked by consumers over other Brands which they do not recognize (Hoyer and Brown, 1990). Zajonc (1968) showed that just from a contact and interaction a positive relationship was immediately being built. The theory in question, the mere exposure effect, elaborates that until a certain point

continuous exposure will have a positive effect. From that point onwards it will have a negative effect. Considering the point of view of companies in terms of awareness, it is very important for Brands to be exposed and use and access this positive effect.

2.2. Perceived Quality

Aaker (1991) introduces perceived quality as "consumer's perception of the overall quality or superiority of a product or service with respect to its intended purpose, relative to alternatives." In other words, the consumer's assessment of the functional superiority of the product.

Positive relationship between Perceived Quality and Brand Equity has been evidenced in several pieces of Literature (Aaker, 1991; Kamakura and Russell, 1993; Feldwick, 1996; Motameni and Shahrokhi, 1998; and Yoo et al., 2000). Early in 1988 Zeithaml defined perceived quality as the consumer's judgement on the supremacy or excellence of the product. Thus means it considers the subjective evaluations on the quality and not those of third parties such as experts or salespeople (Yoo and Donthu, 2001). In the cases where after the use of a product or service the perceived quality of the consumers increases the purchase intention increases as well. (Rust and Oliver, 1994). Although Aaker has considered Perceived Quality as a Brand Association he defended its consideration as Brand asset for the following reasons: its importance in the strategic plan of companies, the strong influence and relationship with other aspects and the close relationship with the financial performance. As the name indicates, what differs from perceived quality to actual quality is the subjective perception from the consumer. Even in cases where the quality of products is extremely high, there could be doubts or negative perceptions about the product. This could happen from lack of experience but also from the brand not being directing their quality marketing efforts to the right characteristics that matter and influence the consumer. Lastly, it is important to also consider that frequently there is not enough information to make a rational and solid evaluation on the quality of the product so the consumers depend on quality heuristics to support their decision. Understanding and proper management of these heuristics is fundamental for companies. The Price heuristic will be used as a reference for quality. It has been showed price is correlated with perceived quality. When the consumers are not familiar and knowledgeable about the product category consumers might use inadequate heuristics. These considerations justified for Aaker the inclusion of Brand Perceived Quality in his Model. Customer relationships are dynamic and change over time, meaning it is necessary to be aware of the dynamics of formation of quality perceptions and how they are changing. The way they are influencing consumer's retention as time goes by is also a relevant topic when considering Perceived Quality (Rust et al., 1999). In 2001 Grunert et al defined perceived quality as "the estimation made by the consumer relying on the whole set of basic as well as outer dimension of the product or service."

2.3. Brand Loyalty

Aaker (1991) infers that brand Loyalty "symbolizes a constructive mindset towards a brand leading to constant purchasing of the brand over time."

Previously, Jacoby and Kyner in 1973 shared what is still today one of the most used definitions for Loyalty, describing it as "a biased behavioral response expressed over time by a decision making unit with respect to one or more alternative brands out of a set of brands and being a function of psychological processes". Just one year after, in 1974 Sheth and Park introduced three dimensions on

Brand Loyalty. Emotive dimension involving emotions such as admiration, obedience or even fear, followed by evaluation which concerns the positively biased evaluation of the Brand and lastly the behavioral dimension, where the habit and responses of the consumer prevail. Oliver (1999) described loyalty as "a deeply held commitment to re-buy or repatronize a preferred product or service consistently in the future, causing repetitive same brand or same brand-set purchasing, despite situational influences or marketing efforts."

Despite the initial inclusion of Brand Loyalty by Aaker as a component of Brand Equity, over the years it has been repositioned as an outcome of Brand Equity. Gladden and Funk (2001) examined this question and found that some specific brand associations (for example identification, product delivery, nostalgia) had a positive and significant relationship with brand Loyalty while others (for example tradition, peer group acceptance) had a negative relationship with brand loyalty. Later in 2008, Bauer et al. identified a relationship between brand associations and brand loyalty. He found positive and unique brand associations were linked to a high level of attitudinal and behavioral loyalty. For these reasons it was decided not to test this component as in the Literature it seems the consensus from scholars is more that brand loyalty is an outcome of brand equity instead of a potential component as Aaker theorized in the beginning.

2.4. Brand Associations

According to Aaker (1991), brand association is the foundation for purchase decision, representing any thought linked to the Brand in the mind of the consumer, from experiences, opinions, feelings etc..

Brand association concerns the information on the consumers mind relative to a specific Brand, whether they are positive or negative, implicitly connected to the node of the brain memory (Emari et al., 2012). Brand association is the unconscious method of consumers to differentiate Brands (Osselaer and Janiszewski, 2001). Most associations reflect the brand Image, by associating the Brand name in consumer recall (Keller, 1993). Product association and organization association are two types of association identified by Cheng (2001). Consumers consider Brand Attributes when evaluating a Brand (Lassar et al.,1995). Bridges et al. (2000) claims that "positive associations help to strengthen the brand and the equity that is carried into a leverage situation if affected by the types association made with the brand". Accordingly, Pouromid and Iranzadeh's research (2012) shows that the relationship between brand association and brand equity is positive and significant. The higher the brand associations in the product, the more it will be remembered by the consumer and the higher the loyalty towards the brand. For these reasons, marketers explore the potential of Brand associations for product positioning matters. Consumers take advantage of it by using these associations to support their decision making (Low et al., 2000).

APPENDIX II – "What the Internet is Saying" **Status on Technology Blogs / Online Newspapers**		
ARTICLE & WRITER	DATE	INTEL / MAIN IDEAS (1/4)
Tech News 18 **7 Things Consumers Want From Affordable Smartphones** Partner Content	06/01/17	Indian reference tech news website, listing what are today the new must-haves even for low end smartphones: **1) Metal body** **2) Dual-lens camera** **3) Dual-SIM** **4) Fingerprint scanner** **5) 4,000 mAh battery** **6) 4G VoLTE connectivity** **7) Under 200€**
Techaeris **Consumers want a smartphone camera that just shoots great photos out of the box** Alex Hernandez	02/04/18	On **camera**: "A mother wanting to capture a cute moment of her newborn isn't going to bother putzing with options" Main conclusion: "**OEMs — don't try and outdo each other with options and features, just make a kickass camera that people want to use out of the box and you'll be golden**."
The Sidney Morning Herald **We've reached peak smartphone. What are Apple and Samsung going to do now?** Geoffrey A. Fowler	28/2/18	"…here's the reality: More and more consumers have decided **we don't need to upgrade every year**. Or every other year." "We're no longer locked into two-year contracts and phones are way sturdier than they used to be. And the new stuff just isn't that tempting even to me, a professional gadget guy" "Holding onto our phones is **better for our budgets**, not to mention the **environment**. This just means we - and phone makers - need to start thinking of them more like cars." "One major driver of the change in our behavior is that **phones now mostly look alike**." "Consumers say, I will buy when I see something new or hear something I need," Ryan Reith, a vice president at IDC said. "Many of the **biggest recent advancements**, like augmented reality, **have come largely through software**." "The next big upgrade moment, in a few years, will likely be for phones capable of 5G service, which brings you mobile data on steroids."
The Verge **The Best phone to buy right now** Dan Seifert	22/06/18	"... areas that matter: **performance, value, camera, and support**."

ARTICLE & WRITER	DATE	INTEL / MAIN IDEAS (2/4)
Forbes **What Do Consumers Want In A New Smartphone?** Christopher Versace	21/07/13	"Smartphone companies like to bring new features to market in order to differentiate themselves, but there's some **question as to whether or not some of these new features are wanted let alone used by consumers.**" "those features are interesting, but I would not say that either is need to have or even nice to have." "that's the point -- to get consumers to upgrade their devices, a smartphone vendor needs to have features and functions that consumers really want." "All of this begs the question -- what do consumers really want in a new smartphone? 1. **Improved battery life:** " … the ability to go more than a day without having to charge or recharge their device". 2. **A more durable device:** Be it some scratches or fractured pieces of glass, Chris thinks it sure does ruin the look of the phone. 3. **Better voice recognition:** "Factor in various accents and lingo, and the experience may not live up to what is advertised."
CNBC – Tech **What to look for when you're buying a new smartphone** Todd Haselton	03/03/18	Here's what you should pay attention to. **The display:** "Make sure you're buying one that's bright enough to see outdoors, and sharp enough where text doesn't look blurry while you're surfing the web" **The battery:** "biggest complaint I get from friends and family is that their smartphones are "always dead."" **The storage:** "Apps are much bigger these days, and pictures can take a lot of space if you're not storing them in the cloud". **The camera:** "Budget phones don't usually have great cameras, so consider spending a bit more if this is important to you." **The age:** "might soon stop getting important software updates, including security patches. Also, as apps become more powerful, the processor and memory but not offer enough power to run the latest games or photo-editing software." **The company's reputation:** "do a bit of research on the company that makes the smartphone."
Yahoo Finance **Survey: The No. 1 feature consumers want from the iPhone 8** Ethan Wolff-Mann	06/09/17	From a survey conducted with 15 000 answers, the most desired features were: 1. **better battery life.** 2. **unbreakable display.** 3. **edge-to-edge display.** 4. **better camera.** 4. **more storage.**

ARTICLE & WRITER	DATE	INTEL / MAIN IDEAS (3/4)
Tech Malak **What Customers Want In A New Flagship Smartphone** Matthew Barnes	10/12/17	**"What Do Smartphone Users Want?** **Screen –** "In short, customers want more screen real-estate in a manageable body. Larger screens are here to stay and are what most people want in a flagship smartphone. We want to feel a sense of being at the forefront of display technology. The quality of the display is a critical factor in making a great flagship mobile phone. **Battery –** "The introduction of quick or rapid charging is more of a band-aid solution for a lingering problem which hasn't been solved." **Camera –** "Higher megapixels don't always determine the quality of a camera, and more consumers are catching on to that fact. Optical Image Stabilization(IOS) and better sensors are some of the features smartphone users care about. A terrible camera can sink the perceived value of a device very quickly. We can deal with battery thing more than a shitty camera any day of the week." **Storage –** "Having options for cloud storage is a convenient option, but in reality, we all want our media in one central place. With faster wireless speeds on the horizon, the potential to consume and share media on a higher scale is a reality. Support for expandable storage is a massive bonus for Android phones." **Software –** "Because of the fragmented nature of Android devices, timely updates just aren't timely at all." "Having an extensive app ecosystem sounds excellent on paper, but in truth, the majority of users only use a handful of apps. More of us wan restrictions on what data these mobile apps are collecting." **Design –** "should not only look incredible, but it must also be durable. covering your device for the sake of protection hides the beauty of your smartphone. Every time we take that device from out of our pockets, we want to look and appreciate the design and build quality. We want to feel like we've made a great decision in spending our money."
DW – German News **Consumers want smartphones designed to last** Hardy Graupner	15/08/16	"A lot of consumers in many parts of the world are unhappy about the way smartphones are produced. They want them to **last longer and thus lessen their environmental footprint**, a new Greenpeace study has shown." "Four in five respondents said it was absolutely **vital for smartphones to be easily repaired**, if damaged - a feature that's hardly ever seen right now in phones from major producers such as Samsung or Apple." "If tech brands want to lead us into the future, they need to **move towards closed-loop production and embrace the circular economy** - something that can be good for their profits, for people and for the planet," the Greenpeace study noted."

ARTICLE & WRITER	DATE	INTEL / MAIN IDEAS (4/4)
Silicon Republic **The X generation: What do consumers want from the next 10 years of the iPhone?** John Kennedy	12/09/17	"Consumers expect greater **security** in the next iPhone and have gotten over the disappearance of the headphone jack" "**Big screens**! Customers want a big screen," said Delahunty. "In fact, sales of smaller screen devices, below 4.5in, are shrinking due to this factor alone. "Customers always want an **improved camera experience**. It's important to articulate the practical improvements that appeal to a wider audience – something that Sony has always done well, for example." "Customers are intrigued about **inductive or wireless charging**." "But when it comes to **design**, the bezeless look for a high-end iPhone could make it a bestseller." "There is also a growing demand for increased **security features** on all smartphones."
YouGov **Smartphone users still want long-lasting batteries more than shatterproof screens** Paul Hiebert	20/02/18	"41% of US smartphone users say **longer battery life** is the design feature they want most" "A closer look by gender reveals that men and women are currently more likely to want the **best camera** available than they were in 2016."" Results on the feature **+18 US people** want the most: 1. **Longer Battery life** 2. **Shatterproof screen** 3. **The best camera available** 4. **Water-resistant** 5. **Hands-free technology**

APPENDIX III – Types of Research

Exploratory Research: The objective of Exploratory Research is to gather complementary information and consolidate the existing one, accessing different perspectives and points of view that aid in the formulation of problems by clarifying concepts, reaching new and different insights and, consequently, adapting and setting the hypotheses. This Research is usually performed with the analysis of existing Literature, Interviews with Experts and Focus Groups (Saunders et al., 2009). Although it can shape and help in the development of the hypotheses, in no way tries to test and evaluate them (Darabi, 2007).

Descriptive Research: In order to properly study a phenomenon or population one must know as much as details and information as possible about its/their characteristics. The difference from Exploratory is the need for detailed information, setting clear hypotheses and most importantly a good and unambiguous understanding on the problem. It is possible to conduct this Research as an extension of, or, alternatively a precursor to, a part of Exploratory Research (Saunders et al. 2009). Generally, it is used on research of markets where it is necessary to identify and collect information on the market size, sales, consumption habits, buying processes, image studies among others (Malhotra, 2006).

Explanatory Research: It is used to test and analyze cause-effect relationships, through the use and management of variables in experimentations. To be able to reach clear and concrete conclusions, it is necessary to organize and structure the research before it takes place (Malhotra, 2006).

APPENDIX IV – In-Depth Interviews

Interview Guidelines

Participants: Smartphone Users - Individuals who own and use a smartphone on a daily basis.

A. Greetings. Ask permission to record the session

B. Profile of the customer:
    a. Introduction: Name, age, education, occupation

C. Smartphone Use and Purchase
    a. What is for you the role of a smartphone?
    b. What do you use it for? How satisfied are you with yours and why?
    c. What is most important and influences you when purchasing a smartphone?

D. Buying Process
    a. I see you have a smartphone/Do you have a smartphone. How did you end up with that one?
    b. And the time/one before that, anything changed in that process?
    c. What are you going to do differently next time?

E. Brand Evaluation
    a. Tell me three Brands that you think most people would avoid having as their smartphones? Why those?

F. Attributes and Requirements
    a. When you bought your current smartphone, what specific specs did you look out for?
    b. What was the impact of the Brand when considering these specs you were looking for?

G. Country of Origin

a. Do you have friends who ordered smartphones from foreign countries? What is your opinion about that?

H. Ingredient Branding and Discussion of Examples
   a. Do you know Brands that advertised together? Some of the most famous examples could be the Intel processors in computers or Beats by Dr. Dre.
      i. In these examples, does it add value to you to the product? You recall other examples?
   b. Looking at your smartphone, what would you have paid more for it to be better or from another Brand?
   c. What do you think smartphone companies are missing towards satisfying their consumers?
I. Thanks and acknowledgement

In-Depth Interview Gonçalo Simões

Name	**Age**	**Studies**	**Occupation**
Gonçalo Simões	27	Communication (BsC) Management (MsC)	Communication and Marketing at Galp Energia
Main Insights	*Introduction: Gonçalo is a proud owner of the latest Iphone X. He is interested in smartphones and reads about technology quite often. His choice for the later came after a deep analysis of the market where he considered many factors. In the end, he says he opted for the Iphone X because Iphones deliver and also he already had a lot of paid Apps in IoS.* "My smartphone is very important to me. It gives me access to information, it is a source of entertainment and helps me with my job. I play on it, read e-mails, check social media, text and call, take pictures, organize my agenda and my life…" "Since I got my first IPhone I did not want anything else." "I would honestly consider changing from an Iphone to another Phone if the device is better. I will always look at the market, read reviews online and examine the changes in the operating systems." "To get a good phone you have to pay. You cannot pay a donkey and get a horse." "Buying an Apple product gives me confidence because I know the Brand worries about quality and user friendliness." "Of course I would consider ordering from a foreign country a Chinese Phone. The country of origin does not matter at all to me." "A great benefit to IB strategies I see is Innovation. I think with these partnerships more innovative products will show up." "I think Apple should listen more its consumers. Lately I am starting to get this feeling." "I think were companies also lose value is that they are not original, they just try to copy Apple and Samsung." "Concerning my Iphone X I would like it to be cheaper, have more battery and more storage and for the camera to perform better in low lighting situations."		

	"IB strategies add value because it brings together the associations of two Brands." "For me, intel is a synonym of Trust and Liability." "It is not about if I would pay 150€ more for a Canon camera, it is about if I would notice and see the differences. If I did, yes I would pay the premium for a better camera." "People will only care about Branded attributes if they are reflected externally. If other can see it. Noone will ever say: This phone as a Duracell battery. But a camera or design, which you can see on the outside is a different story." "If I am browsing products from Brands I do not know, seeing a familiar Brand will give me confidence on the product." "Low End: I think there is a lot of potential here, but I would say not inside the smartphone. Joining with the smartphone other Products from other Brands could, with a lower cost, prove much more beneficial. For example: Instead of 150€ for a phone, sell it for 180€ with some fancy headphones or a cover from a famous Brand. Not actually inside characteristics of the Phone." "High End: What these consumers care about is quality. Price is not an issue. As I said before, a Canon camera for example could still make sense although I would expect the camera for this price range to be pretty good."

In-Depth Interview Fernanda Antunes

Name	**Age**	**Studies**	**Occupation**
Fernanda Antunes	53	Economics and Business Administration (BsC)	Commercial Manager at Millennium BCP
Main Insights	*Introduction: Fernanda owns two smartphones, a Samsung company owned smartphone and a Huawei that she bought for herself after getting a recommendation from her daughter. Both have a market value of around 200€. Fernanda uses the smartphones mostly just to call and go to social media. She admits she is not very knowledgeable about technology and is a bit concerned with the excessive use of smartphones nowadays by children. However, she also recognizes that they are very useful to keep in contact with others and reach family and friends, wherever they are.* "I would never pay 1 000€ for a phone. Even 200€ is already a lot." "I'm not that satisfied with my phone, because it only lasts one day. Apart from that ok. The battery is the main issue." "Next time I buy a phone, I am planning on ordering it from China because I heard from friends that if carefully checked there are very good deals. I have friends who did it and are very satisfied" "All I wanted from the smartphone was that it had good battery and for it not to have "breaks." "The only thing I would have paid more to have improved in my phone would be the battery. I guess up to 20% more. For example if it was advertised a Duracell battery I would pay more since it has a good reputation. Although I would not know if there would be a practical change, I would admit that it would last longer if it was from Duracell the battery."		

	"What would make me pay 300€ for a phone would be knowing that it would last for at least 4 years and it would not crash in 2/3 years. 4 year warranty." "I think how people were raised plays an important role in this topic. It's about how people give value to money. The concept of value. For me a smartphone is not a basic need. I know some people would even run into debt to get a new phone but I would never." "If the products from unknown brands had characteristics from Brands that I trusted, then I would be willing to order the product" "Would my opinion on this (different price segments) be reliable? I only know how I will react in my case." "Work is also important. For my job, the smartphone is not necessary. If I was for example a vendor who needed to register and work daily with a smartphone then I would be willing to spend a little more."

In-Depth Interview Diogo Dias

Name	**Age**	**Studies**	**Occupation**
Diogo Dias	23	Medicine (Integrated MsC)	Student/Intern
Main Insights	*Introduction: Diogo is a last year Medicine student who owns a 150€ Samsung and does not care much about his smartphone. He recognizes its value but does not see himself ever paying a lot of money for one.* "My smartphone broke. The next day I went to a shop and I just looked at the alternatives that were present and picked the one which seemed a better deal, never considering spending more than 150€." "I'm not that satisfied with my phone, it could be better, but I don't plan on spending more next time." "For me, Brands only matter in one scenario: The need of a Tiebraker." "Even if I have a somewhat bad Image of a Brand, I would buy from that Brand. Yet, I would not if I did not know the Brand." "Ordering phones from foreign countries is a risk because there will arrive one day when there will come and empty box and then there will a problem. There is always a risk." "I would pay slightly more to have more memory and for the camera, exclusively if it was necessary for my job, but I would not pay more for any characteristic of the phone to be Branded." "For me, no doubt the number one issue companies are missing is Durability. I would love to find a Brand that is known for strong, solid and long lasting devices." "Considering the three scenarios you presented, I think High End devices is where I feel consumers would value more IB. People who are willing to spend 500€ will be willing to spend more for some improvements, but people who give 150€ will not."		

	"In Middle End devices, I think it will also make a difference, because although it includes consumers who are not willing to spend high amounts it will include consumers who are interested about a better smartphone and are more informed and interested in the topic. This way they may actually be the ones who give more importance to this kind of strategies." "If I looked at two smartphones, and one had slightly better characteristics, but no IB, and the other yes, I would still go for this one and neglect IB."

In-Depth Interview Ricardo Peixoto

Name	**Age**	**Studies**	**Occupation**
Ricardo Peixoto	27	Economics (MsC)	Financial Controller at Galp
Main Insights	*Introduction: Ricardo owns one smartphone, an ASUS that he received as a birthday gift from his parents. Ricardo uses the smartphone to call, send messages, e-mails and uses some apps like Facebook. He is an utilitarian person, however he likes technology very much.* "I do not like spending a lot of money for a smartphone. My current Phone cost around 180€ and was offered by my parents. Despite this, I did not let them spend more than that amount on a Phone." "I think it's not worth it spending a lot of money on a mobile phone because the mobile phone has to be valued for its functionalities and not for what it transmits about your lifestyle or possessions" "I decided to buy my current phone because my previous one was already in really bad conditions. I went to a store and was advised to buy this one, within the range of prices I was looking for. " "I believe most people my age do not have the same opinion, they like to use the phone to show themselves." "I know there are a few cheaper smartphones from Chinese brands such as Xiaomi and Huawei, however I fear a bit buying a mobile phone from one of these Brands. I'd rather buy a cheap Phone from an European, American or Korean brand." "I would be able to buy and pay a little more money for a Phone if it had a Canon camera. I'm a fan of photography, I think I'd give it a lot of value. Also a processor, because I could afford to do more activities through the smartphone." "I would not pay more for having a different design. I think a smartphone should be useful. Plus, I always use a good cover."		

In-Depth Interviews Margarida Tomé

Name	**Age**	**Studies**	**Occupation**
Margarida Tomé	26	Chemical Engineering (Integrated MsC)	Chemical Engineering at Galp

Main Insights	*Introduction: Margarida owns two smartphones, a Samsung company owned smartphone and an Apple iPhone that she bought for herself. The first one has a market value of around 200€ while the iPhone cost her around 900€. Margarida uses the smartphone not only for calls and messages, but also for social media and organize her life. Margarida wants to guarantee she is having access to the latest technology.* "I have no problem spending a considerable amount of money on a smartphone. What matters the most to me is that the smartphone will allow me to have all the applications that I need" "I do not buy a smartphone just when my old one crashes. Also iPhones you can easily sell, and then buy the most recent one. I have done that once." "I like it when my friends tell me they like my smartphone." "I am aware some of my friends think that my technology worship is a bit stupid and that I do not need to pay so much for a Phone." "If I cannot see myself being happier with a phone than I am now, why would I change?" "I do not think I would pay more for a branded characteristic. Only the battery I wish would last longer but I do not think that applies. Having a Canon or Nikon camera would not make me more interested in the iPhone except if I could clearly see the difference." "About a different Design… I never thought about it. It would really depend on how it looked. If I looked at it and fell in love then I think I would be willing to buy it even if more expensive."

APPENDIX V – Survey

COMPOSITION: The survey started by questioning if the respondent was a Smartphone User. For those who were not, that was the ending point of the survey. Non-smartphone users were left out of the Sample since the survey demanded some knowledge on smartphones and their responses would likely not be accurate.

1) **Smartphone User Characteristics:** The first Block of questions focused on gathering information about what kind of Person and Smartphone User the respondent was, such as what was the smartphone owned, which one was desired next, how much it has costed and also a list of Features were presented at this time to be evaluated in terms of importance through a Likert Scale. An important question at this time, was to order in terms of relevance and importance,?? three characteristics that were shown: Camera, Processor and Design.

2) **Next Purchase:** Afterwards, some questions about the next purchase were asked that allowed to know more about the individual, such as how much the person was willing to spend on next smartphone, if it was more likely to buy it from an online store or a retail store and, among others, when applicable, why they wanted to change to a new Brand.

3) **Evaluation of Neutral Smartphone & Smartphone with Branded Ingredient:** At this point the main part of the survey starts. The respondent is asked to place himself in his next smartphone purchase scenario and is asked to evaluate two smarthones. The two smartphones that will show up **depend on the answer from three questions** answered before, which are:

CONDITION 1 - Operating System: Respondents who desire APPLE are taken to an iPhone while the remaining (other Android using Brands) are taken to a Samsung. Through the qualitative research it was evidenced that iOS Users are part of a market apart and in order to collect valid and honest answers from these respondents it was necessary to evaluate them on iPhones.

Considering Android users, **Samsung** was considered to be the best choice to be used in this survey, since it is a Brand that 1) Has models in every Price Range; 2) Is generally perceived with High Quality (it will be compared to APPLE); 3) Is a Consistent Brand that has been in the market for many years and consumers are aware of.

CONDITION 2 – Characteristic Preference: Whether respondents considered the camera, processor or design to be most important in a smartphone for them, they are taken to a smartphone with a **Canon Camera**, an **Intel Processor** or an exclusive limited edition **Armani Design**, respectively.

In fact this characteristic is the only thing that changes between the two scenarios that are evaluated. The **first smartphone** showed is a **Neutral version** and the **second** is the same smartphone but with one of the **Branded Ingredients** mentioned. It is important to note that the change is only in the Brand, objective characteristics remain the same. For instance, the Canon camera has the same Mega Pixels in both scenarios. However, on this second version the logos are clear and visible in the back.

The choice for these three Brands was based on being considered high quality Brands and a reference in their sector. For the purpose of the research, only high quality brands were used in order to test the existence of the previously mentioned spillover effect as shown in previous studies.

CONDITION 3 – Willingness to Spend on Next Smartphone (Price Range): Whether respondents were planning on spending up to 200€, between 200€ and 400€ or over 400€ they were led into Phones of different values, 150€, 300€ and 600€ respectively.

What led to the existence of these scenarios was the objective to evaluate each consumer on a scenario that was as realistic and adequate for its profile as possible. Having a respondent that wants to spend 150€ evaluating a 600€ phone or the other way around would not provide legitimate and honest answers that reflect the reality. Also, there was a limited amount of information shown and that was intentional in order not to take the attention away from what mattered in this study and is being tested: the influence of the Branded Ingredient. The Measures used to evaluate the two versions of the Smartphone are to be detailed below.

Exception: For the APPLE users, only those who selected they were willing to spend between 200€ and 400€ or over 400€ were presented an iPhone. Those who answered up to 200€ were presented a Samsung as they will most likely due to financial constraints end up acquiring an Android.

4) **Evaluation of Brands:** After evaluating the Smartphones, respondents are asked to evaluate the two Brands of the products they were shown: APPLE or SAMSUNG, and CANON or INTEL or ARMANI. This is a relevant question in the sense that if respondents

have a negative image of these Brands it is only natural that the evaluation of the smartphone is not positive.

5) Socio-Demographics: Lastly, some questions to set up the social demographic Profile of the respondent are asked.

The characteristics chosen were taken from a Benchmark of Smartphones of the same Price (Samsung and APPLE models were used).

Different Paths in Survey

SAMSUNG									iPHONE					
150 €			300 €			600 €			300 €			600 €		
Can	Int	Arm	Can	Int	Arm	Can	Int	Arm	Can	Int	Arm	Can	Int	Arm
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Table 2 - Summary of Survey Paths

SAMSUNG			
CONTROL MODEL	**CANON**	**INTEL**	**ARMANI**
150€			
Control 150€  1,6GHz Octa Core | 5,6" | 13 MP | 32 GB	**PATH 1**  1,6GHz Octa Core | 5,6" | 13 MP Canon | 32 GB	**PATH 2**  1,6GHz Octa Core Intel | 5,6" | 13 MP | 32 GB	**PATH 3** **Intentionally, no Picture was shown. Respondent was told to assume he was pleased with the Design.**
300€			
Control 300€  2,2 GHz Octa Core | 5,6" | 13 MP | 64 GB	**PATH 4**  2,2 GHz Octa Core | 5,6" | 13 MP Canon | 64 GB	**PATH 5**  2,2 GHz Octa Core Intel | 5,6" | 13 MP | 64 GB	**PATH 6** **Intentionally, no Picture was shown. Respondent was told to assume he was pleased with the Design.**

600€			
Control 600€	**PATH 7**	**PATH 8**	**PATH 9**
			**Intentionally, no Picture was shown. Respondent was told to assume he was pleased with the Design.**
Quad Core 2.3GHz + Quad Core 1.7 GHz | 5,8" | 16MP | 128GB	Quad Core 2,3 GHz + Quad Core 1.7GHz | 5,8" | 16 MP Canon | 128 GB	Quad Core 2,3 GHz Intel + Quad Core 1.7GHz | 5,8" | 16 MP | 128 GB	

IPHONE			
CONTROL MODEL	**CANON**	**INTEL**	**ARMANI**
300€			
Control 300€	**10**	**11**	**12**
			**Intentionally, no Picture was shown. Respondent was told to assume he was pleased with the Design.**
A8 Dual-Core | 4,7" | 8MP | 32GB	A8 Dual-Core | 4,7" | 8MP Canon | 32GB	A8 Dual-Core Intel | 4,7" | 8MP | 32GB	
600€			
Control 600€	**13**	**14**	**15**
			**Intentionally, no Picture was shown. Respondent was told to assume he was pleased with the Design.**
A11 Bionic Processor | 4,7" | 12MP | 64GB	A11 Bionic Processor | 4,7" | 12MP Canon | 64GB	A11 Bionic Intel Processor | 4,7" | 12MP | 64GB	

SURVEY – EXAMPLE – PATH 5

Q1 Welcome to this questionnaire!

In the sequence of a Management Master's dissertation at Católica Lisbon this questionnaire aims to analyze the factors that influence purchase intention and how much consumers are willing to spend for some features.

All answers are completely confidential and anonymous and will be solemnly used for the purpose of this academic study. Please answer as honestly as possible.

It will take around 10 minutes. I would like to thank you in advance for your time!

Q2 Smartphone User

Are you a **smartphone** user?
(Advanced mobile phone with operating system (ex: Android, iOS, Windows Mobile...) and other functionalities.)

o Yes (1) o No (2)

Q3 Current Brand

Please select the brand of your smartphone.
(If you have more than one, consider the one you use the most)

o ASUS (1) o APPLE (2) o HUAWEI (3) o LG (4) o NOKIA (5) o OPPO (6) o SAMSUNG (7)
o XIAOMI (8) o OTHER (Which Brand?) (9) _____

Q4 Cost of Current Smartphone

Approximately, how much did it cost?

o Less than 150€ (1) o 150 € to 250 € (2) o 250 € to 350 € (3) o 350 € to 550 € (4)
o Above 550 € (5) o Do not know (6)

Q5 Satisfaction with Current Smartphone

How satisfied are you with your current smartphone?

o Very dissatisfied (1) o Somewhat dissatisfied (2) o Neither satisfied nor dissatisfied (3)
o Somewhat satisfied (4) o Very satisfied (5)

Q6 Evaluation of Features

Please evaluate each feature of a smartphone based on their importance and relevance to you:

	Not at all important (1)	Slightly important (2)	Moderately important (3)	Very important (4)	Extremely important (5)	Do not have an opinion (6)
Camera (1)	o	o	o	o	o	o
Construction durability (2)	o	o	o	o	o	o
Design (3)	o	o	o	o	o	o
Dual-SIM (4)	o	o	o	o	o	o
Fingerprint scanner (5)	o	o	o	o	o	o
Large screen (6)	o	o	o	o	o	o
Operating System (7)	o	o	o	o	o	o

Processor (8)	o	o	o	o	o	o
Quality Speakers (9)	o	o	o	o	o	o
Resolution (10)	o	o	o	o	o	o
Storage (11)	o	o	o	o	o	o
Support (12)	o	o	o	o	o	o
Voice Recognition (13)	o	o	o	o	o	o
Water-resistance (14)	o	o	o	o	o	o

Q7 Smartphone Usage Duration

How long did you use your previous smartphone?

o Between 1 and 2 years (2)
o Between 2 and 3 years (3)
o More than 3 years (4)

Q8 Smartphone Change Rate

How often do you feel the need to change smartphones?

o More than once a year (5)
o Between 1 and 2 years (1)
o Between 2 and 3 years (2)
o Every 3 years or more (3)

Q9 Choice of feature for scenario

Please order the features below in terms of importance to you when purchasing a smartphone:
(1 - most important, 2 - second most important, 3 - third most important)

- ___ Camera (1)
- **__X_** Processor (2) **EXAMPLE**
- ___ Design (3)

Q10 Desired Brand

Please think now about the **actual purchase of your next smartphone**.

Which Brand of mobile phone are you most likely to purchase?

o ASUS (1) o APPLE (2) o HUAWEI (3) o LG (4) o NOKIA (5) **o SAMSUNG (6) EXAMPLE**
o XIAOMI (9) o OTHER (Which Brand?) (8) _____

Q11 Reason for Different Desired Brand

Did you select now the same Brand that you currently use?
If not, what are the reasons for your change? If yes, what are the reasons that are making you stick to your current Brand?

Q12 Evaluation of Alternatives

Do you consider buying only this Brand or you will analyze different alternatives at the time?

o Only this Brand. (1)
o I will evaluate the different alternatives in the market but have a preference for this specific Brand. (2)
o I will evaluate the different alternatives in the market yet do not have any preference. (3)

Q13 Online Store

How likely is it that you purchase your next smartphone from an Online Store (ex: Amazon, Gearbest, etc)?
o Extremely unlikely (1)
o Somewhat unlikely (2)
o Neither likely nor unlikely (3)
o Somewhat likely (4)
o Extremely likely (5)

Q14 Retail Store

How likely is it that you purchase your next smartphone from a Retail Store (ex: Worten, Fnac, etc)?

o Extremely unlikely (1)
o Somewhat unlikely (2)
o Neither likely nor unlikely (3)
o Somewhat likely (4)
o Extremely likely (5)

Q15 Recommendations of Others

How likely is it that you purchase your next smartphone based on the recommendation of other(s)?

o Extremely unlikely (1)
o Somewhat unlikely (2)
o Neither likely nor unlikely (3)
o Somewhat likely (4)
o Extremely likely (5)

Q16 Price Range

Approximately, how much are you planning on spending?

o Up to 200 € (1)
o From 200 € to 400 € (2) X EXAMPLE
o Over 400 € (3)

SCENARIO 1

From the information you have, please share your opinion about the smartphone telling how much you agree with the statements below:

We would now like to simulate your next purchase. Try to imagine yourself purchasing your next smartphone.

You come upon a Samsung smartphone, priced at 300€, with the following main features:

2,2 GHz Octa Core | 5,6'' | 16 MP | 64 GB.

Consider for the effect that in what concerns the remaining features it includes all the ones you find necessary and that you expect in a smartphone of this price.

From the information you have, please share your opinion about the smartphone telling how much you agree with the statements below:

Q17 EVALUATION OF NEUTRAL SMARTPHONE

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I feel this smartphone offers good value for money considering its characteristics. (1)	o	o	o	o	o	o	o
I feel this smartphone possesses a degree of quality that is satisfactory. (2)	o	o	o	o	o	o	o
I feel this smartphone is reliable in its performance. (3)	o	o	o	o	o	o	o
I feel like I would want to share the experience of using this smartphone with others afterwards. (4)	o	o	o	o	o	o	o
I feel like using this smartphone would be thrilling. (5)	o	o	o	o	o	o	o
Using this smartphone is interesting to me. (6)	o	o	o	o	o	o	o
Using this smartphone improves the way I am perceived. (7)	o	o	o	o	o	o	o
I feel like using this smartphone would be positively seen by society. (8)	o	o	o	o	o	o	o
Using this smartphone does not help me maintain my social relationships with others. (9)	o	o	o	o	o	o	o
Control Question: Please select Disagree (10)	o	o	o	o	o	o	o

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I feel that this smartphone is trustworthy. (11)	o	o	o	o	o	o	o
I feel it is necessary to be cautious with this supplier. (12)	o	o	o	o	o	o	o
I feel this smartphone is reliable. (13)	o	o	o	o	o	o	o
I feel that in comparison to other smartphones, this one is of high quality. (14)	o	o	o	o	o	o	o
I feel that in comparison to other smartphones, this smartphone is respected. (15)	o	o	o	o	o	o	o
The Brand of this smartphone is of quality. (16)	o	o	o	o	o	o	o
I would like to try this smartphone. (17)	o	o	o	o	o	o	o
I would like to know more about this smartphone. (18)	o	o	o	o	o	o	o
I would recommend this smartphone to my family and friends. (22)	o	o	o	o	o	o	o
Control Question: Please select Strongly agree (20)	o	o	o	o	o	o	o
I would like to buy this smartphone. (19)	o	o	o	o	o	o	o
I am willing to pay a higher price for this smartphone over other alternatives in the market. (21)	o	o	o	o	o	o	o

Q18 WTPO

Would you be willing to pay 300€ for this smartphone?

o Yes (1) o No (2)

Q19 Reason for Negative Purchase Intention I

In case you answered no in the previous question, what is/are the reasons why you would not?
(If you answered yes please move to the next question)

_____

Q20 WTPQ (Quantitative)

Consider now the phone had no price tag. From the information you have available: what is the **maximum amount** you would be willing to spend for this smartphone? _____(€)

SCENARIO 2

SAMSUNG has decided to invest in a partnership with INTEL and is now launching the previous model with an Intel processor for the same price (300€).

2,2 GHz Octa Core Intel | 5,6" | 13 MP | 64 GB. Consider again for the effect that in what concerns the remaining features it includes all the ones you find necessary and that you expect in a smartphone of this price.

Below the image of this new smartphone, where the Intel logo is visible on the back.

Q21 EVALUATION OF SMARTPHONE WITH BRANDED INGREDIENT

Please share your opinion a second and last time about the new version of the smartphone telling how much you agree with the statements below, from the information you have available:

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I feel this smartphone offers good value for money considering its characteristics. (1)	o	o	o	o	o	o	o
I feel this smartphone possesses a degree of quality that is satisfactory. (2)	o	o	o	o	o	o	o
I feel this smartphone is reliable in its performance. (3)	o	o	o	o	o	o	o
I feel like I would want to share the experience of using this smartphone with others afterwards. (4)	o	o	o	o	o	o	o
I feel like using this smartphone would be thrilling. (5)	o	o	o	o	o	o	o
Using this smartphone is interesting to me. (6)	o	o	o	o	o	o	o
Using this smartphone improves the way I am perceived. (7)	o	o	o	o	o	o	o
I feel like using this smartphone would be positively seen by society. (8)	o	o	o	o	o	o	o
Using this smartphone does not help me maintain my social relationships with others. (9)	o	o	o	o	o	o	o

Control Question: Please select Disagree (10)	o	o	o	o	o	o	o

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I feel that this smartphone is trustworthy. (11)	o	o	o	o	o	o	o
I feel it is necessary to be cautious with this supplier. (12)	o	o	o	o	o	o	o
I feel this smartphone is reliable. (13)	o	o	o	o	o	o	o
I feel that in comparison to other smartphones, this one is of high quality. (14)	o	o	o	o	o	o	o
I feel that in comparison to other smartphones, this smartphone is respected. (15)	o	o	o	o	o	o	o
The Brand of this smartphone is of quality. (16)	o	o	o	o	o	o	o
I would like to try this smartphone. (17)	o	o	o	o	o	o	o
I would like to know more about this smartphone. (18)	o	o	o	o	o	o	o
I would recommend this smartphone to my family and friends. (22)	o	o	o	o	o	o	o
Control Question: Please select Strongly agree (20)	o	o	o	o	o	o	o
I would like to buy this smartphone. (19)	o	o	o	o	o	o	o
I am willing to pay a higher price for this smartphone over other alternatives in the market. (21)	o	o	o	o	o	o	o

Q22 WTPO 2

Would you be willing to pay 300€ for this smartphone?

o Yes (1) o No (2)

Q23 Reason for Negative Purchase Intention II

In case you answered no in the previous question, what is/are the reasons why you would not? (If you answered yes please skip to the next question)

_____

Q24 WTPQ 2 (Quantitative)

Consider now the phone had no price tag. From the information you have available: what is the **maximum amount** you would be willing to spend for this smartphone? _____(€)

Q25 WTP Comparison 1

I am willing to pay a higher price for this smartphone with the new brand than for the smartphone exhibited before.

o Strongly disagree (1)
o Disagree (2)
o Somewhat disagree (3)
o Neither agree nor disagree (4)
o Somewhat agree (5)
o Agree (6)
o Strongly agree (7)

Q26 WTP Comparison 2

Even if the first smartphone is priced lower, I will still buy this new version.

o Strongly disagree (1)
o Disagree (2)
o Somewhat disagree (3)
o Neither agree nor disagree (4)
o Somewhat agree (5)
o Agree (6)
o Strongly agree (7)

Q27 WTP Final Comparison

Comparing the two presented smartphones, from the options below, approximately how much more would you pay to have the Intel processor?

o 0 (6)
o 15 € (5% more) (2)
o 30 € (10% more) (3)
o 45 € (15% more) (4)
o 60 € or more (20% more or higher) (5)

APPENDIX VI – Measures

For the first 6 constructs, the Likert Rating Scale was used, which allowed respondents to indicate their degreahe of concordance or discordance with the statements that were being presented (Malhotra, 2006). It was used a seven-point scale (1 - Strongly Disagree, 2 – Disagree, 3 – Somewhat Disagree, 4 – Neither Agree nor Disagree, 5 – Somewhat Agree, 6 – Agree, 7 – Strongly Agree). The choice for a seven-point scale instead of a five-point scale was that since the differences between each scenario were predicted to be small, the likelihood of accurately measuring the changes in perception could be enhanced with the presented scale.

Table 3 - Measures/Constructs

CONSTRUCT	REF	MEASURES / INDICATORS	ADAPTED FROM
Functional Value	FV2	"I feel this smartphone possesses a degree of quality that is satisfactory."	**Kim et al. (2011)**
	FV3	"I feel this smartphone is reliable in its performance."	
	FV1*	"I feel this smartphone offers good value for money considering its characteristics."	
Emotional Value	EV1	"I feel like I would want to share the experience of using this smartphone with others afterwards."	**Otto et al. (1996)**
	EV2	"I feel like using this smartphone would be thrilling."	
	EV3	"Using this smartphone sounds interesting to me."	**Kim et al. (2011)**
Social Value	SV1	"Using this smartphone improves the way I am perceived."	
	SV2	"I feel like using this smartphone would be positively seen by society."	
	SV3*	"Using this smartphone does not help me maintain my social relationships with others. (Reverse)"	
Trust	TR1	"I feel that this smartphone is trustworthy."	**Doney et al. (1997)**
	TR3	"I feel this smartphone is reliable."	
	TR2*	"I feel it is necessary to be cautious with this supplier. (Reverse)"	
Brand Image	BI1	"I feel that in comparison to other smartphones, this one is of high quality."	**Aaker (1996)**
	BI2	"I feel that in comparison to other smartphones, this smartphone is respected."	
	BI3	"The Brand of this smartphone is of quality."	
Purchase Intention	PI1	"I would like to buy this smartphone"	**Shukla (2010)**
	PI2	"I would recommend this smartphone to my family and friends"	
	PI3	"I would be willing to pay a higher price for this smartphone over other alternatives in the market"	
Willingness to Pay	WPQ	"What is the maximum amount you would be willing to spend on this smartphone?"	**Steenkamp et al. (2010)**
	WPO	"Would you be willing to pay X (reference price) for this smartphone?"	
	WPC	"I am willing to pay a higher price for this Smartphone with the new Brand than for the smartphone exhibited before".	

* Items removed on course of the Reliability Analysis.

APPENDIX VII – RQ1 - Evaluation of Characteristics / Features

The Features below, selected for evaluation, are based on the Literature Review and existing knowledge, being complemented with some insights from the Internet Review where analysts claim that new Features are turning into requirements.

Table 4 - Evaluation of Characteristics / Features (1)

Feature/ Characteristic	Storage		Construction Durability		Processor		Camera		Operating System		Screen Resolution		Design	
	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.
Not at all important	1	0%	1	0%	3	1%	2	1%	7	3%	0	0%	4	2%
Slightly important	5	2%	2	1%	10	4%	15	6%	15	6%	18	8%	34	14%
Moderately important	25	11%	33	14%	54	23%	65	27%	63	27%	61	26%	87	**36%**
Very important	86	37%	107	**45%**	87	**38%**	74	31%	74	**32%**	104	**44%**	76	32%
Extremely important	117	**50%**	94	40%	76	33%	84	**35%**	73	31%	52	22%	38	16%
Mean / Rank*	4,3	1	4,2	2	4,0	3	3,9	4	3,8	5	3,8	6	3,5	7
Std. Deviation	0,787		0,747		0,927		0,972		1,044		0,868		0,977	
Total**	234	100%	237	100%	230	100%	240	100%	232	100%	235	100%	232	100%

Table 5 - Evaluation of Characteristics / Features (2)

Feature/ Characteristic	Support		Quality Speakers		Large Screen		Water Resistance		Fingerprint Scanner		Dual-SIM		Voice Recognition	
	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.
Not at all important	17	8%	20	8%	25	10%	60	26%	80	**34%**	132	**56%**	113	**50%**
Slightly important	49	22%	48	20%	61	26%	67	**29%**	57	24%	48	20%	68	30%
Moderately important	83	**37%**	95	**40%**	74	**31%**	62	27%	52	22%	33	14%	34	15%
Very important	48	21%	54	23%	61	26%	29	12%	28	12%	9	4%	10	4%
Extremely important	27	12%	19	8%	18	8%	15	6%	20	8%	15	6%	3	1%
Mean / Rank*	3,1	8	3,0	9	2,9	10	2,5	11	2,4	12	1,9	13	1,8	14
Std. Deviation	1,103		1,048		1,110		1,185		1,288		1,183		0,946	
Total**	224	100%	236	100%	239	100%	233	100%	237	100%	237	100%	228	100%

*Rank: 14 Features were evaluated. The Rank presented is based on the Mean. (1 – Not at all important; 2 – Slightly important; 3 – Moderately important; 4 – Very important; 5 – Extremely important)
**Total: This question was not mandatory. Consequently, the Total is in most cases below 240 (total sample)

APPENDIX VIII – RQ 2 - Explanation of Purchase Intention

Table 6 - SPSS Outputs Regression on Purchase Intention (1)

1st Regression will all Constructs:

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,779[a]	0,607	0,599	0,76250	1,973

a. Predictors: (Constant), TR_BASE, SV_BASE, EV_BASE, FV_BASE, BI_BASE

b. Dependent Variable: PIBaseNOVO

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	210,560	5	42,112	72,431	,000[b]
	Residual	136,050	234	0,581		
	Total	346,611	239			

a. Dependent Variable: PIBaseNOVO

b. Predictors: (Constant), TR_BASE, SV_BASE, EV_BASE, FV_BASE, BI_BASE

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95,0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-0,273	0,314		-0,870	0,385	-0,891	0,345					
	EV_BASE	0,432	0,062	0,421	6,988	0,000	0,310	0,553	0,699	0,416	0,286	0,462	2,162
	FV_BASE	0,058	0,071	0,049	0,814	0,416	-0,082	0,198	0,556	0,053	0,033	0,465	2,151
	SV_BASE	0,045	0,041	0,052	1,092	0,276	-0,036	0,127	0,371	0,071	0,045	0,744	1,344
	BI_BASE	0,357	0,077	0,282	4,605	0,000	0,204	0,509	0,662	0,288	0,189	0,446	2,242
	TR_BASE	0,170	0,069	0,142	2,454	0,015	0,033	0,306	0,565	0,158	0,101	0,501	1,994

a. Dependent Variable: PIBaseNOVO

Correlations

		PIBaseNOVO	EV_BASE	FV_BASE	SV_BASE	BI_BASE	TR_BASE
Pearson Correlation	PIBaseNOVO	1,000	0,699	0,556	0,371	0,662	0,565
	EV_BASE	0,699	1,000	0,638	0,402	0,567	0,463
	FV_BASE	0,556	0,638	1,000	0,120	0,541	0,558
	SV_BASE	0,371	0,402	0,120	1,000	0,382	0,253
	BI_BASE	0,662	0,567	0,541	0,382	1,000	0,665
	TR_BASE	0,565	0,463	0,558	0,253	0,665	1,000
Sig. (1-tailed)	PIBaseNOVO		0,000	0,000	0,000	0,000	0,000
	SV_BASE	0,000	0,000	0,032		0,000	0,000
	BI_BASE	0,000	0,000	0,000	0,000		0,000
	TR_BASE	0,000	0,000	0,000	0,000	0,000	
N	PIBaseNOVO	240	240	240	240	240	240
	EV_BASE	240	240	240	240	240	240
	FV_BASE	240	240	240	240	240	240
	SV_BASE	240	240	240	240	240	240
	BI_BASE	240	240	240	240	240	240
	TR_BASE	240	240	240	240	240	240

2nd Regression with only statistically significant Constructs:

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,699[a]	0,488	0,486	0,86336	
2	,769[b]	0,592	0,589	0,77238	
3	,778[c]	0,605	0,600	0,76167	1,983

a. Predictors: (Constant), EV_BASE

b. Predictors: (Constant), EV_BASE, BI_BASE

c. Predictors: (Constant), EV_BASE, BI_BASE, TR_BASE

d. Dependent Variable: PIBaseNOVO

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	169,208	1	169,208	227,006	,000[b]
	Residual	177,403	238	0,745		
	Total	346,611	239			
2	Regression	205,224	2	102,612	172,003	,000[c]
	Residual	141,387	237	0,597		
	Total	346,611	239			
3	Regression	209,697	3	69,899	120,486	,000[d]
	Residual	136,914	236	0,580		
	Total	346,611	239			

a. Dependent Variable: PIBaseNOVO

b. Predictors: (Constant), EV_BASE

c. Predictors: (Constant), EV_BASE, BI_BASE

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95,0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1,600	0,231		6,934	0,000	1,145	2,055					
	EV_BASE	0,717	0,048	0,699	15,067	0,000	0,623	0,810	0,699	0,699	0,699	1,000	1,000
2	(Constant)	0,139	0,279		0,498	0,619	-0,411	0,689					
	EV_BASE	0,489	0,052	0,477	9,474	0,000	0,387	0,591	0,699	0,524	0,393	0,679	1,473
	BI_BASE	0,494	0,064	0,391	7,770	0,000	0,369	0,619	0,662	0,451	0,322	0,679	1,473
3	(Constant)	-0,182	0,299		-0,611	0,542	-0,771	0,406					
	EV_BASE	0,469	0,051	0,457	9,122	0,000	0,368	0,570	0,699	0,511	0,373	0,666	1,503
	BI_BASE	0,379	0,075	0,300	5,045	0,000	0,231	0,527	0,662	0,312	0,206	0,473	2,115
	TR_BASE	0,184	0,066	0,154	2,777	0,006	0,053	0,314	0,565	0,178	0,114	0,547	1,828

a. Dependent Variable: PlBaseNOVO

APPENDIX IX – RQ 3 - Explanation of Willingness to Pay

Table 8 - SPSS Outputs Regression on Willingness to Pay

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,898[a]	0,806	0,803	83,063	2,089

a. Predictors: (Constant), PriceRange3, PlBaseNOVO, PriceRange1

b. Dependent Variable: WTPquant

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6745143,576	3	2248381,192	325,881	,000[b]
	Residual	1628259,157	236	6899,403		
	Total	8373402,733	239			

a. Dependent Variable: WTPquant

b. Predictors: (Constant), PriceRange3, PlBaseNOVO, PriceRange1

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95,0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	79,947	23,734		3,368	0,001	33,190	126,704					
	PlBaseNOVO	43,268	4,532	0,278	9,547	0,000	34,340	52,196	0,420	0,528	0,274	0,969	1,032
	PriceRange1	-114,883	13,545	-0,268	-8,482	0,000	-141,568	-88,198	-0,573	-0,483	-0,243	0,827	1,210
	PriceRange3	260,517	12,589	0,657	20,695	0,000	235,717	285,318	0,814	0,803	0,594	0,816	1,225

a. Dependent Variable: WTPquant

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics		
						Tolerance	VIF	Minimum Tolerance
1	PriceRange2	.[b]				0,000		0,000

a. Dependent Variable: WTPquant

b. Predictors in the Model: (Constant), PriceRange3, PlBaseNOVO, PriceRange1

APPENDIX X – RQ 4 and 5 – Ingredient Branding Effect

Table 9 - Wilcoxon Ranks Test

Ranks

		N	Mean Rank	Sum of Ranks
EV_WithIB - EV_BASE	Negative Ranks	64[a]	76,45	4892,50
	Positive Ranks	101[b]	87,15	8802,50
	Ties	75[c]		
	Total	240		
FV_WithIB - FV_BASE	Negative Ranks	55[d]	78,19	4300,50
	Positive Ranks	101[e]	78,67	7945,50
	Ties	84[f]		
	Total	240		
SV_WithIB - SV_BASE	Negative Ranks	49[g]	57,77	2830,50
	Positive Ranks	64[h]	56,41	3610,50
	Ties	127[i]		
	Total	240		
BI_WithIB - BI_BASE	Negative Ranks	60[j]	88,81	5328,50
	Positive Ranks	112[k]	85,26	9549,50
	Ties	68[l]		
	Total	240		
TR_WithIB - TR_BASE	Negative Ranks	74[m]	64,47	4771,00
	Positive Ranks	51[n]	60,86	3104,00
	Ties	115[o]		
	Total	240		
PIWithIBNOVO - PIBaseNOVO	Negative Ranks	72[p]	74,80	5385,50
	Positive Ranks	85[q]	82,56	7017,50
	Ties	83[r]		
	Total	240		
WTPquant2 - WTPquant	Negative Ranks	15[s]	82,37	1235,50
	Positive Ranks	114[t]	62,71	7149,50
	Ties	111[u]		
	Total	240		
WTPord2 - WTPord	Negative Ranks	6[v]	16,50	99,00
	Positive Ranks	26[w]	16,50	429,00
	Ties	208[x]		
	Total	240		

a. EV_WithIB < EV_BASE
b. EV_WithIB > EV_BASE
c. EV_WithIB = EV_BASE
d. FV_WithIB < FV_BASE
e. FV_WithIB > FV_BASE
f. FV_WithIB = FV_BASE
g. SV_WithIB < SV_BASE
h. SV_WithIB > SV_BASE
i. SV_WithIB = SV_BASE
j. BI_WithIB < BI_BASE
k. BI_WithIB > BI_BASE
l. BI_WithIB = BI_BASE
m. TR_WithIB < TR_BASE
n. TR_WithIB > TR_BASE
o. TR_WithIB = TR_BASE
p. PIWithIBNOVO < PIBaseNOVO
q. PIWithIBNOVO > PIBaseNOVO
r. PIWithIBNOVO = PIBaseNOVO
s. WTPquant2 < WTPquant
t. WTPquant2 > WTPquant
u. WTPquant2 = WTPquant
v. WTPord2 < WTPord
w. WTPord2 > WTPord
x. WTPord2 = WTPord

Test Statistics[a]

	EV_WithIB - EV_BASE	FV_WithIB - FV_BASE	SV_WithIB - SV_BASE	BI_WithIB - BI_BASE	TR_WithIB - TR_BASE	PIWithIBNOVO - PIBaseNOVO	WTPquant2 - WTPquant	WTPord2 - WTPord
Z	-3,205[b]	-3,262[b]	-1,127[b]	-3,281[b]	-2,137[c]	-1,449[b]	-6,983[b]	-3,536[b]
Asymp. Sig. (2-tailed)	0,001	0,001	0,260	0,001	0,033	0,147	0,000	0,000

a. Wilcoxon Signed Ranks Test
b. Based on negative ranks.
c. Based on positive ranks.

APPENDIX XI – Summary of Conclusions

The main purpose of this study was to assess whether Ingredient Branding could be extended to the smartphone market and how it affected consumers.

1. XIAOMI was the Brand that had the biggest increase in popularity, with 7% owning one but 12% desiring the Brand as their next.

2. Consumers actually show high levels of satisfaction with their current smartphones, with 90,4% of respondents saying they are either Satisfied or Very Satisfied.

3. Consumers are still more likely to acquire their Phones on Retail stores versus Online (64% of respondents say they are likely to buy in a Retail Store versus 38% Online).

4. The purchase of a smartphone revealed to be a rather dependent process, with 49% of respondents claiming they are likely to follow recommendations from others.

5. The 5 Features/Characteristics that are more important to respondents are Storage, Construction Durability, Processor and camera, in that order.

6. From the five constructs analysed, only Emotional Value, Brand Image and Trust influence Purchase Intention.

7. Purchase Intention was proven to influence Willingness to Pay.

8. In all constructs, except Trust, there are more Positive Ranks than Negative, meaning more evaluations that improved in the second scenario. However, only Functional Value, Emotional Value and Brand Image see that change due to the Branded Ingredient (statistically significant constructs).

9. Trust and Social Value were the constructs least influenced by Ingredient Branding (considering the first part of the Model).

10. Ingredient Branding effect on smartphones is disperse, as although the majority of respondents evaluated the Smartphone with Ingredient Branding in a more positive way the opposite also happened.

11. Ingredient Branding does not influence Purchase Intention, although it does positively influence Emotional Value and Brand Image, being that those two constructs were previously shown to influence Purchase Intention.

12. Results indicate that consumers are likely willing to pay more for a Phone with a Branded Ingredient (71% are willing to pay more, in line with 47% agreeing they would pay more). Therefore, Ingredient Branding showed to be an efficient strategy.

13. In terms of favorability of operating system, namely Android using Brands vs APPLE there is no significant difference between the two Groups in terms of paying more or not. However, Android users evidence superior willingness to pay in terms of amount (11% would pay 20% or more in Android against 3% in iOS.

14. Considering characteristic preference, Camera was the most popular and valued Ingredient (85% of respondents willing to pay more), followed by the Processor (66%) and lastly the exclusive Design (55%).

15. In terms of percentage and in relative terms, consumers on the first Price Range were the ones willing to pay more for the Branded Ingredient (33% willing to pay 15% or more against 20% and 17% in Price Range 2 and 3, respectively), while the second Price Range was generally the one that evidenced the most respondents willing to pay more for the second version of the smartphone.

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