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Management from the Nova School of Business and Economics.

WHAT INFLUENCES THE ENGAGEMENT ON  
FACEBOOK, INSTAGRAM, AND TIKTOK?

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**Abstract:**

The exponential growth of the entertainment and media industry has revolutionized the social media landscape. Increasingly more people use social media platforms in their daily lives for different reasons. The goal of this research is what influences its engagement, through a closer insight on the reasons why people use social media, perceptual map's associations with two dimensions, and on a conjoint analysis's preferences. Although all three social media platforms do not need to readjust their positioning strategy to occupy a specific position in the market, there is still room for attributes improvement, to engage with potential Portuguese valuable consumers, considering the different needs, preferences, and behaviors. The most important feature and counterpart for the usage of social media is linked with privacy concerns.

**Keywords:** Marketing Research, Conjoint Analysis, Perceptual Map, Social Media Platforms, Brand perceptions, Brand Preferences, Social Media Engagement

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## **Introduction**

The media has been evolving in recent years, as the internet has revolutionized the way people consume and produce entertainment and media. The significance of this industry has been made particularly evident during the pandemic, which led to the consumption of unprecedented levels of media (Jones 2020), with online content, in particular, gaining consumers amongst the younger generations.

Thus, this master thesis will focus on one form of online media: social media.

Social media enjoys a broad appeal throughout the world, as currently there are 4,63 billion social media users globally, more than half of the total world population. That number keeps increasing every year. Most of these people use their social media accounts, either by app or website, every day, making social media a daily part of their lives. While the time spent on social media is increasing, time on traditional media like TV presents a downwards trend (Kemp 2022).

The appeal of social media led to the spawning of various social media platforms, with a select few of them now being some of the biggest companies in the world, such as Meta (Facebook and Instagram's parent company) and Alphabet (Youtube's parent company) are amongst the top 10 most valuable companies by market cap (Johnston 2022). And the leaders of these social media companies, like Mark Zuckerberg (Facebook and Instagram), Evan Spiegel (Snapchat) and Jack Dorsey (Twitter) are present in the Forbes' 2022 billionaires list (Mille 2022).

The exponential growth and the increasing number of social media platforms launched with distinct features are generating different users' perceptions among them. Over and above, these perceptions are also affected by social media usage patterns, consumer gender, and age (Chan-Olmsted, S. M., Cho, M., and Lee, S. 2013).

For these reasons, it is interesting to analyze, in terms of the different associations and attributes, what consumers value and the different motivations that lead them to use different social media platforms. Therefore, the goals of this study are to dive deep into the market and understand how to proportionate a better user experience to have a higher engagement and lower costs.

This Master's thesis will narrow the object of study to the Portuguese market. Portugal is a country with an extremely high number of social media users (Statista, 2021), and continuous growth of usage (Marketest 2021). Previous literature has looked at this topic mostly in the United States of America (Chan-Olmsted et al. 2013; Di Gangi and Wasko. 2016), however, there was no accessible research that incorporated a conjoint analysis method with perceptual maps or a study dedicated only to the Portuguese market. Since Portugal has a much different cultural, socioeconomic, and historical background than the United States of America, it is pertinent to explore how these differences affect consumers' preferences and perceptions on social media. In particular, Portugal is a much more feminine and collectivist society than the USA, meaning that concern for society and care for others are more prevalent (Hofstede Insights 2022). Therefore, this study will add value to the academic literature by examining exclusively the Portuguese market.

To have a better understanding of Portuguese consumers' perceptions and preferences on social media engagement, this study will further focus on three specific social media platforms - Facebook, Instagram and TikTok. Since these three platforms were among the most known and used in Portugal (Marktest 2022), they can offer the possibility of comprehensive insights into the market. Furthermore, so that the analysis would be more robust, it was important to have associated the different users' needs, which are associated with these platforms distinctly. Although WhatsApp and Twitter could have also been considered, as they are on the top use ranking, both platforms have seen their notoriety declining since 2020

(Markettest 2021). Additionally, WhatsApp is more of a social messaging medium, while Twitter works as a micro-blog. YouTube was also not considered since its content is primarily one-directional and its interactivity is low. Moreover, presently, the most valued social media platform, according to GWI's data research, is Instagram which has overtaken Facebook for the second place worldwide, with 14.8% of internet users preferring it, and 14.5% preferring Facebook. In the first place, WhatsApp is seen by 15.7% of working-age internet users as their favorite social media platform, and TikTok by 4,3% of users (Kemp 2022).

As there does not seem to be any indication these analyses have been performed within the social media industry for the Portuguese market, it will offer new insights into what is most valued by consumers and compare perceptions of the 3 main players in the industry. Thus, this study proposes the following research questions: RQ1) What drives Portuguese consumers to use social media? RQ2) How do Portuguese consumers perceive Facebook, Instagram, and TikTok? RQ3) What are the attributes of social media that Portuguese consumers value the most? These questions will add to the academic literature by focusing on the literature review, as well as the execution of a multidimensional perceptual map and a conjoint analysis, allowing us to gather the relevant information to answer these research questions.

The presented master thesis will be designed based on the following structure. Starting with the background which will contain the introduction to the evolution of this market segment which guides to the literature review. After that, the methodology will demonstrate how the analyses were proceeded dawdled by the results of both analyses. Finally, the discussion, recommendations, and implications will be explained in the conclusion section.

## **Literature review**

In the following section, critical literature for the development of this master thesis will be granted. It dawned with the social media literature trailed by the consumer psychology which

is pursued by the reasons for people use social media. After these 3 concepts, diving into the engagement definition is essential to understanding the business perspective. Finally, the chosen platforms are conferred and reports regarding the Portuguese market are given.

### Social Media

There is no universal definition of what social media are, but in general, as mentioned in the SAGE Handbook of social media, “By social media, we mean those digital platforms, services and apps built around the convergence of content sharing, public communication, and interpersonal connections.” (Burgess and Poell 2017) and these are the online resources “that people use to share ‘content’: video, photos, images, text, ideas, insight, humor, opinion, gossip news” (Drury 2008).

The variety of social media platforms that already exist on the market means that different social media platforms are used for different purposes, as they include different core functions and structures (Sylvia M. Chan-Olmsted, Moonhee Cho, Sangwon Lee 2013). According to Dykeman (2008), people use social media for two main reasons “(i) to connect with others; and (ii) to manage the impression they make on others. According to Roy Baumeister, social media platforms have made it easier for people to fulfill the all-important need to belong to a social group, which is as important for human beings as fulfilling our basic biological needs, such as obtaining food. An Empirical Study showed that members of diverse social media platforms are more resilient and healthier mentally and physically when compared to people that do not use social media platforms. It also concluded that patients with larger networks report less pain, regardless of the quality of these connections and that seniors improved cognitive and motor functioning by using social media platforms (Hoffman, D. L., and Novak, T. 2012).

Although social media platforms bring many benefits to society, as was mentioned, it also brings negative aspects. The need for socialization, along with other factors, leads to

internet addiction (Bayraktutan, 2005; Esen, 2007; Grohol, 1999), which influences users' behaviors. This visible behavior-based dependence can lead to "internet addiction disorders, pathological internet use, problematic internet use, cyber addiction, high internet addiction, excessive internet use, virtual addiction" (Özdemir et al. 2014; Kardefelt 2014; Liu et al. 2014). Considering that time can either be the cause or the result of internet addiction as stated by Irwansyah (2005), life quality can deteriorate, or even psychological issues might surge (Young 1996; Doğan et al. 2008; Gökçearslan and Günbatar 2012). One thing is certain, according to the different addiction levels, young consumers will have different preferences and intended usage of social media (Akın 2017).

The fake news exposure is worrying users hence, there is a concern with privacy and safety (Siegler 2010), and negative reactions to self-representation, if perceived as not reliable or authentic (Easton et al. 2018, 5; Jong and Drummond 2016, 7; Palmer 2015, 437; Raggatt et al. 2018, 8), which leads to a constant effort to have positive reactions. Other negative impacts these platforms might bring are associated with mental health issues and psychological distress (Sampasa-Kanyinga and Lewis 2015), caused by comparison among users, filtered version of reality, or excessive use. In exchange, these behaviors are explained by the fear of missing out on status and the addiction caused by the serotonin (Meghan 2016), which is released when getting likes and comments (Muhammad 2018).

As mentioned, social media platforms differ from each other because they have different structures and core functions. However, there are five specific characteristics that, according to Mayfield (2008) underline the operations of all social media: Participation, Openness, Conversation, Community, and Connectedness.

### *Participation*

Participation can be defined as "the extent to which senders and receivers are actively engaged in the interaction as opposed to giving monologues, passively observing, or lurking"

(Burgoon et al. 2000, 36). This participatory nature allows different parties to engage and interact with each other and emphasizes the social element that permits people to share content with different people. (Burgoon, J.K., Bonito, J.A., Bengtsson, B., Ramirez, A., Dunbar, N.E. and Miczo, N. 2000).

### *Openness*

Social media platforms are open to user feedback by having almost no barriers to making comments or accessing information (Mayfield 2008). This happens because most social media networks contain “limited flow barriers, both in applications and technological transferability, so information can easily travel between sources and users and among users” (Meadows-Klue 2007). This characteristic can be illustrated by the people that share a big part of their lives online on platforms like Instagram, showing the availability of easy-to-use mechanisms for creating and sharing content (Burgoon, J.K., Bonito, J.A., Bengtsson, B., Ramirez, A., Dunbar, N.E. and Miczo, N. 2000).

### *Conversationality*

Traditional media channels enable one-directional transmissions of information to an audience compared to social media which allows a two-way conversation (Mayfield 2008). Conversationality became a central topic of social media since Web 2.0 enables the capacity and speed of dialogic loops. The degree of conversationality varies by social media type, for example, Facebook has a higher level of conversationality compared to TikTok which has more limited two-way communication because of the core utilities and structures inherent in this social media platform (Pilch 2009).

### *Connectedness*

Social connectedness can be described as “interpersonal, community, and general social ties” (Teixeira, 1992). Even though physical presence is considered to be a crucial factor in social relationships (Stafford, Kline and Dimmick 1999), it was also proved that interpersonal



ties can be created and maintained via communication technologies (Stafford et al. 1999; Wellman and Gulia 2003). Core functions of social media like providing links to other resources, people, and sites offer connectedness to its users (Mayfield 2008).

### *Community and Commonality*

Social Media offers the possibility for individuals and organizations to create communities and relationships with other people who share some commonality with them (Mayfield 2008). Social media facilitates the process for individuals and organizations to find people with the same interests as them, and by doing this they are building communities centered on a common goal.

Now that the five characteristics that social media platforms have in common have already been mentioned, it is important to talk about what distinguishes them and what makes them have different reasons for use

### Types of social media

“Social media can be divided into six main groups – Social Network Sites (SNSs), Content Communities, Microblogging, Community Blogs, Social News, and Bookmarking Sites.

This report will focus on the first two types of social media platforms – SNSs and Content Communities because as mentioned earlier this study will only analyze three platforms – Facebook, Instagram, and TikTok, that fall into these two groups of platforms. The reasons that make it possible to distinguish one type of social media from another are the following:

Social Network Sites (SNSs) allow individuals to (1) construct a public or private profile, (2) create a list of other users with whom they want to share a connection, and (3) view and change their list of connections and those made by others within the system. What makes this type of social media different is that it enables users to make visible their social networks,

which can result in connections between individuals that would not otherwise be made (Boyd, D. M. and Ellison, N. B. 2007).

Content Communities allow people to share online multimedia content. After opening an account, users can upload their content and make it publicly available. Visitors search the content communities by keyword, subscribe to individual users, and provide feedback on the content (Danah m. Boyd, Nicole B. Ellison 2007). This type of social network differs from SNSs because in content communities the interaction between the different members takes place in a public space within the site, while in the SNS's the conversation takes place in the private space of an individual member "wall" or profile page (Thompson P. 2011).

So, is possible to conclude that SNSs are relationship management based, like Facebook, and Content Communities are entertainment-based, as TikTok. Instagram can be considered both, depending on its usage.

With a focus on social media engagement, the presence of entertainment with a network component has proved to be the most engaging formula so far.

### Consumer Psychology

#### *Stimulus-Organism-Response Theory*

In 1974, Mehrabian and Russell proposed the Stimulus-Organism-Response (SOR) model which suggests that external factors affect and stimulate (S) different behavioral outcomes (R) after the incentive is perceived by the individual (O). This paradigm describes that customers' emotions and conscious and unconscious perceptions highly influence consumers' responses and feelings (Hetharie, Hussein and Puspaningrum 2019). As confirmed in Appendix 1, the SOR framework demonstrates that emotional responses can be clarified by 3 dimensions – Pleasure, Arousal, and Dominance – that influence the final customers' actions.

SOR model was useful for this dissertation due to three reasons. Firstly, this paradigm has been mostly used in previous studies on digital users' behaviors (Grace, Ross, and Shao

2015; Luqman, et. al 2017). Additionally, Koo and Ju (2010) established that digital features influence the consumers' purposes. Lastly, this model has into account the external and internal factors that can impact the customers' preferences and behaviors.

Having into account, this report, this theory aims to understand how the consumers react to a specific stimulus and analyze how the external factors influence the selection of social media platforms. Understanding this paradigm becomes crucial to conclude if there is a specific motivation that guides consumers to use a certain type of social media platform. Being aware of this theory will allow, throughout the third parties interviews, to detect specific external incentives.

Moreover, to better understand how consumers, construct their decisions we decide to research the consumer decision-making process.

#### *Consumer Decision-Making Model*

The first consumer decision model was developed by Howard in 1963 (Du Plessis et al 1991). In 2011, Eisenfuhr defined decision making as a procedure of choosing from several alternatives to accomplish a result. According to Colin Combe (2014), the decision-making paradigm includes distinct decisions making models – the rational model, administrative model, intuitional model, and political model. In addition, this model is considered an analytic cognitive consumer behavior paradigm which is described as “a sophisticated integration of various social, psychological and marketing influences on consumer choice into a coherent sequence of information processing” “(Foxall 1990). However, the Consumer Decision Making Model (CDM) demonstrate one colossal limitation. CDM was developed rooted mainly in the rational model, which considers that people built their decisions based on consciously oriented evidence and operate in an ideal world. Although later theorists perceived those consumers frequently “engaged in non-conscious behavior” during this process. Despite it, CDM nowadays continues to be useful for research and consumer behavior studies due to the fact it

demonstrates the existent relation between concepts and the flow of the happenings (Erasmus, Boshoff and Rousseau 2001).

As perceived in figure 1, the decision-making process has five main stages: problem recognition, search, alternative evaluation, purchase, and outcomes. Also, it evidences that this model is influenced by external and internal factors which are crucial to define the outcomes (Darley et. al. 2010).

Based on this paradigm some studies were developed in the social media environment once social media platforms began to be an external factor that, nowadays is influencing the target decisions (Lee 2013; Voramontri and Klieb 2019; Wang and Yu 2015).

Furthermore, considering the CD it will increase the value of this thesis since studying this process will be fundamental to drain and guide the third parties' interviews that will be accomplished and, also, better analyse the reasons and recognize the problem which leads Portuguese people to use one platform over another. Additionally, to study the human motivations of social media users, UGT become an essential model.

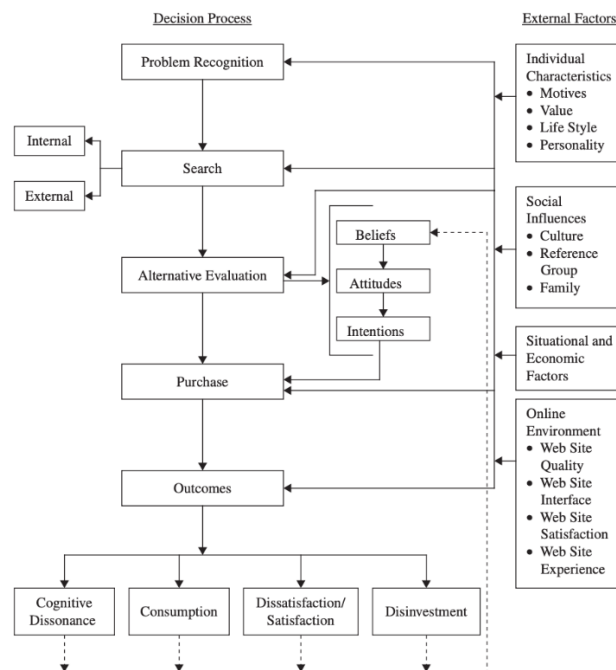


Figure 1 – Adapted Consumer Decision-Making Model Framework (William K. Darley et. al., 2010)

### *Uses and Gratification Theory*

Uses and Gratification Theory (UGT), introduced by Katz and Blumler (1974), provides a further understanding of people's motivations for media access and usage. It was developed to analyze the fulfilled needs and the gratifications that people acquire from diverse forms of media.

UGT assumes that "the individual is active, and goal-directed" (Kaye, Johnson 2004), thus, the being is self-aware of the main reasons for using media and the provided alternatives (McLeod and Becker 1981). Even though when this paradigm was developed, it was directly related to the mass media, Stafford et. al (2004), stated that advertising and marketing researchers, already verified UGT in internet media leading to this conjecture can be applied to the social media platforms and on the internet approaches. Additionally, Katz, Gurevitch and Haas (1973), classified this model into five main needs – Cognitive needs, Affective needs, Personal Integrative needs, Social Integrative needs, and Tension-free needs – which become crucial to comprehending the presented model.

According to Ruggiero (2000), cognitive needs can be described as necessities that are related to the desire to be more informed and knowledgeable (such as curiosity). Affective needs are linked to emotional needs and experiences that provide pleasure. Personal needs are associated with reassurance, self-esteem, integrity and social status, and feeling more connected to the individual itself. Social needs encompass the desire to become part of a community, socialize and build relationships throughout the media. Finally, the tension-free needs embrace the requirement to escape and relieve any emotion of tension or distress (Kasirye 2021). Later, McQuail (1983) discovered four main reasons which motivate people to use media: Entertainment, Integration and Social Interaction, Personal Identity, and Information. In 2011, Mutinga, Moorman and Smit presented two motivations which only applied to social media usage – Remuneration and Empowerment. Finally, in 2018, Muhammad, referred that "social

interaction, information seeking, pass time, entertainment, relaxation, communicatory utility, convenience utility, expression of opinion, information sharing, knowledge about others” are the main accomplishments that people are seeking when using social media. The acceptance of UGT in the context of social media platforms was conducted by Ivan Tanta, Maja Mihovilović and Zrinka Sablić in 2014, where they concluded “The uses and gratification approach proved thereby to be an adequate theoretical background for the research, both for constructing the questionnaire and interpreting the results”.

This theory will be crucial for the selection of associations that will be studied and the Personas creation. Likewise, to explore the associations that Portuguese people might have about the social media platforms, the brand personality construct is an important subject to analyze.

#### *Brand personality construct*

Jennifer L. Aaker (1997) defined brand personality as the array of human characteristics allied to a brand. Moreover, Keller 1993 established that a brand personality manages to have a symbolic or self-expressive purpose. Also, some marketing researchers mentioned that this concept has great importance in the persuasion process and is crucial to distinct from competitors (Sung and Kim 2010). In addition, frequently consumers relate brands with some human traits (Rook 1985; Fournier 1994) which, consequently, will go to influence the consumers’ perceptions and preferences. According to Aaker (1997), this framework was developed to create reliable, valid, and generic dimensions to measure brand personality. As observed in Appendix 2, it includes five diverse dimensions of brand personality: Sincerity, Excitement, Competence, Sophistication and Ruggedness. In 2019, Mutsikiwa and Marre, explored the brand personality dimensions over social media brands by applying the Brand personality construct (BPC) and scale (BPS) in which they conclude that Facebook is highly related to excitement and sincerity. Under Pamuksuz et. al. (2021), “Social media is a natural

platform in which brand personality is discussed—both by consumers and by brands—and therefore a natural arena in which to measure, compare, and track brand perception.”

Along with the development of this report, BPC will be a required paradigm mainly for answering one of the research questions of the dissertation (RQ2), guiding to the conclusions about the three social media platforms' personalities. Nonetheless, becomes essential also to study the profile of the digital consumers and their behaviors and for that, the 4C's is a great theory.

#### *The Digital Consumer's 4 C's*

Online critics, reviews, friends' posts, celebrities' purchases, and much other social media content influence people's purchase behavior. The concept of user-generated content present in today's platforms is an interesting and complex object of study that influences people's consumption (Belk and Llamas 2013).

Therefore, Hoffman and Novak readapted the traditional marketing mix specifically for social media users' goals, creating the 4 C's to understand the “why” behind the usage of social media, and the consequent impacts on consumption behavior (Belk and Llamas 2013). The 4 C's are not opposites or alternatives and often overlap or are dependent to explain the same behaviors.

*Connect:* It is pretty evident that many people use social media for the ability to connect with others, across time and space. Its goals require other people's involvement and interaction, such as socialization and updating status. This connection takes many shapes and is much different from offline communication. From posts to videos to status updates, bios, likes or comments, music sharing etc. it provides a higher range of information, extremely easy to access (Belk and Llamas 2013). Acting as a competitor of offline communication, social media provides first impressions without meeting someone physically, but studies have indicated that

likeability derives from the same aspects in both scenarios: non-verbal expressivity (Weisbuch et al. 2009).

The process of getting information on social media, in what comes to the depth and involvement of it, can impact consumers' impressions generated from it, as research indicated that those who "actively choose which information to use on Facebook to form an impression of another user" do not tend to like such user as much as "those passively given a set amount of information" (Waggoner et al. 2009). Confidence in perceptions also increases with information amount for passive perceivers but not for the active ones (Waggoner et al. 2009). This suggests that using social media with the active purpose of connecting is harder to generate positive perceptions, than when not actively trying to connect, partly due to the "overabundance of info available" (Belk and Llamas 2013).

On what comes to the well-being and socialization, a study conducted on Facebook indicates that while direct communication on a social media platform "increases feelings of bonding and decreases felt loneliness, paradoxically, those who consume the most content feel least bonded and most" lonely (Burke et al. 2010). These connections include, of course, business connections, and social media presence increases the accessibility of brands creating an "online shopping mall" (Stephen and Toubia 2010). Furthermore, studies have indicated that these B2C types of connection have the same trust levels as in the "real world" (Eastwick and Gardner 2008).

*Consume*: social media provides access to instantaneous information of user-generated content, like other people's moods, opinions, photos, etc (Belk and Llamas 2013) and its goals involve a more passive position, by reading, watching, or listening to content. In what comes to behavior effects, there is a lot of information to shape consumption decisions, even when not actively seeking information. Normal social media posts indirectly promote (or demote) certain products, for simply being used (Belk and Llamas 2013). SM's word of mouth effects varies



by product type and by the consumer, but typically, online reviews on unknown products tend to be given more importance (Zhu and Zhang 2010). Plus, “while most word of mouth is positive, negative word of mouth is actually most effective” (Chen et al. 2011). is valued the most when from a “reviewer” with the same likes rather than dislikes (Gershoff et al. 2007).

Goldenberg et al. (2009) define two types of influential people: innovators (embrace new products and trends 1st) and followers (bigger impact on market share) (Belk and Llamas 2013). On influences taken from social media, Watts and Dodds (2007) conclude that a substantial number of easy to influence people is the cause of information spreading rather than a small number of outstanding people spreading information. In what comes to the intentions behind the information-seeking; the breadth is the most valued when trying to decide, while depth is the way to go for people trying to just learn (Weiss et al. 2008).

*Create:* The basis of social media is content creation. The publishing of thoughts, feelings, status, etc (Belk and Llamas 2013). The type of content produced is linked with the personality attributes of the creator (People self-promoting themselves tend to have more narcissistic traits for example (Buffaradi and Campbell 2008) and “those high in need of uniqueness are less likely to generate positive reviews for or recommend, products that signal a lack of” uniqueness (Cheema and Kaikati 2010). Back et al. (2010)’ study on Facebook has concluded that the personality attributes on users’ profiles are quite accurate, reinforcing this idea. However, to understand people’s decisions on what to create, it would be necessary to understand people’s goals and motivations that guide them to do so. Shop, learn, network done by posting, uploading, or blogging, or other of the 4 C’s could be behind this necessity. However, only a study of such goals can generate an understanding of the likeliness of content going viral, and how people consume it.

*Control:* Besides creating content, people decide on whom to share it with and what content to consume. Privacy and usage settings are controlled to change how much of your

presence is private and how much content reaches you. It is a “balance between self-expression and privacy” (Belk and Llamas 2013). The increase of the world’s online presence has constantly challenged people’s control levels. Password memorization, pc-phone connections and other features assess the extent to which people are willing to go on security issues and connect with the real world (Belk and Llamas 2013). More than the practical effects on the platforms, the levels of control of each user signal the way they approach such platforms, and the kind of consumption, connection, and creation they have.

“Consumers will likely exercise weaker control over the content on websites to which they feel a more intimate connection” (Belk and Llamas 2013). At the same time, there are studies indicating a possible paradox on privacy concerns, with people being keener to use personal information on unprofessional dangerous-looking platforms while having low felt security (John et al. 2011). Studies have also indicated that online control has an impact on real-life self-control (Fox and Bailenson 2009) (A phenomenon that can be used to “gain control over themselves or others “by engaging in such “types of online “(Belk and Llamas 2013)).

Besides, this model being a reliable source to clarify the motivations for people to use social media, the reasons for digital consumers use these platforms will be presented in the following.

#### Reasons for People use social media

To better understand how social media are perceived by the Portuguese market, it was important to answer the question “RQ1) What drives Portuguese consumers to use social media?”. Considering the reasoning behind why people use social media would lead to a clearer vision of what could be valued by the users: to reach a more reliable list of features, attributes or even brand associations, we needed to focus on a better insight of what motivates users in the first place.

The distinct levels of engagement according to Thota (2018) are linked to consumer activities and online social media engagement. Different social media goal pursuit is driven by fundamental needs and motivations, and the users' perceptions of well-being will differ considering their distinct primary social media goals (Hoffman and Novak 2012). After analyzing the global market preferences, a closer look at which reasons people use social media that were already identified in previous studies will guide our research and contribute to a better understanding of the customer's needs. There are three main social media goals' antecedents and consequences identified by Hoffman and Novak (2012): the basic need satisfaction, the individual motivational orientation, and the collective self-esteem.

### *1- Basic Need Satisfaction*

The satisfying needs are related to the sense of belonging (Fiske 2004 and Baumeister and Leary 1995) and connection to each other. Make individuals motivated to reach autonomy, the "sense that one's behavior is self-determined", and competence, the "sense of self-efficacy where one has the capabilities to meet the challenges presented by the task" (Deci and Ryan 1985).

According to research (Hsu and Lin 2008), platform usage increases when the user has a critical mass of social acquaintances, which with involvement in social structures results in the obtention of personal meaning.

Motivation comes from a community-building desire composed of like-minded users that share personal information, interests, experiences, thoughts, and needs (Stutzman 2006; Lockyer and Patterson 2008; Grant 2008; Ellison 2007; Govani and Pashley 2006; Ofcom 2008). Customers are used to getting offered advice from each other, building a helping community where relationships, autonomy and competence are maintained. The Online Knowledge Sharing Model (OKSM) (Ma and Yuen 2011) declares that users share their online knowledge due to a desire for relationship maintenance and development. Being present makes

consumers want to participate, and by having an active role, businesses can take advantage and incentive engaged relationships, controlling engagement through word-of-mouth, both autonomy and competence are satisfied, resulting in an instant recognition increase.

In Stollfuß's (2020) study the identified motivation was, among others, maintenance of social connections and the need for affiliation, Akçay (2011) emphasized the social environment improvement.

The time spent in a virtual environment, according to Akin (2017), as well as the number of memberships that continue to increase, indicate that social media is seen as a new and preferred form of communication, interaction, and socialization.

Aligning the key takeaways from the Di Gangi and Wasko (2016) study, social media users are seeking emotional support as well as benefits from their family and friends. Taking a closer look at this social support need, it is worth highlighting that this need relates to mental health for the younger generations, who are constantly experiencing physical, emotional, and social changes, and for the older generations, who desire to overcome loneliness and adapt to the environment (Pinkerton and Dolan 2007).

## *2- Individual Motivational Orientation*

Individual behaviors are controlled by motivational orientations according to the self-determination theory (Deci and Ryan 2000), with the expectation to manifest enjoyment, satisfaction, and well-being (appendix 3). Overall, positive subjective experiences depend on the degree of competence and autonomy that each behavior satisfies.

The ability to reach an achievement (Kuznetsov 2006), the search and share of information (Weiss, Lurie, and Macinnis 2008), and the opportunity for a positive experience (Hoffman and Novak 2009), were all recognized by Hoffman and Novak (2012) as reasons for social media use. Hence, a community proved to be correlated with entertainment-related aspects such as enjoyment, relatedness, motivation, inspiration, and support (Stollfuß's, 2020).

To stay informed in an environment that has online news about brands and products would be one of the main motivations (Thota 2018), which includes purposes such as following the agenda (Eren 2014) and performing academic or research studies (Armağan 2013).

Other additional purposes such as playing games, shopping, to learn about popular events, listening to music, and downloading videos (Hoffman and Novak 2012) which showed to have significant importance and influence on enjoyment, were also considered.

According to the Social Capital Theory, is by reading and following the interactions between other users and businesses' customer service that online consumers engage in social listening (Lee 2009), which according to Clark et al. (2009) is learning more about the brands and listening more about the products. Generally, social media is also used for comparing and seeking online deals effectively, less time consuming than offline, and making better decisions (Silverman 2001).

Social care is the conflict resolution that responds to the customer's needs, and this online customer service is quick and efficient, besides facilitating the interaction, it increases satisfaction and personalization (Canhoto and Clark's 2013).

### *3- Collective Self-Esteem*

Collective self-esteem is a measure of how an individual's relational value (Leary, 2007), as the evaluation of the self-esteem in the context of their social identity. So, an individual is motivated to pursue a positive online social identity (Luhtanen and Crocker 1992).

Private collective self-esteem is an individual's judgement of their value in the social groups. The identity self-esteem is the importance given to these social groups to their self-concept.

The desire to appear individualistic by creating, posting, and controlling personal content (Krämer and Winter 2008; Reich and Vorderer 2013) and the level of active control and self-disclosure affects the entertainment experience (Trepte and Reinecke 2010, 223; Utz

2012, 149) since controllability, editability, time and attention management (Walther 2007, 2541) are connected to pleasure-seeking (Utz 2012, 150).

The self-understanding perspective (Zhao, Grasmuck and Martin 2008), aside from the need of sharing personal and confidential information, comes from the fact that it is required to participate and achieve gratification (Stollfuß 2020). This gratification can derive from direct ways (Utz, 2012, p. 149), with selective self-representation and others' feedback as likes or comments, since individuals benefit from each other through interactions, empathy, and social support (Trepte and Scharkow 2017, 304). There are also indirect ways (Utz 2012, 148) to achieve gratification, with others' self-representation and self-disclosure, by keeping informed and motivated with other's practices. Ambient awareness (Kaplan 2012, 132), which is the "awareness created through regular and constant reception, and/or exchange of information fragments through social media", and, consequently, the self-representation and self-disclosure, are directly correlated with entertainment gratification on social media (Utz 2012, 149).

Social media is seen as a social environment that contributes to self-esteem (Ellison, Steinfield and Lampe 2007), where users can truly express themselves (Bargh, McKenna and Fitzsimons 2002) by having the right opportunities for self-expression and control their online experiences.

By continuing to engage in brand conversations, social media involvement is augmented, which generates a positive identity and self-esteem (Thota 2018). This consumer brand involvement transmits self-expression when identifying with an identity (Cătălin and Andreea 2014), driving Consumer Brand Engagement (CBE) (Hollebeek et al. 2014). "Self-brand connection" and "brand usage intent" are consumer brand engagement consequences. Thus, the product photography is used to generate and share information about the newest products, updating the social status (Dubois and Duquesne 1993).

## Engagement

Engagement is “a holistic psychological state in which one is cognitively and emotionally energized to socially behave in ways that exemplify the positive ways in which group members prefer to think of themselves” (Ray and colleagues 2014), leading an individual to act. In this study, engagement is not seen as a state of mind, but as a state of involvement to obtain personal meaning. Thus, it has two components, Individual involvement, which is the intensity perceived on how a user’s role is important to meet the needs that increase with arousal, interest, and motivation to participate (Barki and Hartwick 1994; Zaichkowsky 1985), and Personal meaning, which is the degree of the perceived fulfilment of the satisfied interests and needs (Battista and Almond 1973; Debats 1998).

According to Di Gangi and Wasko (2016), the usage behavior is influenced by the user engagement, which is higher when the user experience is greater. The social media Engagement Theory (SME) describes user experience as the combination of social online interactions with the platform’s technical features.

The social interactions, which can either between the user and the organization or interactions among users, provide meaning and guide the user in evaluating how intensely involved they pretend to be. Social actual interactions contribute to user experience by encouraging personalized relationships, serving as communication, and by defining how to engage in social media (Jensen and Aanestad 2007; Kettinger and Lee 1994; Prahalad and Ramaswamy 2004; Wixom and Todd 2005).

Social interactions are characterized by the following factors: personalization, social accessibility, risk, and transparency (Di Gangi and Wasko 2016). Table 1 presents definitions of these factors.

Personalization	Transmits the perceived individualized attention by users, focusing on topics of interest and conversely filter, perceiving their role as more relevant
Social accessibility	Social resources: the ease to access to information and expertise in a social media
	Access to a critical mass of social acquaintances: the perception that important people to the user are participating and remain involved on the same social media platform
Risks	Potential risks as privacy, organizational opportunistic behavior, online identity threats, might make the user more cautious
Transparency	Degree of information symmetry among users and if users are taking advantage of them, reduces concerns of opportunistic behavior and creates perception of participation in a trusted community

*Table 1 - Social Interactions Factors*

On the other hand, technical features serve as a tool to these interactions (Brown and Magill, 1998; Simon, 1991), including information obtention, features flexibility, evolvability to meet user's needs, and content integration. The technical features bring new and innovative forms of connection. Table 2 defines said factors.

Completeness	Easily access comprehensive information that meets personal needs
Flexibility	Degree to which users experience existing functionalities in new ways, that is related with how each function is utilized to meet needs
Evolvability	Degree to which a social media platform evolves to meet a user's current needs, keeps in mind needs change as time passes by, and new functionalities are essential to keep involved and correspond to expectations



Integration	Degree to which content is intermixed from various sources, by altering and integrating different content in an environment that changes rapidly
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*Table 2 - Technical Features Factors*

Nevertheless, in Di Gangi and Wasko's (2016) research, only critical mass of social acquaintances, completeness, and evolvability demonstrated to be influenced by both personal meaning and individual involvement, while risk was only by personal meaning.

### Business Perspective

While the traditional business model focused on a product or service protection from its competitors, now it is on the user experience (Pine and Gilmore 1999). There was a shift, as Lessig (2008) defines it, on how to communicate with users, where it is possible to "modify, share, reuse content, regardless of the creators' original meaning or purpose" and provide unique perspectives is the proof that the value proposition is adapting.

Due to a changing and uncertain organizational economic environment, with a strengthened competition and a participative growing user base (Li and Bernoff 2008), social media platforms have gained importance, enabling businesses to "record the social interactions" and "identify their social structures" (Di Gangi and Wasko 2016).

It is indisputable that social media platforms increase exposure, consequent traffic (Henschen 2014), and considerable word-of-mouth effects (Divol et al. 2012). The number of platforms has been growing, as well as the brands and online products' discussions. Nevertheless, it is impossible to control or predict which products will become viral, neither to have a unique way to assess financial benefits of social media engagement. It is because businesses can only have a mediate role in a brand conversation that success in long-term relies on social online interactions to create loyal customers that are honest about the products and services (Thota 2018).

User-Generated Content communication is a marketing strategy for the companies. It was expressed as mass auto communication (Castells 2009) described as being auto directed to a global public with an autogenerated and auto selected message content. This content generation recalls on creation with low skills requisition, it is possible to create outside the professional environment (Shao 2009, 8).

User engagement is sustained by keeping the influential users involved, and simultaneously remaining involved with users. Therefore, a business future is dependent on the user generated content, as users are now seen as a key success component. The aim to create value captivated with advertising and business intelligence, where users can benefit from social interactions and businesses can benefit from the audience maintenance, is necessary to gain competitive advantage. This competitive advantage will exist while there is co-creation between the users and the organization that is superior to its competitors (Di Gangi and Wasko 2016).

Influencers that have huge online exposure and high visibility (Marwick 2013, 114), have an intermediate role due to their opinion leadership (Enke and Borchers 2018, 6). A new attention around unique influential customers, according to Wasserman and Faust (1994), allows to understand how to increase companies' potential, through social network analysis, and, according to this study, critical mass of social acquaintances contributed significantly to engage and social media use (Boyd 2007; Dickinger, Arami and Meyer 2008; Hsu and Lin 2008).

Since social media platforms run on advertisements, rather than a subscription fee, privacy is perceived as a price indicator to businesses. The way customers pay for these types of services is through data, which is then used by the platforms to attract advertisers. According to Thota (2018), if ads are customized to needs and tastes, consumers will pay more attention or even post them. All these creates brand visibility and a personal relationship with the

customer, that drives to popularity and success of the brand. So, by having more personal information, apps can "tailor" the adds more correctly with a more personalized content, increasing their efficiency, engagement, and, consequently, their revenues. Thus, there is also an engagement with Social Ads, paying attention to what is shared in their own social networks. This consume through social ads interactivity is welcomed when customized and personalized, with unique connections (MacKenzie and Lutz 1989). Businesses can then benefit with visibility and further success (De-Vries et al. 2012).

A learning relationship is a relation where both sides benefit from each other. In this social media environment customers learn about their preferences and entities learn about their strengths and weaknesses, when understanding how they are capable to treat each different customer differently according of their preferences. The higher the interaction and tailoring, the closer to a one-to-one relationship it gets, making the customer wanting to stay loyal with a specific brand (Peppers et al. 2016).

The evolution of technology enabled to collect huge amounts of data online. On social media this is contributed by the flow of information, its quick dissemination, and trust association. Data on social media can be used to increase online buzz, increasing sales across channels, improve search results from conversations and therefore, web traffic, obtain influence from recommendations in social networks and communities, and support customers online, decreasing costs (Peppers et al. 2016). Hence, data through social media may result in useful insights about customers' preferences, needs and behaviors.

Although privacy concerns about data security, data exposure, and/or being bothered in unwanted occasions are a constant issue these days, there is no personalization without customers' information being attached. In one hand, customers recognize that personalization is connected with an ease of use, on the other hand they still want to assure privacy. This balance needs to be earned with trust. To fight these concerns, enterprises should try to get data from

the customers that are comfortable with that, communicating its protection. Good privacy practices are not only respectable to their customers, but also lead to costs and risks reductions, when eliminating management of unnecessary and inaccurate data. Presently, there is the GDPR, General Data Protection Regulation, to regulate the use of personal data, and there is, for example, the consent of cookies' usage, that demonstrate the intention of data collection. All these improves the customers and employees' trust, along with the confidentially assurance (Peppers et al. 2016).

The customers' interaction desire makes unquestionably the businesses environment change, where social media serves as an advertising tool that connects consumers with marketers (Paine 2009). Now, businesses are just joining the most popular social media platforms to advertise themselves and interact (Stelzner 2009). The question that remains is that if there are other potential functions that companies could take advantage of (Chan-Olmsted, Cho and Lee 2013).

To sum up, SME theory (Di Gangi and Wasko 2016) states that the more organizations build an experience that responds to user' needs, the higher the user engagement. The higher the usage is, which represents the frequency of the user's contribution, the more valuable the social media is to the organization and its users, which results in co-creation value (Kankanhalli, Tan and Wei 2005; Li and Bernoff 2008). Although usages vary with different platforms, there is also a higher engagement with the intention of contribution since social media usage is driven by the critical mass of social acquaintances. It is up to organizations to anticipate and keep up with changes and new features (Di Gangi and Wasko 2016).

## **Methodology**

To study the Portuguese market preferences regarding social media networks and consider the previous literature review, it was used for this report both quantitative and qualitative research methods. These two approaches complement each other and were used to

answer the three research questions mentioned at the beginning of this dissertation. The first research question will be answered by the qualitative approach through several preliminary interviews with different professionals and third parties that are aligned with the personas' profiles that were considered to be extremely important for this study. The quantitative method will be used to answer research questions number two and three through two surveys that aim to obtain data on the perceptions and attributes that Portuguese consumers consider in social media platforms (Facebook, Instagram and TikTok) and which will be the basis for the construction of a perceptual map and conjoint analysis.

### Personas

For the definition of the market's customer personas, consumer behavior was our basis. Consumer behavior is about what affects consumption decisions. Given that social media has consumers with all sorts of demographics rather than a very specific target, it is a possible way to segment by focusing on the different reasons behind social media use. We analyzed different theories and frameworks and decided to base them on the User and gratification theory as a starting point. From Katz, Gurevitch and Haas's (1973) model, which characterizes the main needs behind the usage of social media platforms, and impacts consequently their consumer behavior, we developed 5 different personas. Those needs are Cognitive needs, Affective needs, Personal Integrative needs, Social Integrative needs, and Tension free needs. These necessities were the segments for this construction, as they describe what is behind individual motivations in this market.

Based on other studies' personas and articles on relevant aspects, we decided to categorize the personas using the following characteristics: Name, age, gender, social media channels, location, occupation, lifestyle, interests, and influences (brands and influencers). To gather this information, some literature research was done, where through averages in Portugal, we were able to understand the typical age and gender for each necessity. Grabbing on other

studies we could also associate other factors, and based on them, we conducted five interviews to fitting people. With those responses, in order to create an individual identity for each persona to guide us more precisely, they were constructed.

From these five personas generated by the five mentioned needs, we reduced them to three personas. Since we found several similarities and common points among the affective, social-integrative and tension needs personas' characteristics we decided to bundle them into one to simplify. Our three final personas (Appendix 4) are therefore the "Cognitive", the "personal-integrative" and the "Affective/ personal-integrative", which we named, respectively, "Tiago", "António" and "Ana" (Table 3).

Needs	Personas	Description
Cognitive	Tiago	Uses social media with the central purpose of getting information and knowledge out of it, as well as satisfying his curiosity on subjects, such as people's social environments and overall exploration of new topics. Seeks particularly for facts. Facebook tends to be the preferred social media platform.
Personal-Integrative	António	Uses social media to connect with others and learn. Accesses social media for social support and to share life events, in order to get a sense of community. Instagram tends to be the preferred social media platform.
Affective and Personal-Integrative	Ana	Uses social media mainly because of emotional necessities. They are either pleasure and satisfaction, or to get positive engagement to increase self-esteem. Accesses social media somewhat compulsively, many times even unconsciously for tension-releasing from stressing issues.

		Instagram and TikTok tend to be the favorite social media platforms.
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*Table 3 - Summary of Consumer Personas*

Later, these three personas' segments will be compared with our results, to understand if and how they vary in preferences and perceptions on social media.

### Preliminary Interviews

For the development of this study, fourteen preliminary interviews were conducted based on two types of questionnaires. The two scripts were composed differently once the intended objectives of these conferences were distinct – one for professionals (Appendix 5) and other for customers (Appendix 6). This process sets in with four professionals' interviews, where the experts were selected having in count the work area and its connection with social media networks. Meanwhile, three personas' profiles were elaborated based on these interviews and the literature review. In this regard, ten consumers were interviewed. These preliminary conferences were managed by Zoom Meetings and face to face interviews.

The expert interviews' script was divided in 4 categories: Market (to better understand the dynamics of the market, future forecasting, and the advantages of this study to the market), Preferences (recognizes what consumers value more based on the experts' perspective), Attributes (to understand the perceptions that experts have about the market) and Recommendations (to recognize which type of research content managers demand for, and which substance would be interesting to study in order to fulfill its needs). Although, the consumer script followed a different design.

The consumer script was categorized in 5 sections: demographic data (age, gender, professional situation, location, and marital status), interests (hobbies, preferred brands), persona segment (to validate the persona segment and perceived the need that the interviewee

could fill in), perceptions (to perceive the associations that costumers have about social media networks) and preferences (analyze the consumers' preferences).

### Professionals Insights

In order to enrich the content of this dissertation, four exploratory interviews with specialists were conducted. The purpose was to understand how our study can be useful for the interviewee's position and career and, also, to gather important insights that add value to the report, given that these people have in-depth knowledge in the social media area.

The **first interviewee** was a Brand Manager of an FMCG company that uses the three platforms that this study addresses to promote different types of products, events and to ensure that the brand she works for is always present in the consumers' minds. As mentioned in the interview "knowing the preferences and motives of my brand's consumers to use social media would be of enormous benefit to my work and industry as the results of your research will certainly provide me with key insights to improve the posts I make and the way I engage with consumers." The interviewee gave as an example that if the report concludes that Portuguese consumers highly valued the information in a post, then it would be a good insight for her to start doing more informative captions instead of interactive posts.

The **second interview** was accomplished with a Fashion and Lifestyle Influencer, who is growing mainly on Instagram, although produces some content for TikTok. The interviewee refers that this study will have crucial impact for understanding which type of content should be uploaded in the different platforms. Furthermore, it was mentioned that companies will have the possibility to reduce costs once, based on the study, it is easier to perceive and better suit the type of content that should be divulge through social media influencers in accordance with Portuguese's preferences. This cost reduction will be sustained by the fact that the managers will spend less in influencers services that do not reach their target consumers and will focus on a specific platform that is more aligned with their purpose and its



objectives. In addition, “it will be also an advantage for content creators since it will allow them to understand better its audience”. Regarding futures predictions, she mentioned that posts on Instagram have the tendency to disappear and the algorithm will go to benefit the interpersonal, interactive, and real-time experiences (Lives, Stories, Videos – Reels, IGTV). She perceived that nowadays people demand for instantaneous content - “people want to live with me”. Also, TikTok will allow long-time videos which will position it as a YouTube competitor.

According to the **third interviewee**, a Client Solutions Manager at TikTok Portugal, this study will be useful to understand exactly what makes a person want to use TikTok and stay. When discussing about brands’ interactions, an interesting perspective was brought up. Brands are realizing that if they want to be on TikTok they cannot just take their square TV ad and put it on TikTok in vertical screen, that does not work. Brands need to adapt and make tailor-made and native content, which is born on TikTok, that may not seem like advertising. While on YouTube a user is forced to see advertising, on TikTok if you do not like it, you can skip it, so an ad on TikTok must be of good quality and fit with the ecosystem. The relationship with brands has to be one of education, explaining to them that brands can relearn how to communicate in a way that is closer to people and more personal. Brands have the opportunity on TikTok to take risks, communicating in a way that had never been done before, and to represent itself to a new audience. According to the interviewee, Portugal is a slow country, in which brands probably do what others have been doing in the last 10-15 years, which is investing on Google, Facebook, ads words, and it has great results. Nevertheless, there are “brands that are already waking up, some sooner than others, and realizing that there is a new player, with a new audience, with a different way of communication. The brands that do not adapt will be overtaken, if not by Portuguese brands, will be by the foreign ones, which are two steps ahead.” This study will contribute for these brands to understand how to better engage with consumers through TikTok.

The **fourth interviewee** was a nano-influencer (content creators that have between 1000 and 10 000 followers) that uses Instagram almost exclusively. She shares health, fitness, and diet related tips, and is the owner of an online platform for fitness instructions. She believes this study could be relevant to her as an opportunity to understand better what and how to post, and even consider other apps, in order to increase her engagement and subscribers of the app. Being that her target are females, she would also like to understand how differently man and woman's preferences and perceptions are when consuming on social media, in order to create more specifically to her goals.

### Consumers Insights

Based on the created personas, ten consumers' interviews were conducted with the purpose to determine and confirm the characteristics of the developed personas. The interviews followed the structure described in the Appendix 6.

These interviews provided the evidence to conclude that the generated personas were aligned with the target and that the different profiles were aggregable with the reality. Mainly, that younger consumers have a higher tendency to be on Instagram, however they slightly prefer TikTok and, the older generations prefer Facebook, as perceived in appendix 4 with "Ana" and "Tiago", respectively.

One of the youngest interviewees (15 years old) mentioned that she preferred to use TikTok due to how she easily can express and be herself on this platform. Also, mentioned that her preference regarding the platforms for entertainment is TikTok, although Instagram is a great platform to be aware about different and recent events. Other consumers with 17 years old and 21 years affirms that they do not have Facebook and it is a platform that does not arouse interest to create an account ("Facebook had it glory times, however I never had an account there. Instagram is more useful and already satisfy my needs that Facebook could satisfy. Nowadays, is a social media more attached to older generations").

In contrast, another consumer interviewed with 28 years old referred that he only has Facebook to be aware about the news and sometimes to chat with his friends. Moreover, others interviewee located in the range of 28-35 years old confirmed that the only social media platform they have is Facebook because they do not have interest in other people life (Instagram) and do not identify with the content shared on TikTok.

In addition, based on these interviews, it was perceived that female consumers have a higher tendency to be customers of social media platforms than male gender. Also, is statable that their percentage of usage is higher than males.

Nonetheless, these performed questionings added value to this report once it provided the possibility to complement the personas' information mainly regard the hobbies, preferred brands, and their preferences.

### Conjoint analysis

A “Conjoint analysis is utilized to categorize the consumers’ preferences and desire to pay for various product contributions” (Green et al. 2001). According to Kotler (2000), it is a method to calculate the “utility values that customers give to varying levels of a product’s attributes” (King et al. 2019).

Mathematicians Duncan Luce and John Tukey are the first brains behind this method. They published an article called “Simultaneous conjoint measurement: A new type of fundamental measurement” in the year of 1964, with their idea of “measuring the intrinsic goodness of certain characteristics of objects by measuring the goodness of an object as a whole” (Luce et al. 1964). This is where it all started, still very basic and missing central concepts like products, features, prices or even data collection. However, the concept was built upon and became renowned in the 1970’s with further studies: “Conjoint Measurement for Quantifying Judgmental Data” in 1971 by Green and Rao, “the first detailed consumer-oriented” on the subject (Green et al. 1978), and “On the design of choice experiments involving

multifactor alternatives” by Paul E. Green in 1974. At the level it has today, it is a more complex method, used professionally by Marketing managers and researchers in order to study consumer trade-offs.

The way that this method is conducted is a choice-based study on product’s (and pricing) characteristics to understand people’s preferences among a set of different features. The experimental design consists of breaking down products into a set of components, that are then bundled differently creating fictional, mixed, products with characteristics from different ones (levels), where the respondents will choose from different combinations. Meaning, the analysis centers on the comparison of product’s attributes rather than the products themselves (Kucukusta and Guillet 2014).

With the results of the conjoint analysis, it is possible to calculate the Partworth utility (or preference score or utility score). This is a mathematical measurement of the degree to which every attribute and every level impacts the respondent’s decision of a purchase. So, with the weighting of distinct factors that constitute the marketing mix, this questionnaire will, at the end, not only provide information on what levels are more valuable, but also, what attributes weight more when making the decision of what product to choose. This studies often uncover unconscious purchase drivers that are not even apparent for the customers themselves (King et al. 2019).

On what comes to marketing practical relevance of this studies, this tool acts as a predictor of factor’s different importance and preferences for the target consumers, or even segments of consumers, and provides consequent understanding of consumer behavior. It allows for the evaluating of business possibilities (namely line depth or breadth), testing new features or validating old ones (as the basis for a benefic and valuable, at the consumers eyes, feature selection for the product), defining the marketing mix and even outlining customers. It

can even be used for market share forecasting and demand projections (Wittink and Bergestuen 2001).

Now that the definition of conjoint analysis has been presented, the different attributes and levels chosen to analyze in this study will be presented.

### Conjoint Analysis Attributes and Levels

#### *Content Media*

Content Media refers to the form type of content shared and presented. It comprises three possible levels: Images, Videos, or Text. Facebook possesses all three options, Instagram two of them (Images and Videos), and TikTok only has video content. This attribute is in a way connected with Completeness, that will lead us to understand how accessible, important, and comprehensive format is, and which are the preferred ones that meet their needs.

#### *Content Displayed Based On*

Social media, in particular our studied brands, has three main ways of presenting its content to people: Following, Recommendations and Search and Explore. The first occurs when the content that the platform presents you is based on people you follow or is your friend. The second, when the content seen is based on suggestions by the app based on the user's preferences in material, which is calculated by an algorithm. The third one is when the users search directly for what they want to see. The three studied platforms possess the three mechanisms. However, Instagram and Facebook's feed is more focused on the Following, whether TikTok's is on Recommendations. This attribute connects with Flexibility, where content is presented through different ways that respond to different needs.

#### *Visual Content Available Time (stories)*

This time-focused attribute looks specifically into the Stories feature. This consists of content that is only available for a 24-hour period and then is automatically deleted, that is why it is related with Evolvability, responding to the recent constant status update need. Both

Facebook and Instagram have it and is here studied to understand how the time-limit concept is important for the platforms' users.

#### *Send Content*

In these platforms people can send content to other users, corresponding to the Integration technical feature, by understanding the preferences on different combinations of environments and sources. This attribute studies the possible ways to do that. Direct Messages is one of the mechanisms that all three apps have. There is also Tagging, that consists of putting the receiver's Tag-name in the content to share for them to be notified directly and Sharing in Groups of people.

#### *Amount of Exposed Personal Information*

Finally, the Amount of Exposed Personal Information is an attribute that will, as already mentioned, serve as an indicator of the price-to-pay for the consumption of social media. Divided in less possible, intermedium and All, with no restrictions, it intends to understand how much people are willing to give up in privacy as a trade for the apps' usage.

#### 1st Survey - Multidimensional Perceptual Map

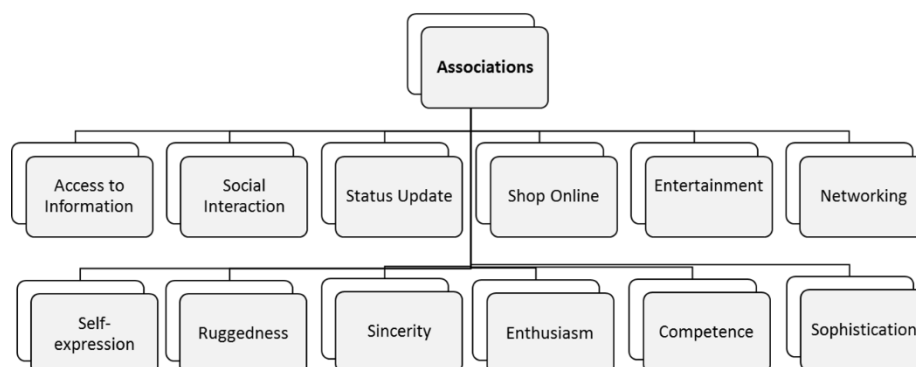
To be able to answer RQ2, that is, how Portuguese consumers perceived Facebook, Instagram and TikTok, a perceptual map was conducted. For the creation of the perceptual map, the first step was conducted a survey to analyze the perceptions of the Portuguese about three social media platforms in relation to the twelve chosen attributes.

#### *Attributes*

Presented in Figure 2 is the list of associations chosen for the survey. Throughout the survey' development, some modifications and improvements were made. The first improvement was related the initial choice of associations, as "Peer Pressure" was considered as a factor that leads consumers to use social media. However, when creating the survey, it was concluded that this factor should not be considered a determinant since it is a precedent to the

use of social media and not a factor that Portuguese consumers relate with it. Having said that, it was removed from the primary list and did not proceed to the final survey . In addition, some of the selected names for the associations were changed during the analysis of the results: Online shopping and Update Status were changed for Shop Online and Status Update, respectively. Thus, Robustness was changed for Ruggedness, as the model indicates. These modifications did not have greater impact on the analysis because the definitions were still the same, although the association names were modified.

Furthermore, during the survey formalization, the brand personality construct was added to literature review once it was perceived that it would be a great complement and it would highly increase the insights for the conclusions of the study. To gather this information, was decided to inquire about how the Portuguese associate each social network with the different five dimensions of brand personalities.



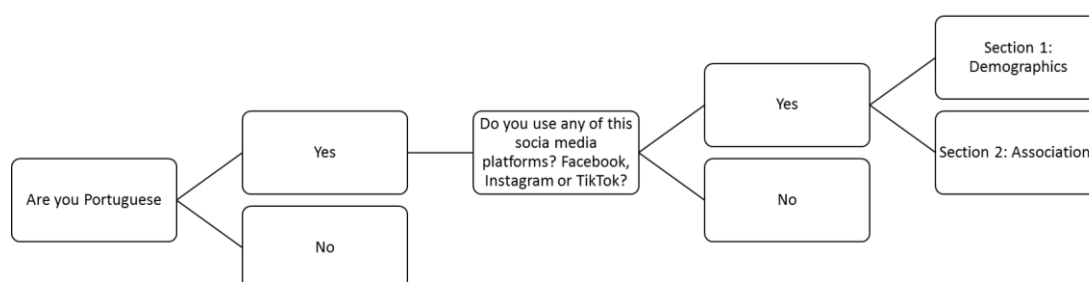
*Figure 2 - List of Associations for the 1<sup>st</sup> survey*

### *Survey settings*

The survey was created in Microsoft Forms and the developed questions were designed mainly based on the Likert-type scale. Furthermore, it was constructed with the possibility to participants pursue different pathways based on their responses. The main objective was to present all the chosen associations to consumers and invite them to rate each social media regarding these associations.

The first section aims to obtain demographic information from consumers. As it is shown in Figure 3, the first question requests the participant nationality (“Are you Portuguese?”) and if the answer given is “No”, the participant would not advance further into the survey, as this report only focus on the Portuguese market. The second question asked if participants used any of the aforementioned platforms: Facebook, Instagram or TikTok, and, similarly to the first question, if the answer given is “No”, the participant would not advance further into the survey.

Further questions were about the frequency of usage of the platforms, age, gender, marital status, and education level to reach a more complete analysis of the consumer.



*Figure 3 - 1st Survey's Diagram*

The second section is more oriented for collecting data about the Portuguese consumers' associations. In this section, the explained associations on LR and the five dimensions of BPC were presented and followed by brief explanations, as can be seen in Appendix 7. As mentioned, previously, these questionnaire (section 2) follows a Likert-type scale so that consumers can rate the three social media on five-point scale, where 1 is totally disagree, 3 is neutral and 5 is totally agree. As reported by Mutsikiwa and Maree (2019) “The scale reported high reliability across all five dimensions” and Croasmun and Ostrom (2011) “Likert scales are useful in social science and attitude research projects”.

### *Revision, Selected channels, and Data processing*

Before the survey being published was revised by the professor and by three people to investigate the clarity and reliability of the survey. It was available online for 3 days and was



spread by the researchers throughout social media channels as WhatsApp (groups and individual messages), Instagram, Facebook, and LinkedIn.

After closing the survey, the data was exported into an Excel sheet and then processed. All the columns relative to data from feedback to the survey and points that could be given to each question, which are specific to Forms, were removed as they had not data. Then, the entries in which respondents answered no to the question “Are you Portuguese” and to the question “Do you use any of these platforms? Facebook, Instagram or TikTok?”, were deleted, as there presented insufficient data to analyze. Later, all the data relative to the associations were converted from text to numbers. Finally, an average for each association per brand was computed.

These averages were exported to SPSS. On SPSS, the data was analyzed for dimension reduction of the associations using the principal components analysis as the extraction method. Initially, the perceptual map was constructed without any rotation. However, that implies that all perceptions, when integrated into 2 main associations, are independent from each other, which would lead to unconvincing results. Therefore, the Direct Oblimin rotation method, with delta as zero, was chosen to construct a final map, to ensure that some dependence between the components was allowed (Jennrich 1979).

Finally, in order to measure the influence that the demographics of the sample had on the final results, particularly the averages for each association, a series of ANOVAs were run using the statistical analysis software Jamovi to determine whether it was possible to conclude that the average of each association for each group within each demographic trait were not equal. Then, once more employing Jamovi, the averages for each group were computed.

### 2nd Survey – Conjoint Analysis

According to Rao and Pilli (2014), there are four main steps for the development of a conjoint analysis: “1) development of stimuli based on a number of salient attributes

(hypothetical profiles or choice sets); 2) presentation of stimuli to an appropriate sample of respondents, 3) estimation of partworth functions for the attributes as well as any heterogeneity among the respondents; and 4) use of the estimates in tackling any managerial problems (e.g., forecasting, pricing, or product design).” The first two steps correspond to the development of our survey and will be described in this methodology. The last two will correspond to the posterior analysis.

### *Attributes and levels*

Based on the official platforms' websites, in addition to the group's personal experience, attributes were discussed. From an initial set of 14 attributes and 43 levels identified, through a careful and discussed selection, 5 solid attributes with 14 levels remained. Even though all the initial attributes were interesting and relevant to a better comprehension of the engagement, they had to be reduced, otherwise the number of combinations would be too many. With that being said, the selection was made based on the ones considered to have the least relevance, and not because they were considered not to be relevant.

The first step was deleting four Yes or No questions, that did not seem to enrich the study substantially. The Preferred Device attribute (pc, tablet, phone) was not included, considering it is possible to access to all of them in all these devices, besides the fact that it was not focused on the brands features. Then, the Text Quantity was cut, since its levels (none, few, or a lot) were not very quantifiable as people could have different interpretations of it, and it would depend on the type of media content. Two options were discussed after that, either integrating Content Displayed Based On with Research Content or Visual Content Available Time with Visual Content Source. The first one was chosen, due to the higher similarity among them: the levels from Research Content were erased, except the Follows level, that was integrated in the new generated Content Displayed Based On attribute. The Hashtag level from the Get Content Displayed Based On attribute was deleted, when agreed that it was possible to

be included in the Search and Explore level option. Since the editing feature would need to have a different and more thorough analysis, rather than just a yes or no question, the Visual Content Source attribute was also removed. Lastly, the Videos was not included in the final attributes, mainly because there was still a need to decrease the remaining number of levels, and from the remaining options appeared to be the one with less takeaways. In addition, we had already removed the attributes specific to the other types of Content Media, Text, and Images, so it seemed reasonable to remove the attribute specific to video.

Overall, the attributes present in Table 4 were the ones studied in the survey.

Attributes	Levels
Content Media	Images
	Video
	Text
Get Content Displayed Based On	Search and Explore
	Following
	Recommendations
Visual Content Available Time: Stories	With time limited content
	Without time limited content
Send Content	Tagging other users
	Sharing on Groups
	Send Direct Message
Amount of Exposed Personal Information	Less possible
	Intermedium
	All, with no restrictions

*Table 4 - Attributes and Levels*

After developing and selecting the attributes so as their corresponded levels, a point was reached where we needed to decide whether to include the brands as an attribute or not. There were benefits for both sides, so the main objective was reviewed. Increasing the social media engagement was identified as the principal one, rather than how to specifically improve Facebook, Instagram or TikTok. These are three platforms chosen to guide us and to serve as a starting point; thus, they are different and respond to diverse needs. Since these brands provide somewhat of a specific product, unlike other brands where it is often possible to choose from various products, these social media platforms are the products themselves. So, by using them

in the survey, users could respond based on the whole concept of the brand, rather than the specific attributes defined in the questions.

The brands did not seem necessary, since in the introduction the three social media platforms were referred. Considering these platforms are constantly adapting and adding new features, the point was not to associate a specific feature to a brand, but to understand the association and preference for a specific feature. However, the frequency of each platform's usage was asked, so that it is possible to make some analysis and have conclusions about preferences for people with different preferred platforms. Having the brands included would also make the survey more extensive.

#### *Survey settings*

The chosen tool for the development of the survey was *conjoint.ly* for a choice-based, brand-specific questionnaire, where the final attributes and levels were uploaded, together with icons to improve the understanding and lightness of the answering process. (Appendix 9) After that, and before running the survey, the “applicability of levels across brands” table was filled, regarding the connection between each level and each brand. The selection was based on the features each brand actually possesses, at the time of the survey development. Some attributes have all levels featured in all apps (case of the quantity of Exposed Personal Information, where this is customizable), others have distinct levels on different apps (TikTok only has video content, and Facebook is the only app to have Text, for example) (Appendix 10). Being that these platforms change and adapt a lot, during the period of answers collection, TikTok introduced Stories, which it did not have before. That attribute is therefore not associated with TikTok in this table, and most of the respondents still answered to the survey unknowingly of such TikTok actualization.

On what comes to the platform's settings, it is important to mention the filtering mechanisms against low quality responses that were used. Two major policies were adopted as

already suggested and standardly set by conjoint.ly: responses that are too quick, as well as responses where people do not scroll all the way to down to see all the alternatives, were not considered. Respondents would be warned once (and if the problem was answering too quickly, would be sent back to the beginning), and at the second occurrence, the survey would simply end. While a good assurer of quality and well-thought responses, this serves at the same time as a limitation on quantity of responses, as explained in the limitations chapter.

The template was chosen based on clarity (Appendix 11). The attributes' names had to be showed to support and clarify what the levels were referring to, thus, having a button at the end of the bundles was valued positively, instead of just pressing anywhere. This would serve to avoid possible confusion of people thinking they were voting for a specific level, and as a way to force people to scroll down to see all the options to be able to vote.

Besides the conjoint questions, a set of demographic ones were also established. Two yes or no questions were asked at the beginning for validation of the respondents: "Do you have Portuguese nationality?" and "Do you use any of the following platforms? Facebook, Instagram, TikTok". If the answer to any of them was "No", that would be the end of the survey for that person, as they do not fit our study focus. After the conjoint analysis, age, gender, study level, occupation, civil status, and frequency of use of the three studied platforms was asked (Appendix 12). These responses would be useful for analysis purposes, namely the comparison with our defined consumer personas, and possibly understanding of previously unnoticed influences of such factors on preferences.

#### *Revision, Selected channels, and Data processing*

After testing its understandability with a few respondents and it being revised by the professor, the survey was launched and collected answers from the 4<sup>th</sup> of April to the 20<sup>th</sup> of April 2022. It was spread by the researchers through several channels, namely WhatsApp, Facebook (messenger and groups), LinkedIn, E-mail, YouTube comments, Instagram, and

SMSs. The calculations and graphs were created in the Conjoint.ly platform, for the exception of the pivot tables that were constructed in Excel.

## **Results Perceptual Map**

### Sample

Through the launched survey a total of 533 answers were gathered, in which 529 were Portuguese and four non-Portuguese. Furthermore, from the 529 (533-4) respondents, 86% (456) were users and 14% (73) were corresponded to non-users. Knowing that this research focused on studying the social media networks for Portuguese users, only 456 collected answers were taken into consideration, which represents 86% from the total answers. To better characterize our sample, demographic information was requested: age, gender, occupation, marital status, and education level as well as the usage frequency. As cited in the literature review, age and gender are two main characteristics that influence the usage and the perception of social media platforms, enhancing the importance of the understanding the impact of these characteristics in our research. Furthermore, the study of the additional characteristics is crucial to investigate the respondents' profiles which therefore is vital to examine the created personas. Nevertheless, these additional traits can influence the results becoming essential to analyze them.

Hence, the evaluation of these answers was crucial for this study once it had the possibility to impact the report conclusions.

### *Sample characteristics – Age*

Based on the demographic answers given by the respondents, the collected sample can be characterized. Understanding the age of the social media networks users' sample is a central aspect that should be studied. As it is possible to verify in graph 1 Appendix 13, the majority of the respondents were either between 18 and 24 years old or between 45 and 54 years old, the former being 32% of the sample (146 respondents) and the latter being 28% of the sample (128

respondents). This compares to 22 under 18 (5%), 33 between 25 and 34 (7%), 53 between 35 and 44 (12%), and 74 over 54 (16%). As it is visible, on this remaining set of less significant answers, the sample skews to older people, with 56% of the sample being more than 34 years old, and only 5% of our sample being under 18 years old.

The difference between the age ranges, in particular the concentration of answers from people between 18 and 24 years old, can be explained by the fact that younger people are more related with social media sites (Auxier and Anderson 2021). Also, the excess of answers from responses between 45-55 years old can be elucidated due to the selected channels to disclose the survey, since around the oldest people Facebook is a most popular social media platform (Kemp 2022).

The fact that there are not an equal number of responses in all age ranges directly influences the results of the study as, like previously mentioned in the literature review, different social media platforms have different people segments that they pretend to attract.

#### *Sample characteristics – Gender*

As perceived in graph 2 Appendix 13, the collected users' sample consists of 297 females, 156 males and 3 others. It means that 34% of the users were male and 65% female users, while the remainder 1% consists of the people which preferred not to say. Based on this data, is possible to observe a relevant discrepancy between the number of males and females.

This disparity between genders can be interpreted with the fact that in the Portuguese population the number of females is higher than males, as concluded in the CENSOS 2021 and supported by PORDATA 2022. In addition, and as referred before in the literature review, females have a higher tendency to be social media users meaning that the gap between genders is also perceived in social media networks (Kemp 2022).

### *Sample characteristics – Occupation*

According to the previous analysis, the Occupation distribution was predictable. The gathered sample (graph 3 Appendix 13) reported 145 students, 12 unemployed, 260 employed, 33 retirees, and 6 who preferred to not reveal their occupational status. The 57% of employed people was explained by wide range of people between 25 and 54 years old in collected data, since in accordance with the INE, in February 2022, Portugal had 3 207 000 employed people among 16 and 24 and 4 845 000 workers with 25 or more years old.

### *Sample characteristics – Education Level*

Regarding to the Education level of the introduced sample, the observation of the graph 5 Appendix 13 demonstrates that the sample is composed by 13 people with elementary education, 72 with secondary education, 232 with a bachelor's degree, 129 with a Master's degree, 7 with a doctorate, 1 with none of the other education levels, and 2 who preferred to not reveal such data.

In 2020, Portugal had 52 832 residents with a bachelor and 26 235 people with a Master's degree, 348 892 people with an elementary level and 393 340 with secondary education (PORDATA 2021). The relative difference between the sample and the Portuguese population is justify by the age and the characteristics of the Portuguese population. According to the INE and PORDATA, the level of education has been increasing since 1991, which is reflected mainly in the youngest generations (that have higher levels of education). Furthermore, Portugal population is characterized for being an aging population, which is also demonstrated in Portuguese data. Due to this, and since the sample provided is highly focused on the younger generations, 80% of the respondents that have greater levels of education.

### *Sample characteristics – Marital status*

When analyzing graph 4 Appendix 13, is possible to observe that the most frequently marital status was single, followed by married. These two classes represented more than 50%



of the registered sample, more precisely 89% of the people were single or married. This situation can be explained based on marital conditions that Portugal exhibits, since the presented values are similar to the official Portugal numbers. Based on PORDATA (2021), these categories represent 84% of the total residents. It means that the collected data was a Portugal's reflection, providing to this sample a more realistic approach.

*Sample characteristics – Percentage of usage and frequency per platform*

When analyzing the graph 6 Appendix 13, it is possible to affirm that there are colossal discrepancies in terms of the use of Facebook and Instagram relatively to TikTok. Based on this data, the social networks Facebook and Instagram, are used every day by respectively 47.8% and 66.7% of respondents. However, TikTok only have a daily use about 11.4%. The results for the first two respective social networks were as expected given that Instagram proved to be the preferred social media network for people between the ages of 20 and 24, and Facebook proved to being slowly abandoned by the youngest generation (Duncan 2016; Frees and Koch 2018; Matthews 2014). With regard to people who answered that they did not use any of these types of social network, the answers were as follows - 70% do not use TikTok, 15.8% Facebook and 10.3% Instagram. This high number of people who do not use TikTok, precisely a total of 319, is connected with the fact that TikTok is the most recent social network when compared to the other two, and also because, as referred in the literature review, its main target segment are users aged with less than 20 years old (Bossen and Kottasz 2020). Furthermore, as mentioned before, only 5% of respondents are under 18 years old, which consequently influences the results.

These results were expectable when compared to the Portuguese population. According to Statista (2021), Portuguese people present a daily usage' frequency percentage, regarding Facebook and Instagram, of about 83%, which is also reflected on the sample results. Besides, Duarte and Dias (2021) concluded that 38,5% of Portuguese population that use TikTok open

the platform more than 10 times a day, which upon comparison to the sample results is higher, although justifiable by the lower number of survey participants that use this platform.

Nevertheless, the mentioned results are a useful insight for the conclusion of this dissertation.

## **Results Conjoint analysis**

### Sample

A total of 1.636 entries were registered, from which 359 serve as responses for the analysis. 94 people (about 6% of the respondents) were screened out in the first two elimination questions, with 41 answering not to be Portuguese, and 53 not using any of the three studied platforms. In addition, 1.083 of the respondents opened the link but did not complete the survey (people that gave up during the questionnaire or after receiving a warning of being providing low quality answers), 84 were cut halfway by the platform (answers that were too quick or did not scroll enough even after a first warning), and 16 were cut for being rated as low quality.

A demographic characterization of the sample is the first step of the analysis, as it is a crucial indicator and influencer of the results, as already studied in the personas.

### *Sample characteristics – Age*

The vast majority of the respondents were aged 18 to 24, comprising about 62.1%. The second biggest share was 12,3%, from people aged between 25 and 34 years old. 3.3% were under 14 and above 35 years old, 9,5% between 45 and 54, and 4.5% were above 54 years old. 8.4% of the respondents were minors (<18y). Parallely to the perceptual map' sample, the explanation for this division can be found in the bigger usage of social media platforms by younger people, and due to the spreading method of the survey, where personal connections of the researchers were central.

### *Sample characteristics – Gender*

Gender-wise, the sample is quite evenly distributed, with 56% being female and 43.5% being male. 0.3% answered other, and 0.3% preferred not to disclose. The female gender is slightly more represented, but so is the overall Portuguese percentage of females (52%) (PORDATA 2021). In addition, females tending more to the usage of social media (Simon Kemp 2022) is also a possible explanation for such difference.

### *Sample characteristics – Occupation*

70.2% of the sample are students. 26.7% are either employed or autonomous workers, 1.9% are unemployed, 0.8% retired and 0.3% preferred not to say. The most represented group on the people that responded are, therefore, students. It makes sense when accounting that many responses were gathered on student groups on Facebook and by personal connections of the researchers leading to this skewed demographic status. In addition, it is congruent with the fact that a total of 70.5% of the responses are from people under 24 years old.

### *Sample characteristics – Education Level*

On what comes to the education of our respondents, elementary school was the level for 2.8%, high-school or an equivalent for 23.1% and the majority (52.1%) answered to have a bachelor's degree. 20.3% were masters, 1.4% doctorates, and 0.3% did not share this information. Education-wise the responses form somewhat of a normal distribution, with the bigger response being a bachelor's degree. It fits with the other demographics, namely the age and occupation, as, even though the percentage of people with superior courses is similar to those with a high-school level, the average education increases in younger generations (PORDATA 2021).

### *Sample characteristics – Marital status*

Regarding marital status a huge slice of the sample is single (82.5%). 13.6% are married, 2.5% divorced and 0.8% widowed. 0.6% preferred not to say. These values are vastly different

from the general demographics in Portugal, where single people are approximately the same number as married people. It is, however, understandable due to the low average of age of the respondents, while the average Portuguese person gets married with 33 years of age (PORDATA 2022).

#### *Sample characteristics – Location*

Studying the locations where the survey was taken, a total of 336 of the 359 answers were in Portuguese territory. Around 160 of those were in Lisbon, 55 in Oeiras and 30 in Porto, constituting the most represented areas. 4 answers were taken in Spain, and 15 across the rest of Europe. There were also 3 from Portuguese in the USA and 1 in Angola.

#### *Sample characteristics – Percentage of usage frequency per platform*

To understand the usage quantity of each of the three studied platforms, the frequency of use of each of them was also collected. Facebook is used every day by 25.6% and is not used at all by 29.8%, which could be expectable with what was seen before, on its usage decrease over time. Instagram is used every day by 79.4% and not used by 5.6%. The respondents that use TikTok on a daily basis are 24%, and those who do not use it are 55.4%. Those who use each of the platforms every other day are 8.1% for Facebook, 7.2% for Instagram, and 5.8% for TikTok. Respectively, those who use it a few times a week are 16.2%, 6.1% and 6.1%. Finally, those who use Facebook a few times a month are 20.3%, Instagram are 1.7%, and TikTok are 8.6%.

Instagram is the most used out of the three and has the biggest percentage of users on a daily basis, which is congruent with the defined personas, when looking at the sample demographics. Contrarily, more than half of the survey-takers do not use TikTok at all. Facebook holds the middle ground, between use and unuse. The explanation for having less respondents using TikTok could be based on the fact the other two platforms were used as channels to spread the survey, while TikTok was not. In addition, it is a platform used more by

consumers under twenty years old, which do not represent the bigger proportion of the answers (Bossen and Kottasz 2020). It is also a more recent platform, compared to the other two, being therefore normal that it does not have the same number of users already. The progression between the everyday and never limits is also different between them. On Instagram, with the increase of the frequency of use, there's progressively more people using it. The opposite happens when talking about TikTok and Facebook, with more people stating to use them a few times a month than a few times a week, and even less using it every other day.

Continuing with a more profound analysis of the frequency of use for the three studied platforms, pivot tables (appendix 20) were useful to compare it with the different demographics from our sample.

### Pivot Tables Analysis

#### *Age and usage frequency*

Age seems to highly influence the consumption of Facebook and TikTok, while having a smaller impact on Instagram. According to the correlation in the conjoint survey's responses, on average, Facebook usage increases with the increase of the age group, while TikTok has the exact opposite effect. 80% of people under 18 and 34% between 18 and 24 report not to use Facebook at all, whereas the bigger share of the older respondents say they use it every day. For TikTok, the biggest response for each age group, except under 18's (that 73% use every day), claim to never use it. On Instagram's case, even though Instagram's average frequency of use decreases with age and people responding to never use it increases, there is a majority of every-day users on every age gap, with levels of more than half of the respondents in every group except those over 54.

#### *Gender and usage frequency*

For Facebook, both male and female have a similar percentage of everyday users (about ¼). However, there are more males not using it at all than, due to more females using it on

middle terms (for example  $\frac{1}{4}$  of women use it a few times a month, frequency that only 15% of men indicate). Gender also has little impact on Instagram, where the differences between them were minimal. On TikTok 61% of males and 52% of females do not use the platform. The difference is even higher on everyday users, where females have 29% and males 17%.

#### *Occupation and usage frequency*

Knowing that age is somewhat associated with occupation, namely regarding the student group, the results were as expected. Regarding Facebook, students were the only group not having the majority using it on a daily basis. Looking at Instagram, 98% of students use it (86% daily), representing Instagram's biggest group in percentage. TikTok's usage is mainly either used daily or never used at all and is, in percentage, more used by students: 53%.

#### *Education and usage frequency*

Education is also connected with age and occupation and shows similar effects in the responses: Instagram being transversal to all groups (and with very similar results among them), Facebook increasing with education, and TikTok decreasing. Facebook's everyday user go from 11% on schoolers (basic and/or high schoolers) to 35% of masters and/or doctorates, while those who never use it decrease, respectively, from 58% to 13%. Inversely, TikTok has 42% of schoolers and 15% of masters and/or doctorates that use it daily. The percentage of people that do not have the platform are 35% and 71% in the same order.

#### *Marital status and usage frequency*

Singles are the only group to have most people not using Facebook and is also the group that uses Instagram more frequently. Nonetheless, it is relevant to highlight that a large share of the sample is younger, consequently, single. Since the big majority of TikTokers are minors, no big surprises or conclusions are taken in this analysis.

### *Usage frequency across platforms*

For those that use Facebook every day, 68% uses Instagram on a daily basis and 75% does not use TikTok, so for those who use Facebook every day, many also use Instagram daily, but do not use TikTok. On the other hand, 86% of respondents that never use Facebook, use Instagram every day, and 41% do the same with TikTok. In other words, independent of Facebook's usage frequency, for the majority, Instagram is frequently used.

For most who use Instagram, there is a high chance of not using TikTok, as it occurs with 51% of who uses Instagram on a daily basis. Hence, if using Instagram on a low frequency, respondents seem to give TikTok less use, considering 75% of who never uses Instagram, does not use TikTok. It seems that the comparison with Facebook is contrary: when using a lot of Instagram, Facebook is not used with much frequency, and 65% of respondents with Instagram usage low or inexistent, use Facebook every day.

As for TikTok, half of those who use this platform every day do not use Facebook. For those that use a few times per month or never use TikTok, 29% and 35% respectively use Facebook daily. Lastly, independently of the frequency of TikTok's usage, most of the users seem to use Instagram on a regular basis.

In general, based on the majority of our sample, it seems reasonable to conclude that between Facebook and Instagram, when users consume one a lot, they seem to not use the other much (and vice versa), except when the Facebook usage is high, Instagram usage is also high. Between Facebook and TikTok, when users use one a lot, they seem to not use the other much (and vice versa. Finally, between TikTok and Instagram, who uses Instagram frequently, will not use much TikTok, and among those that do not use TikTok, it is expectable to use Instagram a lot. For those who do not use Instagram, it is probable that will also not use TikTok, and the same is expected to happen for those that use a lot TikTok, also use Instagram a lot.

After having insights on our sample, it was possible to move on to the core of the analysis, the responses of the conjoint, to understand users' preferences on the defined attributes and levels.

### Analysis and findings

Goodness-of-fit “refers to a statistical test that determines how well sample data fits a distribution from a population with a normal distribution (...) and establishes the discrepancy between the observed values and those expected of the model in a normal distribution case” (Kenton 2021). With a McFadden's pseudo- $R^2$  of 58,3%, the goodness-of-fit of the statistical test was considered to be a Medium Fit.

Relatively to the brands, it can be seen in the Appendix 21, the preferences for different combinations of features within each brand. Through them is possible to identify which brands have more or less variation by constituent concept: the wider “violins” represent potential combinations of features within the brand. The diamonds in the middle of the violins show median values, Instagram is in first place with 8.5, then TikTok with 4.6 and Facebook is at last with -3.6. This means Instagram tends to be the preferred brand and Facebook the least preferred one.

An analysis of the relative importance of each attribute, averaged across consumers, was done. These partworths were calculated in Conjoint.ly with an average of each respondent attribute partworth utility, done with the range of preferences to levels within the attributes (Appendix 22). The most important attribute was Amount of Exposed Personal Information for all three brands, which is reasonable considering personal data is evaluated as willingness to pay for a product. In turn, the least important attribute was not the same for the three platforms, Content Media for Facebook, Send Content for Instagram, and Content Displayed Based On for TikTok. The attributes' preferences analysis is based on the weight that the levels that were selected in the beginning have. Therefore, there are some attributes that are not included in



specific brands, because there was only selected one level, as for Videos in TikTok. The Visual Time Limited Content (Stories) attribute was also not the subject of an analysis by the platform because it consists of a have / not have scenario, where the choosing of a platform implies the choosing of one level. Thus, it is not compared in importance with the other features, as there is not a choice possible inside each brand.

Having a closer look on the levels' preferences, understanding the different preferences distribution for levels was the next step (Appendix 23). Having less available personal information is strongly preferred to having no limitations at all. Direct messaging was the most preferred form to Send Content in all platforms, thus, on TikTok and Facebook there is a preference for Content Displayed Based on the Following, which was surprising. On the contrary, for Instagram it was Search and Explore that was somewhat preferred to Following. There is no preference on the Content Media type on Instagram, but as for Facebook, data indicates that Videos are preferable to Images, and Text at last. As attributes partworths, the level's partworths were calculated with each level's preferences average.

The output of the survey enables to have an ideal social media platform profile, with a value to customers of 22,2 (average partworths across individual respondent's total partworth utility scores for the combination. It is scaled with 0 as the average value): Instagram platform, Images type Content Media, Content Displayed Based on Search & Explore, with Time Limited Content available option, Direct Messages for Sending Content, and less possible Exposed Personal Information (Appendix 24). The highest valued combination for Facebook is in 4<sup>th</sup> position on preferences and includes Videos, Following, Time Limited Content, Direct Messages and Less possible Exposed Personal Information. For TikTok, the combination is the same, except without Time Limited Content (TikTok did not have it at the time of the study which might have influenced this choice), and it is ranked as 7<sup>th</sup>. Interesting to note that, even though Instagram and Facebook has both Images and Videos, and Search & Explore and

Following, the highest ranked set of preferences are different for each. It is also worth to mention that, for the seven highest ranked possible answers, while Content Media changes between Images and Videos and Content Displayed Based On changes between its three options, the entirety of them have less possible exposed information, and Direct Message as the way to Send Content. Even though Stories was considered as an attribute for analysis, it was not possible to extract a lot of information on its preference, due to the fact it is a “have” or “not have” feature with only one level given to each platform. However, the 7<sup>th</sup> ranked set is the first one to not include Stories, demonstrating that having Stories such feature available was considered as a valuable attribute in social media platforms, rather than not having Limited Time Content.

In addition to a general analysis of the responses, it is also important to understand how the different demographics influence or not the choice of the attributes.

#### Demographics vs Attributes and Levels

Through a segmentation process on the conjoint.ly platform, a comparison between different demographics and the responses was conducted to study their correlation (appendix 25). Due to low responses of the following demographics, those segments will not be analyzed: Retired people, Basic schoolers and doctorates, widows, and divorced people.

Brands' preferences are now studied, where the results are quite different from the frequency of use' results. However, it is important to remember that this measures the preferences based on the set of attributes provided by each of them, instead on the brands themselves. Therefore, not only many other features are left out of the analysis, as other intangible crucial factors such as the weight of the brand personality. Furthermore, people are not necessarily aware of these preferences and do not take a conscious decision on which platform to use based on them.

## *Age*

On brands preferences, Instagram has a similar effect to a normal distribution, with the highest of its valorization on people between 25 and 34 years old. It decreases with the distance from this range, as the opposite poles rate it the lowest value. Over 54's is the only group to value Facebook's sets of attributes positively, while the age group that values Instagram the highest (25-34), values Facebook the lowest. Curious to note that the group that uses TikTok the most, minors, ranks it under average. Both 25-34 and 45-54 are the ages that rank TikTok higher, while those comprised between them value it negatively.

For Amount of Exposed Personal Information, while the older groups on average give it the higher importance, the younger one assign it lower importance in comparison, even though it is by far still the most important attribute. Among all platforms, those who are 25-34 are the group that rate this attribute higher. Across the three platforms and all age groups, the most valued level of this attribute in the low level one, except for people under 18 years old. These value an intermedium level more than a low level and, in Facebook and TikTok cases, they even prefer a none-restrictive level to the lower one.

On Instagram, for Content Media under 18' prefer Videos and 35-54 prefer Images. Text is negative across on Facebook, but it gets, on average, less negative with the increase of age, while Videos are value decreases, increasing age. Images have the opposite effect as Videos, though in a smaller scale, and they are only less valued than Videos until 34-year-old.

Instagram's Send Content is the least important in almost every age group, except for 18-24. On TikTok, people over 45 are the only to give more importance to Content Displayed Based On than Send Content, whose importance is higher particularly for people under 24. On Facebook these attributes follow the general results in all ages.

On Instagram's Content Displayed Based On, Search and Explore is negative for the youngest and increasingly positive by age. Follow is more valued by the youngest, but negative

for 54 and above. All values are somewhat close to 0 and so more evenly distributed on Facebook, where minors prefer Following rather than Recommendations, while 34-45 are the only to prefer Search and Explore. On average, looking at TikTok, Search and Explore increases with age from negative to positive values, while Follow decreases (always positive), and Recommendations are the least preferred in every age gap. Under 18's strongly dislike Search and Explore.

Looking at the Send Content levels, Direct Messaging value tends to be higher the younger the consumer is, maintaining to be the preferred one. Tag level has the opposite effect.

### *Gender*

On brands' feature set, the order of preferences is the same in both genders. Females value Instagram sets of attributes more than males, while the opposite happens for TikTok. Even though it is negative for both, Facebook's value is less negative for males. The order of attributes' preferences is typically the same for both genders across platforms. Focusing on small differences, females do give more importance to exposed information theme, and males care a bit more for Content Media on Instagram and Send Content on Facebook. Content-wise, on Instagram, females prefer photos, while males, tending a bit more to Videos, are close to indifference. On the Content Displayed Based On attribute, males do prefer Follow more, when comparing to the opposite gender.

### *Occupation*

The brands preferences are similar across different occupations, with students rating TikTok a little higher. Looking at the attributes, autonomous workers give more importance to Content Media than Content Displayed Based On, unlike the rest, because they value Images rather than Videos to a higher degree than the rest do. Students are the only to not rate Images higher on Instagram, and employees prefer Videos on Facebook. For the Content Displayed Based On attribute, the values are close all across. On Instagram, Search and Explore is the

preferred, surpassing Follow in every group other than employed, while it is the least valued by students and employees on Facebook. On TikTok the differences between students, employed and autonomous workers are smaller than the on other two social media.

### *Education Level*

Different education levels have similar values on brand preferences between them. Attribute-wise, preferences on Instagram and Facebook were also similar across the different education backgrounds of the respondents, with the exception of more importance given to Content Displayed Based On by highschoolers, and slightly less to Exposed information. Level-wise, on Instagram, from high school to masters, preferences evolve from Videos to Images, in Follows decreases, and in Direct Messages increases. On Facebook the same exact effect happens, except that Videos are higher valued still in the three groups. In addition, masters dislike Tagging more than Sharing in Groups, unlike the other two. The importance for Exposed Personal Information increases with education only on Facebook. TikTok is ranked pretty similarly on Exposed Personal Information and Send Content, with masters giving a higher value to Direct Messages. Highschoolers give more importance to Content Displayed Based On as they prefer Follow to a higher degree.

### *Marital status*

The brand preferences order is the same between single and married. Facebook is, however, given a higher value by the second group. The biggest difference on Instagram attributes is that Married people give more relevance to Content Media than Content Displayed Based On, and singles do the other way around. In addition, singles are indifferent between Images and Videos, but the others prefer Images. Married value Search and Explore higher than singles in detriment of the Follow feature. On Facebook, singles value Videos more than married, in detriment of Text, and married are valuing more low Exposed Information. On TikTok there is a higher valorization of Follow by single people. In all platforms, singles give

more value to Direct Messages than married, and these last ones are preferring more of low information sharing (this difference is not significant on Instagram).

Grabbing on the initially identified personas, now a look is given to those specific demographics as they represent consumer-types and specific needs of this market, not only to validate them, but to correlate their needs with their preferences.

#### *Facebook Sensitivity to Information*

Facebook decreases 10% with each increase in exposed information level (30% on the low information level, and 10% on the high one). From those 10%, approximately 1,5% are converted in non-preferences, 4% go to TikTok and 4,5% to Instagram from low-level to Intermedium level. From this to the all-information level about half move to Facebook and 4% to TikTok.

#### *Instagram Sensitivity to Information*

Instagram loses largely with the increase of exposed information, especially with the non-restrictive level. It evolves from 45,4% to 38,6% to 16.7% with the raising of exposed amount levels. Facebook and TikTok gain from this. Facebook from 19,5 to 20,2 to 30,4%; TikTok from 27,5 to 32 to 42.9% and gaining the highest share. Those not preferring any app increase from 7,6 to 9,2 to 10,1%.

#### *TikTok Sensitivity to information*

TikTok has, as expected, the same effect. Its increases in quantity of information are also harmful and benefiting for the other two social media. It has 7.5% more than the baseline scenario when requiring low-information and loses almost 17% to move to the all-information level. Instagram: The 7,5% goes mainly to Instagram (4%) with Facebook receiving 2%. The 17% benefits Instagram in 9% and Facebook in 6%.

### *Facebook Removal*

In a theoretical scenario without Facebook, Instagram would have 49,6% of preference share, which means it would increase 29,4% (a higher increase comparing to a scenario without TikTok), TikTok would have 40,1%, with an increase of 8,1%, and None would increase 1,1%, which corresponds to approximately 1/18 of Facebook's previous share.

### *Instagram Removal*

An Instagram removal would mean a preference share of 37,5% for Facebook and 51,5% for TikTok, that represent an increase of 17,3% and 19,5%, respectively. For both platforms, a scenario without Instagram would be the most advantageous player removed. The "None" percentage would increase 1,8%, which is around 1/21 of Instagram's previous share.

### *TikTok Removal*

By removing TikTok the preference scenario would be Facebook with 31,5%, increasing 11,3%, and Instagram leading with 56,2%, increasing 17,6%. None share would increase by 3,1%, which is around just 1/10 of TikTok's previous share. It is also the biggest share comparing to other removal scenarios' "None" percentage.

## **Conclusion**

### Perceptual Discussion

Based on the introductory analysis results, it is possible to state that some of these results were predictable, mainly regarding age and gender, considering that, and according to previously mentioned studies, women have a higher tendency to shop online on Instagram and access information via this platform. Thus, the conclusion of this study corroborates the claim that different genders have different preferences and perceptions. Furthermore, as expected, Facebook is highly associated with entertainment and social interaction for older generations.

Nonetheless, it is perceivable that some results are unexpected and interesting to analyze, for example, how unemployed people relate TikTok as Social Interaction. That was

surprising because TikTok is a social media platform that has more barriers to entry for older generations and usually unemployed people tend to be older than 18 years old. As well, as mentioned earlier, women use Instagram to access to information even though they curiously consider Facebook to be the most comprehensive and reliable network.

Besides that, based on the acquired outcomes, which resulted from the perceptual map analysis, it is possible now to respond to research question 2 - How do Portuguese consumers perceive Facebook, Instagram and TikTok platforms.

The selected platforms are positioned in market spaces completely different, which means that they are not direct competitors, however, as expected some of them share similarities in their profiles. Instagram and Facebook are both related to social approval (dimension 1) and to the access to information. However, Instagram has a more consistent connection with the referred associations, since is more distant from the origin in the horizontal approach and closer to the initial part of the access information vector (blue point).

TikTok and Instagram have also some similarities mainly regarding entertainment and free time available (dimension 2). Nevertheless, TikTok and Facebook are, based on the collected data, platforms which operate in completely distinct markets and do not have any commonalities among their profiles. As previously discussed, SNS, like Facebook, are relationship management based, and Content Communities, as TikTok are entertainment based. This study confirms those assertions.

Besides this, Instagram is the social media platform that Portuguese people associate with a higher number of associations, which is expectable since Instagram is growing in the Portuguese market since 2019. Furthermore, the preference for Instagram is also justified by the age and the gender of the survey respondents since the age of most of the sample is between 18 and 24 years old. As mentioned in the literature review, Instagram has a higher tendency to be the social media platform which these generations prefer, knowing that Matt Ahlgren (2022)



concluded “18 to 34 years old is the age range which is more active on Instagram” and according to the Datareportal, in the early 2022, “51.9 percent of Instagram’s ad audience in Portugal was female”. As such, Instagram is perceived to be sophisticated since it presents to be a modern and elegant brand and to have the best profile to satisfy most of consumers’ needs. Moreover, the presence of entertainment with network components, which Instagram can offer, is most engaging, which is validated by the results of the perceptual map. And, due to that, people associate Instagram to competence rather than the common-sense expectation of associating competence to Facebook.

TikTok is positioned as being the platform that is more associated to Self-expression and Entertainment. This conclusion is aligned with the purpose and the mission of TikTok “is the leading destination for short-form mobile video. Our mission is to inspire creativity and bring joy.” Although, the number of associations done to this platform could had been influenced by the lower number of respondents that use this network, since TikTok penetrates the Portuguese market mainly in the youngest ages. This can be seen as the platform is not associated with “Enthusiasm”. This result was unforeseen because, according to the literature review, TikTok is usually seen as a fun and creative brand, so that association was expected to occur. In contrast, Portuguese people perceive TikTok as rugged (strong presence). These incongruencies with common sense could reflect a sample weakness.

On the other hand, Facebook occupies a completely different position in the market. This platform has the lowest number of associations, however, continues to have a high rate among some of them. It was expectable since Facebook is the oldest platform in the market and nowadays is considered one of the biggest cash cows in the market (Sparks 2014). In addition, Facebook, according to the background, is the market leader in terms of the number of users. Its leadership is guided for the innovation and reputation of Meta company (Tillman 2021). This capacity to innovate and offer new experiences and features, as stated in the literature

review, is the reason consumers perceive Facebook as an enthusiastic brand, even though the user base is trending towards older people. However, an expected result is that Facebook is a sincere brand due to its originality.

Based on this, the presented social media platforms do not need to readjust their strategy in order to be distinguished from the other apps, and occupy a specific position in the market.

After being aware of the social media platforms' profiles would be noteworthy to understand what are the attributes that would create the perfect platform for the Portuguese population.

### Managerial Implications

In terms of how this study will help different businesses, the conclusions were as follows:

Firstly, Instagram itself can use the insights from this study. As previously discussed, Instagram is growing in the Portuguese market and is the platform whose profile satisfies most of consumers' needs. Therefore, to become the biggest social media platform in Portugal, and, considering it is significantly correlated with "Social Approval", it can turn into the "modern day public square". Thus, it should emphasize its marketing communications on how the platform creates connections. One way to do so would be to create a newsletter showcasing Stories in which Instagram helped people connect with each other.

Since Instagram offers connection, B2C connection on social media is as trusted as connection in real life, it supports that the platform is also the most associated with online shopping and, therefore, businesses that sell online or intend to do so should, use this platform as a point of sale, thus increasing their visibility and, consequently, profits. Additionally, as Instagram is the app that people use the most to have access to information, businesses that require more informative ads should use this platform so that what they want to transmit is

reached by as many people as possible and manages to persuade consumers to engage in the purchasing stage of the consumer-decision model.

TikTok was associated with a high correlation to Self-Expression, which means that those businesses that want to convey a more personal message or even opinions that may generate controversy, can use this social network, as they will obtain greater acceptance by the target audience. An example could be a painter who wants to promote his most artistic work and uses this platform, as it allows him to be more himself.

Facebook was highly related to Enthusiasm, which means that companies that intend to promote products or services where commitment and willingness to act are required on the part of the consumer, should use this platform for better results. For example, publicizing a volunteer event in a marathon will require people who see it to be willing to participate and be committed towards this activity.

Also, for the managers is interesting to perceive how they should invest in the different platforms and understand which platform is related to the different genders and ages. This means that, based on this report, they can adjust their strategy and create a greater impact on their consumers. Doing so will decrease the costs and increase the engagement of the brands. It will be crucial to understand if the correct channel is being used and if the demanded content is being produced and shared in the most engaging platform and reaching the target audience, in order to achieve the appropriate objective.

Firms already using social media as marketing channels have the possibility to compare this thesis' takeaways with their performance so far and utilize such insights to better perform on reaching their defined targets. Through means of pivot tables, demographic, segmentation analysis, and a few simulations, key indications on the variation of usage and preferences by people are provided, to better conduct specific marketing strategies.

Through each customer's information, by keeping in mind each unique specification for a constructed segment or persona and associating new interactions with the described results and acquired data, it will be easier to customize every interaction with the customer. Understanding better where and how to create connections more efficiently, reaching and impacting the right people, will enable companies to develop individual relationships based on trust. So, increasing engagement through means of adapting to the specific types of consumption each demographic has, together with feedback, this continuous learning leads to competitive advantage, and because the relation is improved, value is created.

Simultaneously, from a social media brands perspective, with this research both current or potential new players can understand where there is room for improvement, that is to say, which attributes should be improved, and which ones should be considered to be left behind. Thus, Facebook, Instagram and TikTok can also gain competitive advantage, with the analysis and takeaways on the competition, by comprehending where each can gain preference share and, therefore, increase personal meaning and user involvement. More specifically, the main key is to better understand its users' needs, so they can develop its features in order to have a continuous improvement in responding to their needs to a higher engagement.

In conclusion, despite the different usage frequencies of these three platforms, Facebook is typically used by older and wiser users, Instagram can be seen as the platform used the most and by more distinct demographics, and TikTok is a platform for younger generations, especially females, but that is being more adopted over time by other generations. However, it is important to retain that their frequency of use does not necessarily implicit their unconscious sets of preferences. As described, cognitive needs, affective and personal integrative needs, and social integrative needs have different preferences and behaviors on social media consumption and have therefore different ways to be reached in a more accurate way. In these three social media, for the Portuguese market, affective and personal needs could be targeted with an

interesting and trendy video, on Instagram or TikTok, promoting a certain product or linked to a certain page. Social needs would possibly gain the most interest from an advertising post shared by their connections through means of a message, and so a post or brand page that has high rates of being sent in direct messages would work for them, mainly on Instagram. For cognitive needs, even though they have the most spread preferences, Instagram and Facebook would be the way to reach out. Particularly in Instagram, Search & Explore is valued the most, so a page that is easy and intuitive to find could be a positive approach.

### Limitations with Analysis Tools

There were some limitations regarding the analysis tools employed.

Firstly, regarding the perceptual map, it was impossible to perform ANOVAs to detect if there were significant differences between the groups for their respective characteristic for certain associations due to some options for the demographic questions for the first survey having so few answers.

Furthermore, it was impossible, with the tools at hand, to control for any bias for the platform from which the platform the first survey was received, as Microsoft Forms does not discriminate in that regard. This could be interesting to measure if perceptions from respondents that got the survey via Facebook were biased towards Facebook.

Regarding the conjoint analysis, the survey loses a lot when answered on a cellphone. Instead of a table being presented, with the different options' levels right next to each other, the visualization is much harder, as the options are presented individually and vertically, requiring for a harder memory process. This has two possible consequences: Less people responding to the survey because this makes it harder to understand and more exhaustive (incentive for people to give up on answering it); or a decrease in the response's quality, because people cannot compare levels right next to each other and will have to memorize them while scrolling down. The data does show that 30% of the entries on a computer were completed answers, while only

18% of mobile answers were completed. It also shows that, while computer-respondents took on average 12,46 minutes to respond to the survey (complete answers), mobile-respondents took 5,42. In addition, if the internet browser is set to “dark mode”, on certain devices the survey also loses on clarity, as the icons and shadowing may not be visible. In order to fight this limitation, together with the link sent out for people to answer, a note was added, requesting for the responses to be done, whenever possible on a computer.

The percentage of useful responses on the conjoint analysis is very low: 22%, requiring an incredibly great number of people to answer the survey for us to meet the reasonable sample number that the platform advises. A very significant number of people are filtered. The main reasons are: 66% of the respondents opened the survey but did not complete it, 5,7% were screened out, 5,1% provided incomplete answers and 1% completed but were marked as low quality. The most common reason (about a third of the one that did not complete) are people who abandon in the fourth slide (the short message before the conjoint questions explaining what comes next regarding the combinations). A possible explanation for that to happen is that people that answer to the survey too fast. These respondents are given a warning with the options: “end survey” or “go back to questions”, the second sends the survey back to such slide, possibly causing people to give up at that point. Therefore, people who respond to the survey giving “random” answers instead of taking it seriously might be the cause behind this low percentage of valid data. This also serves as a “wake up call” about the quantity of people not answering to surveys in a well-thought manner, which is possible to be correlated with what was mentioned about the clarity issues when responding on a cellphone: Response success was 30.1% in computer answers and just 18.5% in mobile answers. This filtering assures, therefore, for a better quality and certainty of our analysis, but at the same time, decreases the available responses for us to analyze.

Another noteworthy mention in the spreading of both surveys is the fact that they were both shared through Instagram and Facebook and not by TikTok. This was due to the first two platforms being accessible for the researchers. That however means that two of the three analyzed brands were used to gather responses, leaning to skewed respondents on platform usage, as it leads to more Facebook and Instagram users responding than TikTok's.

### Implications for Future Research

There were some limitations in applying this perceptual map, mainly related to sample characteristics, especially the age of the respondents. As previously discussed, 56% of the sample is over 34 years of age, while only 5% is under 18, and as mentioned in the literature review TikTok's main target segment is users aged less than 20 years old (Bossen and Kottasz 2020). As such, this skewed the sample to Facebook and Instagram daily users, while 70% of the sample did not use TikTok. This, in turn, led to a difficulty in obtaining answers for associations regarding TikTok, as 34% of the time, the respondent gave no answers. However, the same occurred 24% of the time for Facebook and 20% for Instagram, which still illustrates the higher struggle to obtain responses for TikTok. As such, it would be interesting that future research takes that into account and builds a sample which more accurately represents the social media market.

It is extremely important to keep in mind that preferences are relative to the moment of the survey, i.e., with the platforms having the attributes that were available at that time. Platforms are constantly updating and adding new features and, while this study was being conducted, that turned out to be the case. TikTok, during the response-time of the conjoint survey, added Stories as a new feature. It also improved its following system with the introduction of a new alternative feed page, based on Follows, to add to the already existent Recommendations one.

By having selected Visual Content Available Time (Stories) as a yes or no question, it was not possible to extract a lot of information about the preferences relative to the “in-the-moment” sharing experience. Further investigation about such attribute is relevant, since it is a central feature of social media and has been introduced in most of the big brands, one by one in the last few years.

Since our attributes’ study was not totally disconnected from the brands, a relevant approach that could be taken would be to do an analysis of the studied attributes independent from the brands, to better understand the central preferences and dynamics on a general ground to all social media platforms. This would allow for the theoretical creation of an ideal platform for all types of consumer segments and provide better insights to market newcomers, independent of brand associations. With this being said, a scenario analysis of new competitors in the market could also be relevant to understand new preferences distributions.

By adding prices and success rates information to a future conjoint analysis, willingness to pay, price elasticity, revenue and profit can be calculated and useful for marketing planning and budget decisions from companies. This could be accomplished by studying the positive correlation between exposed information, namely cookies settings and personal data people give to the platforms, add efficiency of personalized advertisement.

Parallely, studying other social media perceptions and preferences that are “fighting” more directly for the same consumers’ time, or even for social media that satisfy the same gratifications and respond to the same needs. For example, it could be interesting to understand what needs are not being primarily satisfied by the “None” segment.

To conclude, this study analyzed the main reasons for Portuguese consumers to use social media platforms, as well as what attributes’ preferences they value most on Facebook, Instagram and TikTok. The conclusions obtained are useful insights mainly for those who use any of these platforms as a marketing tool, or even for the platforms themselves. By knowing



why they use social media, what are their associated perceptions, and what consumers value most, they can optimize their approach and work more efficiently to increase engagement.

This study hopes to spark further research questions, considering social media in Portugal has been an evolving and impacting environment that is changing the way of communication and the relation between users and brands.

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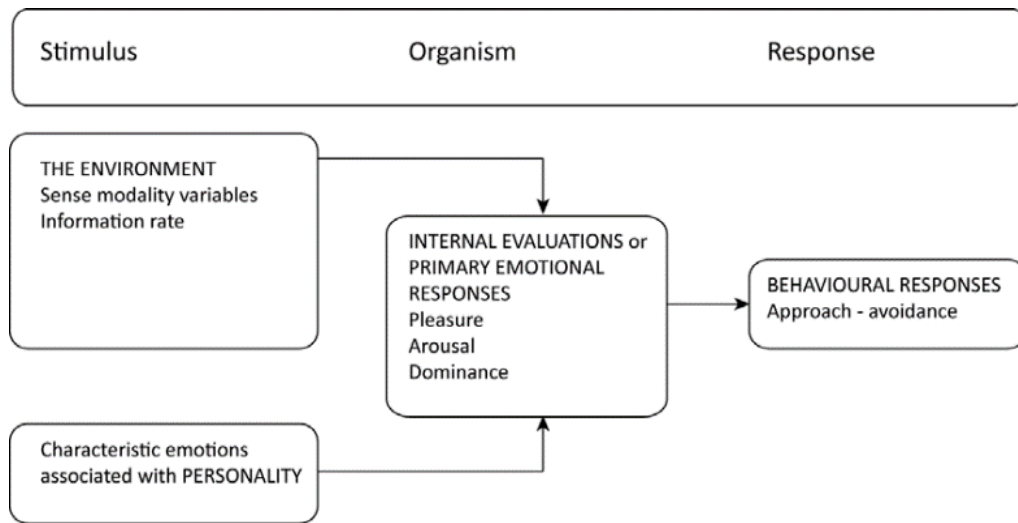
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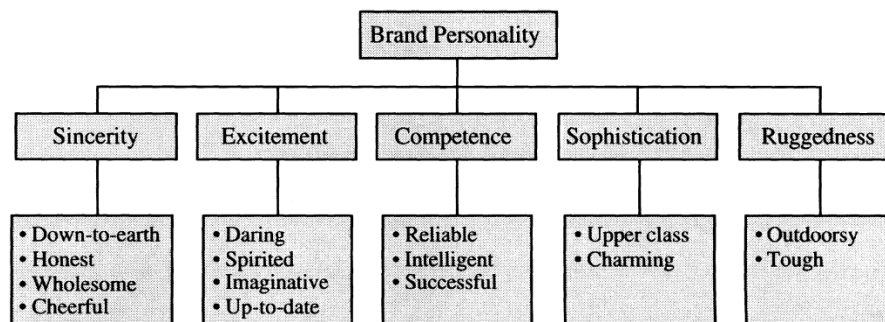
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## APPENDICES

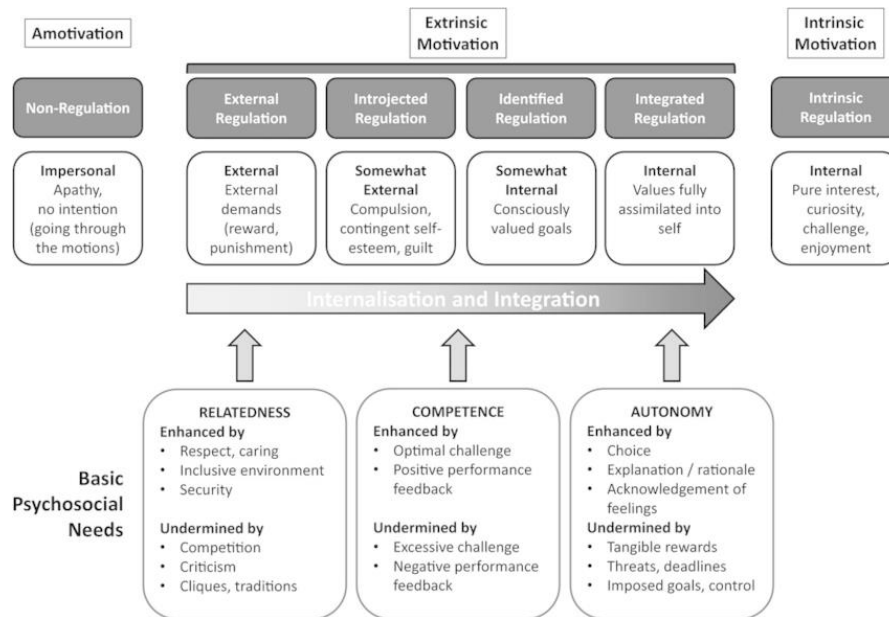
### Appendix 1 – Framework of the Stimulus- Organism- Response (Mehrabian and Russell, 1974)



### Appendix 2 – Brand Personality construct framework (Aaker 1991)



## Appendix 3 – Framework of Self-Determination Theory (Deci and Ryan, 2000)



## Appendix 4 – Personas

### Persona 1 - "Tiago"

## Tiago

"I check up on Facebook at least every couple of days with the purpose of being informed"

Age: 31  
Work: Real State  
Family: Married  
Location: Oeiras

### Social media needs

**Cognitive need:** Tiago uses social media with the central motive of getting information and knowledge out of it, as well as satisfying his curiosity on subjects, such as people's social environments and overall exploration of new topics. Seeks particularly for facts.

### Interests | Hobbies

- Reading the news
- Watching football and rugby
- Searching investment tips
- Facebook groups on selling-buying opportunities

### Lifestyle

- Recently married, starting to constitute a family
- Medium class, average salary, seeking to diversify his financials

### Preferred Platforms

Platform	Preference Level
Facebook	High
Instagram	Medium
TikTok	Low

### Brands & Influencers

Tiago follows brands and news firms that have high international reputation and serve for him as examples and sources of relevant or interesting info.


### Traits

- Enthusiastic
- Keen to learn



## Persona 2 - "António"

### António



"I'm used to share funny posts, follow what's new, communicate with my friends and make new ones"

Age: 19  
Work: Student  
Family: Single  
Location: Porto

#### Social media needs

**Social Integrative need:** António uses social media to connect with others and learn. He accesses social media for social support and to share life events, in order to get a sense of community.

#### Interests | Hobbies

- Watching films
- Playing videogames
- Read
- Sharing videos and tagging his friends

#### Lifestyle

- Has one older brother
- Economy Bachelor's student


#### Preferred Platforms

Facebook

Instagram

TikTok

#### Brands & Influencers



António follows fun brands that incentivize a sharing community that are crucial for social identification with others and networking.


#### Traits

Introvert

Low self-esteem

## Persona 3 - "Ana"

### Ana



"The platforms I use the most are Instagram and TikTok to relax and see what happens around me. I publish stories and videos to engage with others and express myself"

Age: 18  
Work: Student  
Family: Single  
Location: Lisboa

#### Social media needs

**Affective/ Personal-integrative needs:** Ana uses social media mainly because of emotional necessities. They are either pleasure and satisfaction, or to get positive engagement to increase self-esteem. She accesses social media somewhat compulsively, many times even unconsciously for tension-releasing from stressing issues.

#### Interests | Hobbies

- Paddle Classes
- Video streaming platforms' series and movies.
- Fashion, beauty and health content
- Travelling and trying new restaurants
- Photograph & Video.
- Walking and connecting with nature.

#### Lifestyle

- Youngest sister with two brothers
- Nurse Bachelor
- Seeking a part-time job
- High-income family

#### Preferred Platforms

Facebook

Instagram

TikTok

#### Brands & Influencers



Ana follows brands that provide her with satisfaction and motivation, important for inspiring or relaxing her and giving ideas for her daily life on expressing herself. She is also prone to follow influencers.

#### Traits

Seeks approval

Creative

## Appendix 5 – Professionals’ script

Category	Questions
<b>Market</b>	<ol style="list-style-type: none"> <li>1. In your opinion, how this study will add value to your industry? How it is helpful for the organizations and for the customers?</li> <li>2. In your perspective, what essential characteristics are the “Competitive advantage” of each platform?</li> <li>3. What apps produce the best result for the brands to advertise or sell? Why? With which methods (ads, influencers, etc)?</li> <li>4. Any future predictions?</li> </ol> <p><u>For content creators:</u></p> <ol style="list-style-type: none"> <li>5. In what way is the content you produce the same or different depending on the social media platform and why?</li> <li>6. Your followers are typically the same in all networks or do you have concentration of certain demographics in each?</li> </ol>
<b>Preferences</b>	<ol style="list-style-type: none"> <li>7. Based on your perspective, what are the values more valuable in Portugal?</li> <li>8. What are the characteristics that cause to the customers a sense of preference?</li> </ol>
<b>Attributes</b>	<ol style="list-style-type: none"> <li>9. What are the essential features in these platforms?</li> <li>10. In your opinion, how do you rate Facebook, Instagram and TikTok in security, credibility, professional vs leisure, ruggedness, sophistication?</li> </ol>
<b>Recommendations</b>	<ol style="list-style-type: none"> <li>11. Any suggestions of topics that can be studied?</li> </ol>

## Appendix 6 – Personas’ script

Category	Questions
<b>Demographics</b>	<ol style="list-style-type: none"> <li>1. Age</li> <li>2. Gender</li> <li>3. Professional situation</li> <li>4. Location</li> <li>5. Marital status</li> <li>6. Family</li> <li>7. Social class</li> </ol>
<b>Interests</b>	<ol style="list-style-type: none"> <li>8. Hobbies</li> <li>9. Preferred Brands</li> </ol>
<b>Persona Segment</b>	<ol style="list-style-type: none"> <li>10. Describe the aforementioned needs and ask: Which one of these needs do you relate to?</li> <li>11. What social media platforms do you use? (If people do not mention Facebook, Instagram and TikTok, ask directly about them).</li> <li>12. What do you use them for?</li> <li>13. Between these three social media platforms, which one is your favourite? And why?</li> <li>14. How frequently do you use it? (Several times a day, few times a day, once a day)</li> </ol>
<b>Perceptions for Perceptual maps</b>	<ol style="list-style-type: none"> <li>15. What do you value the most on these platforms?</li> <li>16. From the following attributes how much do you relate with? <u>Options</u>: Access to information; social</li> </ol>

	interaction; status update; network; online shop; self-expression; entertainment. (If the interviewee adds more there is no problem)
<b>Preferences for Conjoint analysis</b>	<p>17. What features do you value the most or the least on these platforms? (If people do not understand what we mean about features, provide some examples)</p> <p>18. Or any feature you would like to add?</p>

#### **Appendix 7 – Perceptual Survey Design : Associations, description and scales**

	<b>Associations</b>	<b>Description</b>	<b>Scale</b>
<b>Purpose</b> How do you associate each social network to the following attributes regarding their purposes?	Access to Information	Finding information about interests and news, learn about new topics and acquire new skills.	1 - "Completely Disagree" to 5 - "Completely Agree" N/A - "Non-Applicable"
	Social Interaction	Fraternize, communicate, socialize, interact, learn about, connect, and reconnect with relatives, friends, known and unknown people.	1 - "Completely Disagree" to 5 - "Completely Agree" N/A - "Non-Applicable"
	Status update	Sharing information, expressing opinions, and sharing personal and mutual interests, experiences, thoughts, and needs and sharing what you think and do	1 - "Completely Disagree" to 5 - "Completely Agree" N/A - "Non-Applicable"

	Shop Online	The purchase of products through social media, find information about products, find good deals and products to buy and explore.	1 - "Completely Disagree" to 5 - "Completely Agree" N/A - "Non-Applicable"
	Entertainment	Having fun, playing, pass the time, relax, find, and share photos, music, and videos	1 - "Completely Disagree" to 5 - "Completely Agree" N/A - "Non-Applicable"
	Networking	Connecting with people for business/professional purposes and promote ourselves for business purposes	1 - "Completely Disagree" to 5 - "Completely Agree" N/A - "Non-Applicable"
	Self-expression	Self-representation and self-disclosure by posting and create videos, photographs, and music on social media networks, having the total control of the personal content uncovered and receiving peer recognition (i.e. creatively expressing yourself through online content)	1 - "Completely Disagree" to 5 - "Completely Agree" N/A - "Non-Applicable"
<b>Brand Personality</b> How do you associate each social network to the following attributes regarding	Ruggedness	Strong presence/structure, vigor, resistance, firmness	1 - "Completely Disagree" to 5 - "Completely Agree" N/A - "Non-Applicable"
	Sincerity	Honesty, originality, emotional influence, trust	1 - "Completely Disagree" to 5 - "Completely Agree" N/A - "Non-Applicable"

brand personality?	Enthusiasm	Challenging, young, creative, unique, independent	1 - "Completely Disagree" to 5 - "Completely Agree" N/A - "Non-Applicable"
	Competence	Coherence, reliability, success, intelligence, confidence	1 - "Completely Disagree" to 5 - "Completely Agree" N/A - "Non-Applicable"
	Sophistication	Modern, charming, elegant	1 - "Completely Disagree" to 5 - "Completely Agree" N/A - "Non-Applicable"

## Appendix 8 – Attributes and levels

Product attributes

Social Media Platform

Brand / SKU

⌵

⊖

⊕

This attribute represents the brand name, SKU, or pricing tier. ⓘ

Content media

Feature

⌵

⊖

⊕

This attribute is a feature of the product. ⓘ

Get content displayed (profiles/ shopping/ etc.) based c

Feature

⌵

⊖

⊕

This attribute is a feature of the product. ⓘ

Visual content available time (eg. stories)

Feature

⌵

⊖

⊕

Send content

Feature

⌵

⊖

⊕

Amount of exposed personal information

Feature

⌵

⊖

⊕

Levels (i.e., what the attributes can be like)

Instagram

Facebook

TikTok

⊕ Add level

Images

Video

Text

⊕ Add level

Search & explore

Follows

Recommendation

⊕ Add level

With time limited content

No time limited content

⊕ Add level

Tagging other users

Sharing on groups

Sending direct messages

⊕ Add level

Less possible
















Intermedium

All, with no restrictions

## Appendix 9 – Survey example (computer and phone)

### Example 1 - Computer

Which of the following Social Media Platforms would you choose?


	A	B	C
Visual content available time (eg. stories)	 No time limited content	 With time limited content	 With time limited content
Send content	 Sending direct messages	 Tagging other users	 Tagging other users
Get content displayed (profiles/ shopping/ etc.) based on	 Search & explore	 Recommendation	 Recommendation
Amount of exposed personal information	 Intermedium	 All, with no restrictions	 Less possible
Content media	 Video	 Video	 Text
	CHOOSE	CHOOSE	CHOOSE

Go back ✗ NONE


### Example 2 - Phone

**B**


Amount of exposed personal information

  
All, with no restrictions


Get content displayed (profiles/ shopping/ etc.) based on

  
Search & explore


Visual content available time (eg. stories)

  
With time limited content

Send content

  
Sending direct messages

Content media

  
Images

✓ CHOOSE

## Appendix 10 – Levels per brand table

Levels		Instagram	Facebook	TikTok
Content media				
Images	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Video	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Text	1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Get content displayed (profiles/ shopping/ etc.) based on				
Search & explore	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Follows	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Recommendation	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Visual content available time (eg. stories)				
With time limited content	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
No time limited content	1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Send content				
Tagging other users	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Sharing on groups	1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sending direct messages	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Amount of exposed personal information				
Less possible	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Intermedium	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
All, with no restrictions	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## Appendix 11 - Template

Choose template

**Your preferences in cars**

Which of the following cars would you choose?

Brand	Tesla	Toyota	Land Rover	None of the above
Size	Small	Large	Medium	
Engine capacity	1L	2L	2L	
Price	\$19,950	\$11,200	\$25,000	

Abstract (attribute names shown)

Which of the following cars would you choose?

Brand	Land Rover	Toyota	Tesla
Engine capacity	2L	1L	2L
Size	Large	Medium	Medium
Price	\$25,000	\$25,000	\$19,950

CHOOSER CHOOSER CHOOSER

NONE OF THE ABOVE

Comparison table (attribute names shown)

**Your preferences in cars**

Which of the following cars would you choose?

Tesla	Land Rover	Toyota	None of the above
Large	Medium	Small	
1L	1L	2L	
\$25,000	\$19,950	\$11,200	

Abstract (attribute names hidden)

Which of the following cars would you choose?

Toyota	Land Rover	Tesla
2L	2L	2L
Small	Medium	Large
\$25,000	\$19,950	\$25,000

CHOOSER CHOOSER CHOOSER

NONE OF THE ABOVE

Sea 3 pricing table (attribute names hidden)

Which of the following cars would you choose?

Toyota	Land Rover	Tesla
2L	1L	1L
Small	Large	Medium
\$25,000	\$19,950	\$25,000

CHOOSER CHOOSER CHOOSER

NONE OF THE ABOVE

Checklists of attributes (attribute names hidden)

Which of the following cars would you choose?

Sort by: Price

Tesla	Toyota	Tesla
Small	Medium	Large
2L	1L	2L
\$25,000	\$25,000	\$19,950

CHOOSER CHOOSER CHOOSER

NONE OF THE ABOVE

Online supermarket (attribute names hidden)



## Appendix 12 – Demographic questions

### *Question 1 - Nationality*

Do you have portuguese nationality?

Yes	No
-----	----

Go back

### *Question 2 - Usage of Facebook, Instagram of TikTok*

Do you use any of the following social media platforms: Facebook, Instagram, TikTok?

Yes	No
-----	----

Go back

### *Question 3 - Age*

Age

< 18	18-24	25-34
35-44	45-54	> 54

Go back

### *Question 4 - Gender*

Gender

Male	Female	Other
Prefer not to say		

Go back

### *Question 5 - Occupation*

Occupation

Student	Employed	Self-employed
Unemployed	Retired	Prefer not to say

Go back

### Question 6 - Education Level

Education level

None	Basic school	High school or equivalent
Bachelor	Masters	Doctorate
Prefer not to say		

Go back

### Question 7 - Civil Status

Civil Status

Single	Married	Divorced
Widowed	Prefer not to say	

Go back

### Question 8 - Frequency of Facebook usage

With what frequency do you use Facebook?

Every day	Every other day	Few times a week
Few times a month	I don't	

Go back

### Question 9 - Frequency of Instagram usage

With what frequency do you use Instagram?

Every day	Every other day	Few times a week
Few times a month	I don't	

Go back

### Question 10 - Frequency of TikTok usage

With what frequency do you use TikTok?

Every day	Every other day	Few times a week
Few times a month	I don't	

Go back

## Appendix 13 – Perceptual map Survey sample characteristics

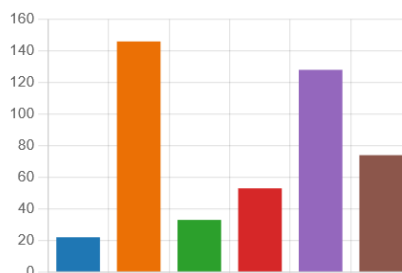
### Graph 1 - Age

#### 4. Idade (0 ponto)

[Mais Detalhes](#)

[Informações](#)

Menos de 18	22
18-24	146
25-34	33
35-44	53
45-54	128
Mais de 54	74



### Graph 2 - Gender

#### 5. Género (0 ponto)

[Mais Detalhes](#)

[Informações](#)

Masculino	156
Feminino	297
Outro	1
Prefiro não dizer	2



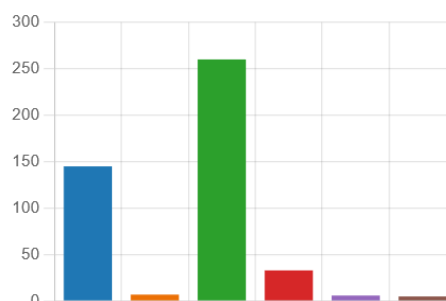
### Graph 3 - Occupation

#### 6. Ocupação (0 ponto)

[Mais Detalhes](#)

[Informações](#)

Estudante	145
Desempregado/a	7
Empregado/a	260
Reformado/a	33
Prefiro não dizer	6
Outro	5



Graph 4 - Marital Status

7. Estado Civil (0 ponto)

[Mais Detalhes](#)

[Informações](#)

Casado/a	188
Solteiro/a	218
Divorciado/a	40
Viúvo/a	10



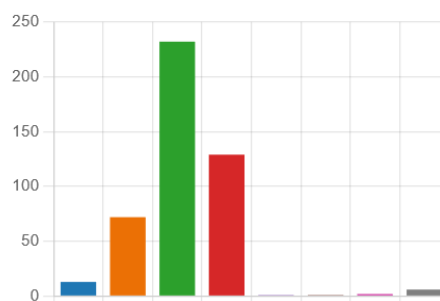
Graph 5 - Education Level

8. Nível de Ensino (0 ponto)

[Mais Detalhes](#)

[Informações](#)

Ensino básico	18
Ensino secundário ou equivalente	72
Licenciatura	232
Mestrado	129
Doutoramento	1
Nenhum dos acima	1
Prefiro não dizer	2
Outro	6

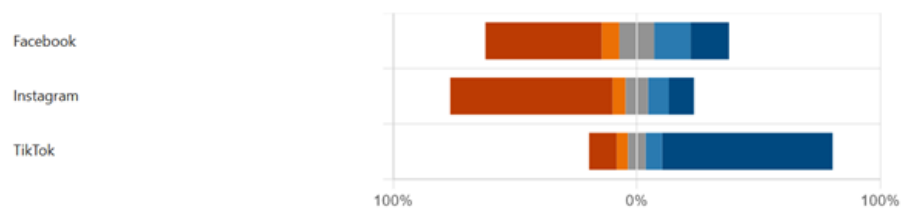


Graph 6 - Frequency of usage

3. Se sim, com que frequência? (0 point)

[More Details](#)

Todos os dias Dia sim, dia não Algumas vezes por semana Algumas vezes por mês Não uso



## Appendix 14 – ANOVA for measuring impact of demographics<sup>1</sup>

*Table 5 - Access to Information Facebook*

ANOVA - Access to informationFacebook									
		Sum of Squares		df		Mean Square		F	p
Gênero		9.03		4		2.257		1.612	0.170
Idade		13.36		5		2.672		1.908	0.092
Ocupação		1.24		4		0.310		0.222	0.926
Estado Civil		2.17		3		0.722		0.516	0.672
Nível de Ensino		4.00		6		0.667		0.476	0.826
Residuals		540.43		386		1.400			

*Table 6- Access to Information Instagram*

ANOVA - Access to informationInstagram									
		Sum of Squares		df		Mean Square		F	p
Gênero		22.20		3		7.400		6.284	< .001
Idade		9.94		5		1.988		1.688	0.136
Ocupação		3.92		4		0.980		0.832	0.505
Estado Civil		1.05		3		0.349		0.296	0.828
Nível de Ensino		4.75		6		0.792		0.673	0.672
Residuals		454.60		386		1.178			

*Table 7- Access to Information TikTok*

ANOVA - Access to informationTikTok									
		Sum of Squares		df		Mean Square		F	p
Ocupação		3.23		4		0.807		0.484	0.747
Estado Civil		1.60		3		0.532		0.319	0.811
Idade		12.28		5		2.456		1.474	0.201
Residuals		288.34		173		1.667			

*Table 8 - Social Interaction Facebook*

ANOVA - Interação socialFacebook									
		Sum of Squares		df		Mean Square		F	p
Gênero		5.61		4		1.401		1.053	0.380
Idade		4.92		5		0.984		0.739	0.594
Ocupação		17.31		4		4.327		3.252	0.012
Estado Civil		3.10		3		1.034		0.777	0.507
Nível de Ensino		5.22		6		0.870		0.654	0.687
Residuals		519.05		390		1.331			

<sup>1</sup> Online Shopping refers to Shop Online  
Update Status refers to Status Update  
Robustness refers to Ruggedness

*Table 9- Social Interaction Instagram*

ANOVA - Interação socialInstagram 2									
		Sum of Squares		df		Mean Square		F	p
Gênero		10.74		4		2.68		2.68	0.032
Idade		11.04		5		2.21		2.20	0.053
Ocupação		6.52		4		1.63		1.63	0.167
Estado Civil		6.44		3		2.15		2.14	0.094
Nível de Ensino		6.78		6		1.13		1.13	0.346
Residuals		389.04		388		1.00			

*Table 10- Social Interaction TikTok*

ANOVA - Interação socialTikTok 2									
		Sum of Squares		df		Mean Square		F	p
Idade		16.10		5		3.22		2.18	0.059
Ocupação		20.11		4		5.03		3.40	0.011
Estado Civil		5.99		3		2.00		1.35	0.260
Residuals		246.88		167		1.48			

*Table 11- Status update Facebook*

ANOVA - Atualizar o statusFacebook									
		Sum of Squares		df		Mean Square		F	p
Gênero		8.22		4		2.056		1.170	0.324
Idade		9.40		5		1.881		1.070	0.376
Ocupação		2.85		4		0.713		0.406	0.805
Estado Civil		6.59		3		2.198		1.251	0.291
Nível de Ensino		22.65		6		3.776		2.148	0.047
Residuals		666.11		379		1.758			

*Table 12- Status update Instagram*

ANOVA - Atualizar o statusInstagram 3									
		Sum of Squares		df		Mean Square		F	p
Gênero		15.25		3		5.085		3.434	0.017
Idade		16.01		5		3.202		2.163	0.058
Ocupação		2.17		4		0.543		0.367	0.832
Estado Civil		3.33		3		1.110		0.750	0.523
Nível de Ensino		10.45		6		1.741		1.176	0.318
Residuals		559.64		378		1.481			

*Table 13- Status update TikTok*

ANOVA - Atualizar o statusTikTok 3									
		Sum of Squares	df	Mean Square	F			p	
Idade		13.1	5	2.63	1.47			0.203	
Ocupação		25.6	4	6.39	3.57			0.008	
Estado Civil		17.1	3	5.72	3.19			0.025	
Residuals		295.4	165	1.79					

*Table 14- Shop online Facebook*

ANOVA - Compras onlineFacebook5									
		Sum of Squares	df	Mean Square	F			p	
Gênero		4.71	4	1.178	0.648			0.629	
Idade		12.92	5	2.584	1.421			0.216	
Ocupação		12.05	4	3.012	1.657			0.160	
Estado Civil		1.55	3	0.517	0.284			0.837	
Nível de Ensino		24.02	6	4.003	2.202			0.043	
Residuals		603.63	332	1.818					

*Table 15- Shop online Instagram*

ANOVA - Compras onlineInstagram 4									
		Sum of Squares	df	Mean Square	F			p	
Gênero		57.91	4	14.477	8.752			< .001	
Idade		9.63	5	1.926	1.164			0.326	
Ocupação		12.18	4	3.045	1.841			0.121	
Estado Civil		2.19	3	0.731	0.442			0.723	
Nível de Ensino		21.35	6	3.558	2.151			0.047	
Residuals		555.78	336	1.654					

*Table 16- Shop online TikTok*

ANOVA - Compras onlineTikTok 4									
		Sum of Squares	df	Mean Square	F			p	
Idade		1.94	5	0.388	0.261			0.933	
Ocupação		4.33	4	1.082	0.729			0.574	
Estado Civil		3.57	3	1.188	0.801			0.495	
Residuals		218.20	147	1.484					

Table 17- Entertainment Facebook

ANOVA - EntretenimentoFacebook6									
		Sum of Squares		df		Mean Square		F	p
Gênero		4.71		4		1.178		0.841	0.500
Idade		26.61		5		5.323		3.799	0.002
Ocupação		2.56		4		0.641		0.458	0.767
Estado Civil		5.12		3		1.706		1.218	0.303
Nível de Ensino		17.87		6		2.978		2.126	0.050
Residuals		518.33		370		1.401			

Table 18- Entertainment Instagram

ANOVA - EntretenimentoInstagram 5									
		Sum of Squares		df		Mean Square		F	p
Gênero		4.27		4		1.07		1.01	0.402
Idade		7.55		5		1.51		1.43	0.213
Ocupação		9.24		4		2.31		2.19	0.070
Estado Civil		9.71		3		3.24		3.06	0.028
Nível de Ensino		29.51		6		4.92		4.65	< .001
Residuals		399.43		378		1.06			

Table 19- Entertainment TikTok

ANOVA - EntretenimentoTikTok 5									
		Sum of Squares		df		Mean Square		F	p
Idade		9.14		5		1.83		1.79	0.114
Ocupação		5.99		4		1.50		1.46	0.212
Estado Civil		6.43		3		2.14		2.10	0.100
Residuals		406.84		398		1.02			

Table 20- Networking Facebook

ANOVA - NetworkingFacebook7									
		Sum of Squares		df		Mean Square		F	p
Idade		16.10		5		3.22		2.18	0.059
Ocupação		20.11		4		5.03		3.40	0.011
Estado Civil		5.99		3		2.00		1.35	0.260
Residuals		246.88		167		1.48			



*Table 21- Networking Instagram*

ANOVA - NetworkingInstagram 6									
		Sum of Squares		df		Mean Square		F	p
Gênero		8.22		4		2.056		1.170	0.324
Idade		9.40		5		1.881		1.070	0.376
Ocupação		2.85		4		0.713		0.406	0.805
Estado Civil		6.59		3		2.198		1.251	0.291
Nível de Ensino		22.65		6		3.776		2.148	0.047
Residuals		666.11		379		1.758			

*Table 22- Networking TikTok*

ANOVA - NetworkingTikTok 6									
		Sum of Squares		df		Mean Square		F	p
Gênero		15.30		4		3.824		2.576	0.037
Idade		16.03		5		3.206		2.160	0.058
Ocupação		2.17		4		0.542		0.365	0.834
Estado Civil		3.33		3		1.111		0.749	0.524
Nível de Ensino		10.48		6		1.747		1.177	0.318
Residuals		559.59		377		1.484			

*Table 23- Self-Expression Facebook*

ANOVA - Auto-expressãoFacebook8									
		Sum of Squares		df		Mean Square		F	p
Idade		13.1		5		2.63		1.47	0.203
Ocupação		25.6		4		6.39		3.57	0.008
Estado Civil		17.1		3		5.72		3.19	0.025
Residuals		295.4		165		1.79			

*Table 24- Self-Expression Instagram*

ANOVA - Auto-expressãoInstagram 7									
		Sum of Squares		df		Mean Square		F	p
Gênero		4.71		4		1.178		0.648	0.629
Idade		12.92		5		2.584		1.421	0.216
Ocupação		12.05		4		3.012		1.657	0.160
Estado Civil		1.55		3		0.517		0.284	0.837
Nível de Ensino		24.02		6		4.003		2.202	0.043
Residuals		603.63		332		1.818			

Table 25- Self-Expression TikTok

ANOVA - Auto-expressãoTikTok 7									
		Sum of Squares		df		Mean Square		F	p
Gênero		57.91		4		14.477		8.752	< .001
Idade		9.63		5		1.926		1.164	0.326
Ocupação		12.18		4		3.045		1.841	0.121
Estado Civil		2.19		3		0.731		0.442	0.723
Nível de Ensino		21.35		6		3.558		2.151	0.047
Residuals		555.78		336		1.654			

Table 26- Ruggedness Facebook

ANOVA - RobustezFacebook9									
		Sum of Squares		df		Mean Square		F	p
Idade		1.94		5		0.388		0.261	0.933
Ocupação		4.33		4		1.082		0.729	0.574
Estado Civil		3.57		3		1.188		0.801	0.495
Residuals		218.20		147		1.484			

Table 27- Ruggedness Instagram

ANOVA - RobustezInstagram 8									
		Sum of Squares		df		Mean Square		F	p
Gênero		4.71		4		1.178		0.841	0.500
Idade		26.61		5		5.323		3.799	0.002
Ocupação		2.56		4		0.641		0.458	0.767
Estado Civil		5.12		3		1.706		1.218	0.303
Nível de Ensino		17.87		6		2.978		2.126	0.050
Residuals		518.33		370		1.401			

Table 28- Ruggedness TikTok

ANOVA - RobustezTikTok 8									
		Sum of Squares		df		Mean Square		F	p
Gênero		4.27		4		1.07		1.01	0.402
Idade		7.55		5		1.51		1.43	0.213
Ocupação		9.24		4		2.31		2.19	0.070
Estado Civil		9.71		3		3.24		3.06	0.028
Nível de Ensino		29.51		6		4.92		4.65	< .001
Residuals		399.43		378		1.06			

Table 29- Sincerity Facebook

ANOVA - SinceridadeFacebook10									
		Sum of Squares		df		Mean Square		F	p
Gênero		10.74		4		2.68		2.68	0.032
Idade		11.04		5		2.21		2.20	0.053
Ocupação		6.52		4		1.63		1.63	0.167
Estado Civil		6.44		3		2.15		2.14	0.094
Nível de Ensino		6.78		6		1.13		1.13	0.346
Residuals		389.04		388		1.00			

Table 30- Sincerity Instagram

ANOVA - SinceridadeInstagram 9									
		Sum of Squares		df		Mean Square		F	p
Idade		16.10		5		3.22		2.18	0.059
Ocupação		20.11		4		5.03		3.40	0.011
Estado Civil		5.99		3		2.00		1.35	0.260
Residuals		246.88		167		1.48			

Table 31- Sincerity TikTok

ANOVA - SinceridadeTikTok 9									
		Sum of Squares		df		Mean Square		F	p
Gênero		8.22		4		2.056		1.170	0.324
Idade		9.40		5		1.881		1.070	0.376
Ocupação		2.85		4		0.713		0.406	0.805
Estado Civil		6.59		3		2.198		1.251	0.291
Nível de Ensino		22.65		6		3.776		2.148	0.047
Residuals		666.11		379		1.758			

Table 32- Enthusiasm Facebook

ANOVA - EntusiasmoFacebook11									
		Sum of Squares		df		Mean Square		F	p
Gênero		15.30		4		3.824		2.576	0.037
Idade		16.03		5		3.206		2.160	0.058
Ocupação		2.17		4		0.542		0.365	0.834
Estado Civil		3.33		3		1.111		0.749	0.524
Nível de Ensino		10.48		6		1.747		1.177	0.318
Residuals		559.59		377		1.484			

*Table 33- Enthusiasm Instagram*

ANOVA - EntusiasmoInstagram 10									
		Sum of Squares	df	Mean Square	F			p	
Idade		13.1	5	2.63	1.47			0.203	
Ocupação		25.6	4	6.39	3.57			0.008	
Estado Civil		17.1	3	5.72	3.19			0.025	
Residuals		295.4	165	1.79					

*Table 34- Enthusiasm TikTok*

ANOVA - EntusiasmoTikTok 10									
		Sum of Squares	df	Mean Square	F			p	
Gênero		4.71	4	1.178	0.648			0.629	
Idade		12.92	5	2.584	1.421			0.216	
Ocupação		12.05	4	3.012	1.657			0.160	
Estado Civil		1.55	3	0.517	0.284			0.837	
Nível de Ensino		24.02	6	4.003	2.202			0.043	
Residuals		603.63	332	1.818					

*Table 35- Competence Facebook*

ANOVA - CompetênciaFacebook12									
		Sum of Squares	df	Mean Square	F			p	
Gênero		57.91	4	14.477	8.752			< .001	
Idade		9.63	5	1.926	1.164			0.326	
Ocupação		12.18	4	3.045	1.841			0.121	
Estado Civil		2.19	3	0.731	0.442			0.723	
Nível de Ensino		21.35	6	3.558	2.151			0.047	
Residuals		555.78	336	1.654					

*Table 36- Competence Instagram*

ANOVA - CompetênciaInstagram 11									
		Sum of Squares	df	Mean Square	F			p	
Gênero		4.57	4	1.143	0.902			0.463	
Idade		3.85	5	0.771	0.608			0.694	
Ocupação		4.34	4	1.086	0.857			0.490	
Estado Civil		3.45	3	1.152	0.909			0.437	
Nível de Ensino		11.97	6	1.994	1.574			0.153	
Residuals		486.51	384	1.267					

*Table 37- Competence TikTok*

ANOVA - CompetênciaTikTok 11									
		Sum of Squares	df	Mean Square	F			p	
Idade		8.94	5	1.79	1.27			0.276	
Ocupação		7.26	4	1.81	1.29			0.274	
Estado Civil		6.27	3	2.09	1.49			0.219	
Residuals		270.81	193	1.40					

*Table 38- Sophistication Facebook*

ANOVA - SofisticaçãoFacebook13									
		Sum of Squares	df	Mean Square	F			p	
Gênero		1.93	4	0.482	0.494			0.740	
Idade		10.21	5	2.042	2.093			0.066	
Ocupação		2.89	4	0.721	0.739			0.566	
Estado Civil		2.36	3	0.787	0.807			0.491	
Nível de Ensino		8.86	6	1.476	1.513			0.172	
Residuals		374.68	384	0.976					

*Table 39- Sophistication Instagram*

ANOVA - SofisticaçãoInstagram 12									
		Sum of Squares	df	Mean Square	F			p	
Gênero		6.93	4	1.733	1.625			0.167	
Idade		3.37	5	0.673	0.631			0.676	
Ocupação		9.05	4	2.263	2.122			0.077	
Estado Civil		1.29	3	0.431	0.404			0.750	
Nível de Ensino		8.14	6	1.357	1.273			0.269	
Residuals		407.40	382	1.066					

*Table 40- Sophistication TikTok*

ANOVA - SofisticaçãoTikTok 12									
		Sum of Squares	df	Mean Square	F			p	
Idade		15.02	5	3.00	2.235			0.052	
Ocupação		4.47	4	1.12	0.832			0.506	
Estado Civil		7.76	3	2.59	1.926			0.127	
Residuals		257.95	192	1.34					

## Appendix 15 – Tables of differences in means<sup>2</sup>

Table 41- Mean Differences for Age

	Idade	Access to informationF	Access to informationIn	Access to informationTi	Interação socialFacebook	Interação socialInstagram	Interação socialTikTok	Atualizar o statusFacebook	Atualizar o statusInstagram	Atualizar o statusTikTok	Compras onlineFacebook	Compras onlineInstagram	Compras onlineTikTok	Entretenimen toFacebook6	Entretenimen toInstagram 5
Mean	18-24	3.13	3.48	2.95	3.17	4.47	2.53	2.86	3.98	2.68	2.29	3.12	2.00	2.37	4.10
	25-34	3.57	3.48	2.27	3.53	4.24	2.86	3.03	3.48	2.91	2.69	3.00	1.60	2.79	4.11
	35-44	3.16	2.93	1.83	4.02	3.58	2.36	3.27	3.33	2.80	3.07	3.00	1.30	3.50	3.93
	45-54	3.34	3.06	1.79	4.03	3.56	2.00	3.34	3.21	2.00	2.61	3.02	1.75	3.40	3.51
	Mais de 54	3.28	2.91	2.17	3.81	3.05	2.22	3.03	2.73	2.12	2.46	2.19	1.65	3.58	3.17
	Menos de 18	1.86	3.73	3.10	2.14	4.62	3.37	1.86	3.86	2.94	1.80	3.24	2.23	1.17	4.00

Entretenimen toTikTok 5	NetworkingFacebook7	NetworkingInstagram 6	NetworkingTikTok 6	Auto-expressãoFacebook	Auto-expressãoInstagram	Auto-expressãoTikTok	RobustezFacebook9	RobustezInstagram 8	RobustezTikTok 8	SinceridadeFacebook10	SinceridadeInstagram 9	SinceridadeTikTok 9
4.47	2.53	2.86	3.98	2.68	2.29	3.12	2.00	2.37	4.10	4.47	2.53	2.86
4.24	2.86	3.03	3.48	2.91	2.69	3.00	1.60	2.79	4.11	4.24	2.86	3.03
3.58	2.36	3.27	3.33	2.80	3.07	3.00	1.30	3.50	3.93	3.58	2.36	3.27
3.56	2.00	3.34	3.21	2.00	2.61	3.02	1.75	3.40	3.51	3.56	2.00	3.34
3.05	2.22	3.03	2.73	2.12	2.46	2.19	1.65	3.58	3.17	3.05	2.22	3.03
4.62	3.37	1.86	3.86	2.94	1.80	3.24	2.23	1.17	4.00	4.62	3.37	1.86

EntusiasmoFacebook11	EntusiasmoInstagram 10	EntusiasmoTikTok 10	CompetênciaFacebook12	CompetênciaInstagram 11	CompetênciaTikTok 11	SofisticaçãoFacebook13	SofisticaçãoInstagram 12	SofisticaçãoTikTok 12
3.98	2.68	2.29	3.12	3.24	2.92	1.98	3.91	3.48
3.48	2.91	2.69	3.00	3.14	3.00	2.16	3.89	3.87
3.33	2.80	3.07	3.00	3.07	2.47	2.51	3.47	2.75
3.21	2.00	2.61	3.02	3.08	2.29	2.41	3.54	2.81
2.73	2.12	2.46	2.19	2.81	2.09	2.51	3.32	2.55
3.86	2.94	1.80	3.24	3.14	3.24	2.00	4.24	3.68

Table 42- Mean Differences for Gender

	Gênero	Access to	Access to	Access to	Interação	Interação	Interação	Atualizar o	Atualizar o	Atualizar o	Compras	Compras	Compras	Entretenimen	Entretenimen
		informationF	informationIn	informationTi	socialFacebook	socialInstagram	socialTikTok	statusFacebook	statusInstagram	statusTikTok	onlineFacebook	onlineInstagram	onlineTikTok	toFacebook6	toInstagram 5
Mean	Feminino	3.33	3.36	2.80	3.70	3.93	2.66	3.14	3.56	2.84	2.63	3.21	2.01	3.12	3.82
	Masculino	3.04	3.00	2.32	3.51	3.90	2.33	2.95	3.34	2.11	2.35	2.40	1.60	2.84	3.76
	Prefiro não dizer	3.50	3.00	NaN	4.00	3.00	NaN	3.00	3.50	NaN	2.50	3.50	NaN	3.50	3.50
	Outro	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00

Entretenimen toTikTok 5	NetworkingFacebook7	NetworkingInstagram 6	NetworkingTikTok 6	Auto-expressãoFacebook	Auto-expressãoInstagram	Auto-expressãoTikTok	RobustezFacebook9	RobustezInstagram 8	RobustezTikTok 8	SinceridadeFacebook10	SinceridadeInstagram 9	SinceridadeTikTok 9
3.93	2.66	3.14	3.56	2.84	2.63	3.21	2.01	3.12	3.82	3.93	2.66	3.14
3.90	2.33	2.95	3.34	2.11	2.35	2.40	1.60	2.84	3.76	3.90	2.33	2.95
3.00	NaN	3.00	3.50	NaN	2.50	3.50	NaN	3.50	3.50	3.00	NaN	3.00
2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	3.00	1.00

EntusiasmoFacebook11	EntusiasmoInstagram 10	EntusiasmoTikTok 10	CompetênciaFacebook12	CompetênciaInstagram 11	CompetênciaTikTok 11	SofisticaçãoFacebook13	SofisticaçãoInstagram 12	SofisticaçãoTikTok 12
3.56	2.84	2.63	3.21	3.15	2.85	2.27	3.73	3.22
3.34	2.11	2.35	2.40	3.03	2.50	2.28	3.62	3.37
3.50	NaN	2.50	3.50	2.00	NaN	2.50	3.50	NaN
2.00	3.00	1.00	2.00	2.00	3.00	1.00	2.00	3.00

<sup>2</sup> Online Shopping refers to Shop Online  
Update Status refers to Status Update  
Robustness refers to Ruggedness

Table 43- Mean Differences for Occupation

	Ocupação	Access to informationF	Access to informationIn	Access to informationTi	Interação socialFacebook	Interação socialInstagram	Interação socialTikTok	Atualizar o statusFacebook	Atualizar o statusInstagram	Atualizar o statusTikTok	Compras onlineFacebook	Compras onlineInstagram	Compras onlineTikTok	Entretenimen toFacebook6	Entretenimen toInstagram 5
Mean	Desempregado/a	3.50	3.60	2.00	2.83	3.50	5.00	2.60	3.75	5.00	2.80	3.00	1.00	3.20	4.25
	Empregado/a	3.30	3.15	2.14	3.94	3.69	2.15	3.21	3.29	2.13	2.71	2.96	1.63	3.30	3.72
	Estudante	3.04	3.48	2.96	2.99	4.50	2.78	2.75	3.93	2.86	2.18	3.16	2.09	2.32	4.08
	Prefiro não dizer	3.20	2.40	2.00	4.00	2.50	1.00	3.00	2.67	1.00	1.50	1.00	1.00	2.75	1.67
	Reformado/a	3.35	2.71	2.57	3.87	2.84	2.43	3.16	2.64	2.67	2.45	1.77	1.80	3.67	2.85

Entretenimen toTikTok 5	NetworkingFacebook7	NetworkingInstagram 6	NetworkingTikTok 6	Auto-expressãoFacebook	Auto-expressãoInstagram	Auto-expressãoTikTok	RobustezFacebook9	RobustezInstagram 8	RobustezTikTok 8	SinceridadeFacebook10	SinceridadeInstagram 9	SinceridadeTikTok 9
3.50	5.00	2.60	3.75	5.00	2.80	3.00	1.00	3.20	4.25	3.50	5.00	2.60
3.69	2.15	3.21	3.29	2.13	2.71	2.96	1.63	3.30	3.72	3.69	2.15	3.21
4.50	2.78	2.75	3.93	2.86	2.18	3.16	2.09	2.32	4.08	4.50	2.78	2.75
2.50	1.00	3.00	2.67	1.00	1.50	1.00	1.00	2.75	1.67	2.50	1.00	3.00
2.84	2.43	3.16	2.64	2.67	2.45	1.77	1.80	3.67	2.85	2.84	2.43	3.16

EntusiasmoFacebook11	EntusiasmoInstagram 10	EntusiasmoTikTok 10	CompetênciaFacebook12	CompetênciaInstagram 11	CompetênciaTikTok 11	SofisticaçãoFacebook13	SofisticaçãoInstagram 12	SofisticaçãoTikTok 12
3.75	5.00	2.80	3.00	3.60	5.00	2.67	4.00	4.00
3.29	2.13	2.71	2.96	3.06	2.47	2.36	3.57	3.04
3.93	2.86	2.18	3.16	3.26	2.96	2.02	3.97	3.49
2.67	1.00	1.50	1.00	2.00	1.00	2.00	2.00	1.00
2.64	2.67	2.45	1.77	2.77	2.54	3.35	3.14	

Table 44- Mean Differences for Marital Status

	Estado Civil	Access to	Access to	Access to	Interação	Interação	Interação	Atualizar o	Atualizar o	Atualizar o	Compras	Compras	Compras	Entretenimen	Entretenimen
		informationF	informationIn	informationTi	socialFacebook	socialInstagram	socialTikTok	statusFacebook	statusInstagram	statusTikTok	onlineFacebook	onlineInstagram	onlineTikTok	toFacebook6	toInstagram 5
Mean	Casado/a	3.23	3.04	2.09	3.88	3.51	2.39	3.20	3.16	2.56	2.63	2.78	1.76	3.35	3.47
	Divorciado/a	3.37	3.00	1.67	4.24	3.15	2.14	3.57	2.94	1.75	2.75	3.00	1.33	3.84	3.53
	Solteiro/a	3.20	3.45	2.86	3.27	4.40	2.65	2.87	3.85	2.67	2.40	3.13	1.98	2.51	4.12
	Viúvo/a	3.30	2.89	2.25	4.00	2.78	1.50	2.70	2.63	1.50	2.38	2.29	1.00	3.80	2.71

Entretenimen toTikTok 5	NetworkingFacebook7	NetworkingInstagram 6	NetworkingTikTok 6	Auto-expressãoFacebook	Auto-expressãoInstagram	Auto-expressãoTikTok	RobustezFacebook9	RobustezInstagram 8	RobustezTikTok 8	SinceridadeFacebook10	SinceridadeInstagram 9	SinceridadeTikTok 9
3.51	2.39	3.20	3.16	2.56	2.63	2.78	1.76	3.35	3.47	3.51	2.39	3.20
3.15	2.14	3.57	2.94	1.75	2.75	3.00	1.33	3.84	3.53	3.15	2.14	3.57
4.40	2.65	2.87	3.85	2.67	2.40	3.13	1.98	2.51	4.12	4.40	2.65	2.87
2.78	1.50	2.70	2.63	1.50	2.38	2.29	1.00	3.80	2.71	2.78	1.50	2.70

EntusiasmoFacebook11	EntusiasmoInstagram 10	EntusiasmoTikTok 10	CompetênciaFacebook12	CompetênciaInstagram 11	CompetênciaTikTok 11	SofisticaçãoFacebook13	SofisticaçãoInstagram 12	SofisticaçãoTikTok 12
3.16	2.56	2.63	2.78	2.96	2.32	2.42	3.44	2.89
2.94	1.75	2.75	3.00	2.88	2.08	2.45	3.47	2.18
3.85	2.67	2.40	3.13	3.24	2.93	2.07	3.91	3.51
2.63	1.50	2.38	2.29	3.38	3.50	2.89	3.88	3.75

Table 45- Mean Differences for Education Level

	Nível de Ensino	Access to informationF	Access to informationIn	Access to informationTi	Interação socialFacebook	Interação socialInstagram	Interação socialTikTok	Atualizar o statusFacebook	Atualizar o statusInstagram	Atualizar o statusTikTok	Compras onlineFacebook	Compras onlineInstagram	Compras onlineTikTok	Entretenimen toFacebook6	Entretenimen toInstagram 5
Mean	Douturamento	3.71	3.60	3.00	3.86	3.83	3.00	3.00	3.00	3.00	3.33	3.20	1.33	2.86	2.83
	Ensino básico	2.60	3.77	3.42	2.33	4.67	3.50	2.33	4.08	2.91	3.00	4.00	2.86	2.25	4.38
	Ensino secundário ou equivalente	3.05	3.18	2.76	3.63	3.75	2.68	3.30	3.39	2.84	2.87	2.83	1.78	3.24	3.39
	Licenciatura	3.23	3.22	2.63	3.60	3.92	2.42	3.18	3.56	2.51	2.47	2.86	1.87	3.02	3.80
	Mestrado	3.31	3.27	2.25	3.71	3.95	2.38	2.81	3.38	2.37	2.45	3.14	1.82	2.97	4.04
	Nenhum dos acima	3.00	3.00	NaN	4.00	3.00	NaN	2.00	2.00	NaN	3.00	3.00	NaN	3.00	3.00
	Prefiro não dizer	3.50	1.00	NaN	5.00	2.00	NaN	2.00	2.00	NaN	2.00	2.00	NaN	1.50	1.00

Entretenimen toTikTok 5	NetworkingF cebook7	NetworkingInstagram 6	NetworkingTi kTok 6	Auto-expressioFace	Auto-expressioInst	Auto-expressioTikTok	RobustezFace book9	RobustezInsta gram 8	RobustezTikTok ok 8	SinceridadeF acebook10	SinceridadeInstagram 9	SinceridadeTi kTok 9	EntusiasmoFa cebook11	EntusiasmoInstagram 10	EntusiasmoTi kTok 10	Competência Facebook12	Competência Instagram 11	Competência TikTok 11	SofisticaçãoF acebook13	SofisticaçãoInstagram 12	SofisticaçãoTikTok 12	
3.83	3.00	3.00	3.00	3.00	3.33	3.20	1.33	2.86	2.83	3.83	3.00	3.00	3.00	3.00	3.00	3.33	3.20	2.83	2.33	2.71	3.50	2.67
4.67	3.50	2.33	4.08	2.91	3.00	4.00	2.86	2.25	4.38	4.67	3.50	2.33	4.08	2.91	3.00	4.00	3.67	3.30	2.43	4.58	3.83	
3.75	2.68	3.30	3.39	2.84	2.87	2.83	1.78	3.24	3.39	3.75	2.68	3.30	3.39	2.84	2.87	2.83	2.79	2.75	2.44	3.54	3.38	
3.92	2.42	3.18	3.56	2.51	2.47	2.86	1.87	3.02	3.80	3.92	2.42	3.18	3.56	2.51	2.47	2.86	3.16	2.78	2.22	3.61	3.21	
3.95	2.38	2.81	3.38	2.37	2.45	3.14	1.82	2.97	4.08	3.95	2.38	2.81	3.38	2.37	2.45	3.14	3.14	2.53	2.25	3.83	3.22	
3.00	NaN	3.00	2.00	NaN	3.00	3.00	NaN	3.00	3.00	3.00	NaN	2.00	NaN	2.00	3.00	3.00	2.00	NaN	3.00	3.00	NaN	
2.00	NaN	2.00	2.00	NaN	2.00	2.00	NaN	1.50	1.00	2.00	NaN	2.00	2.00	NaN	2.00	2.00	4.00	NaN	2.00	4.00	NaN	

EntusiasmoFa cebook11	EntusiasmoInstagram 10	EntusiasmoTi kTok 10	Competência Facebook12	Competência Instagram 11	Competência TikTok 11	SofisticaçãoF acebook13	SofisticaçãoInstagram 12	SofisticaçãoTikTok 12
3.00	3.00	3.33	3.20	2.83	2.33	2.71	3.50	2.67
4.08	2.91	3.00	4.00	3.67	3.30	2.43	4.58	3.83
3.39	2.84	2.87	2.83	2.79	2.75	2.44	3.54	3.38
3.56	2.51	2.47	2.86	3.16	2.78	2.22	3.61	3.21
3.38	2.37	2.45	3.14	3.14	2.53	2.25	3.83	3.22
2.00	NaN	3.00	3.00	2.00	NaN	3.00	3.00	NaN
2.00	NaN	2.00	2.00	4.00	NaN	2.00	4.00	NaN

## Appendix 16 – Perceptual map outputs

Table 46 - Attributes Means for each Platform

	Facebook	Instagram	TikTok
Access to Information	3.23	3.24	2.61
Social Interaction	3.63	3.91	2.54
Updated Status	3.06	3.48	2.57
Shop online	2.53	2.96	1.88
Entertainment	3.02	3.80	3.91
Networking	2.54	3.07	3.49
Self-expression	2.57	2.53	2.97
Ruggedness	1.8	3.02	3.80
Sincerity	3.91	2.53	3.07
Enthusiastic	3.49	2.57	2.53



Competence	2.97	3.10	2.72
Sophistication	2.27	3.68	3.27

Graph 7- Cumulative Variance Scree Plot

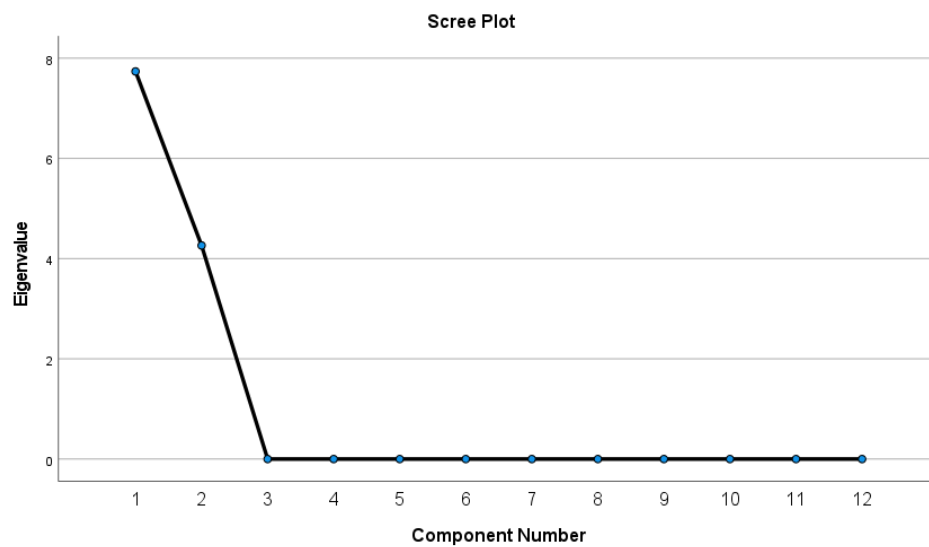
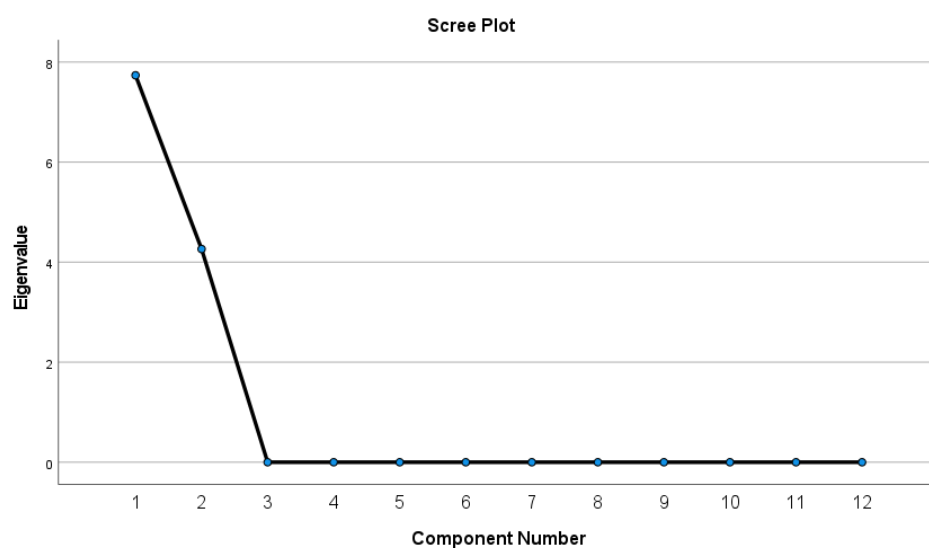


Table 47- Variance and cumulative variance explained, by dimension



### Total Variance Explained

Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings <sup>a</sup>
	Total	% of Variance	Cumulative %	Total
1	7,737	64,475	64,475	6,860
2	4,263	35,525	100,000	5,775

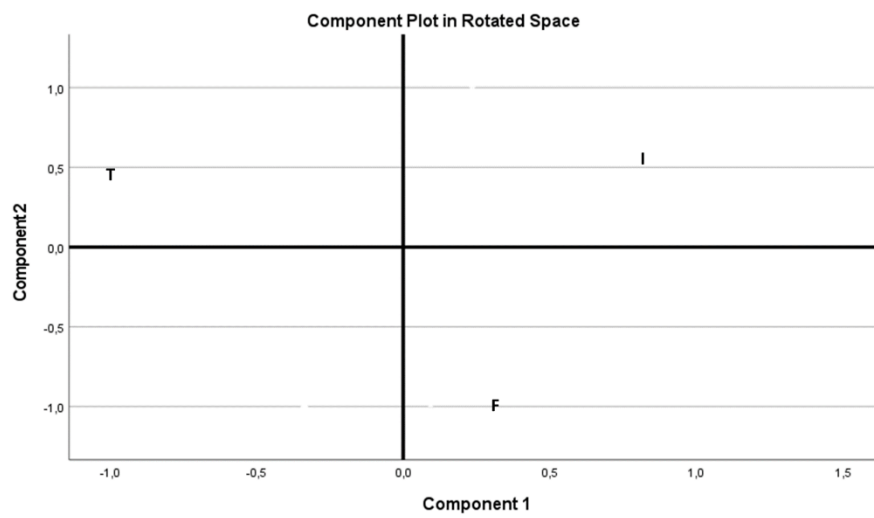
Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

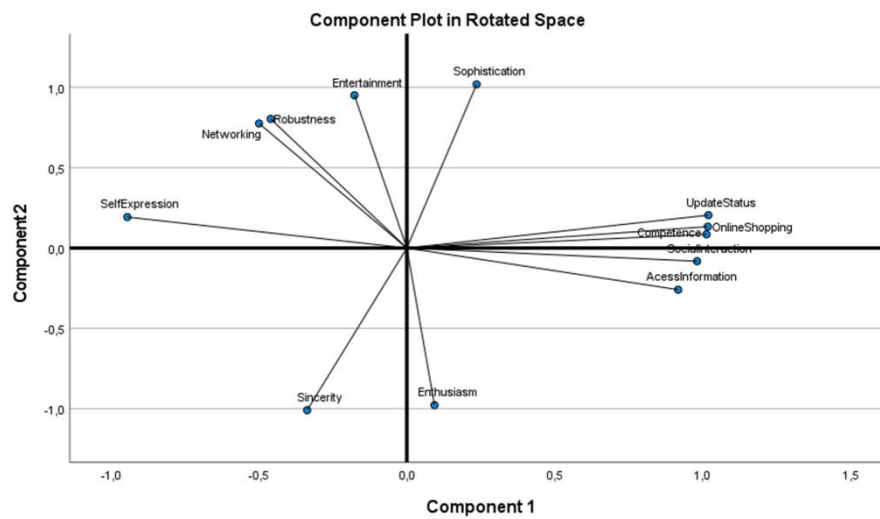
Table 48- Social media platforms coordinate

	Dimension I	Dimension II
Facebook	0,28497	-1,153
Instagram	0,82723	0,63078
TikTok	-1,1113	0,52222

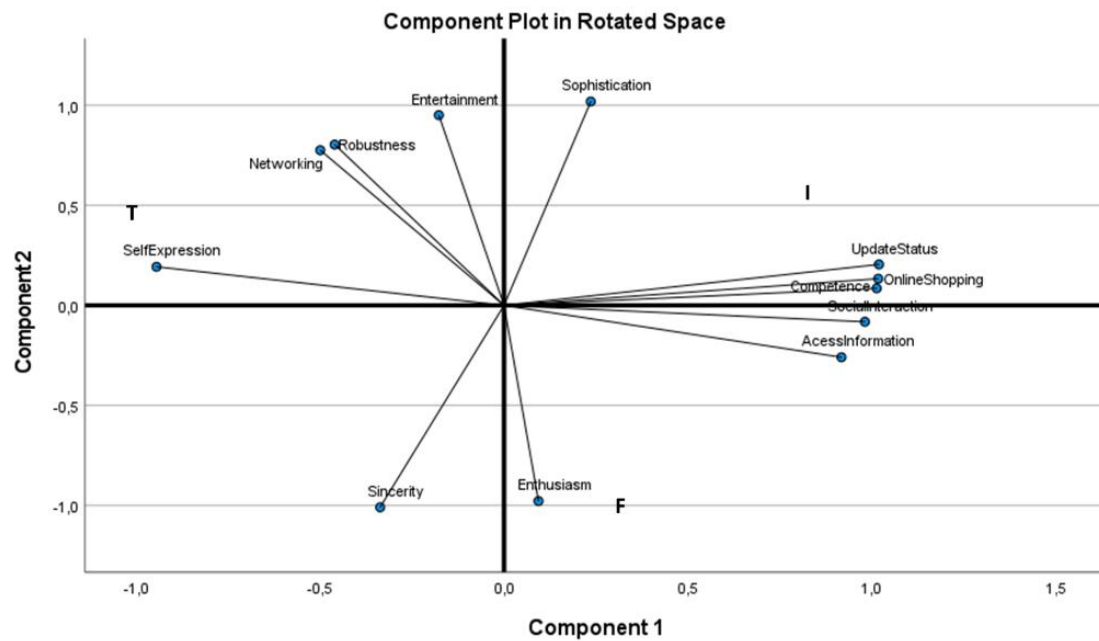
## Appendix 17 – Perceptual Map Social Media Platforms



## Appendix 18 – Perceptual Map Associations

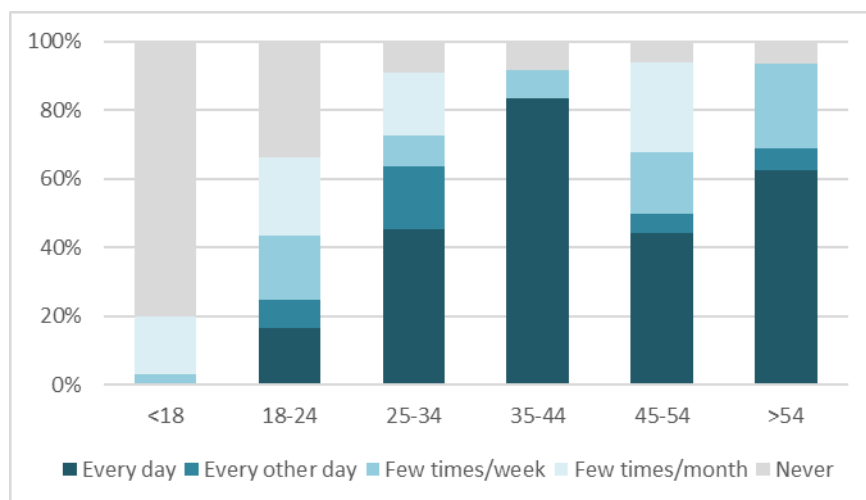


## Appendix 19 – Expanded Perceptual Map

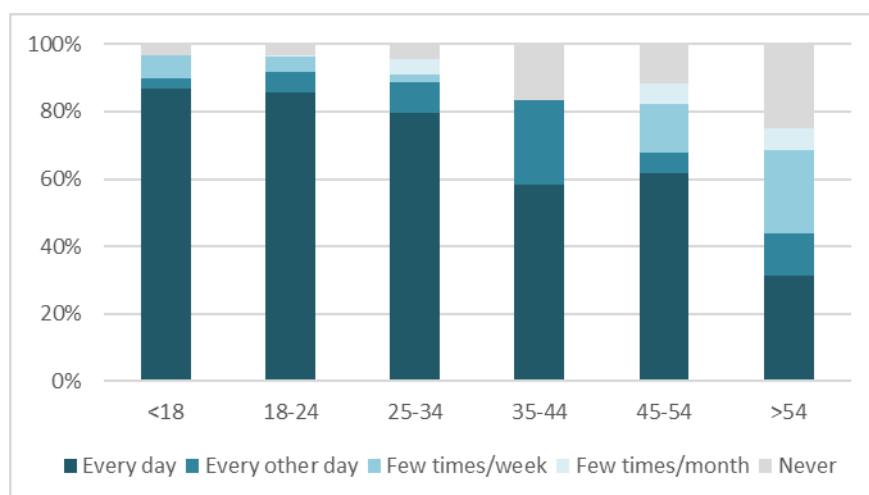


## Appendix 20 – Pivot Tables

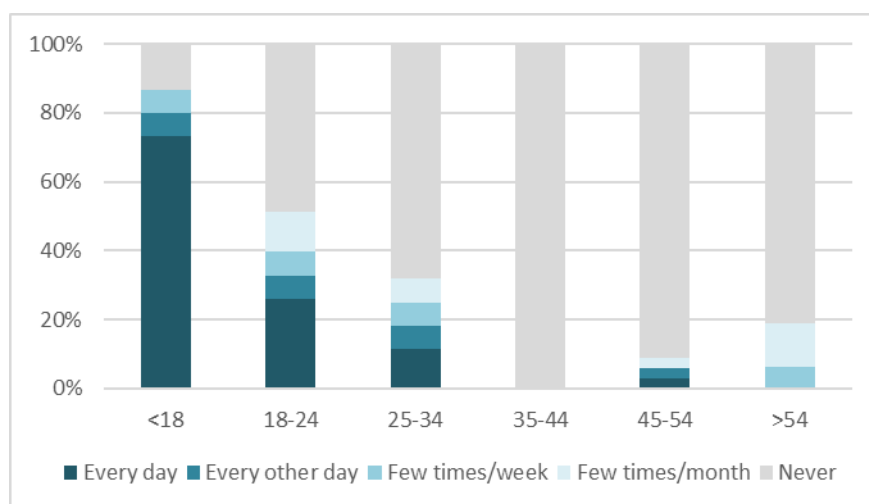
Graph 8 – Facebook's frequency of use per age



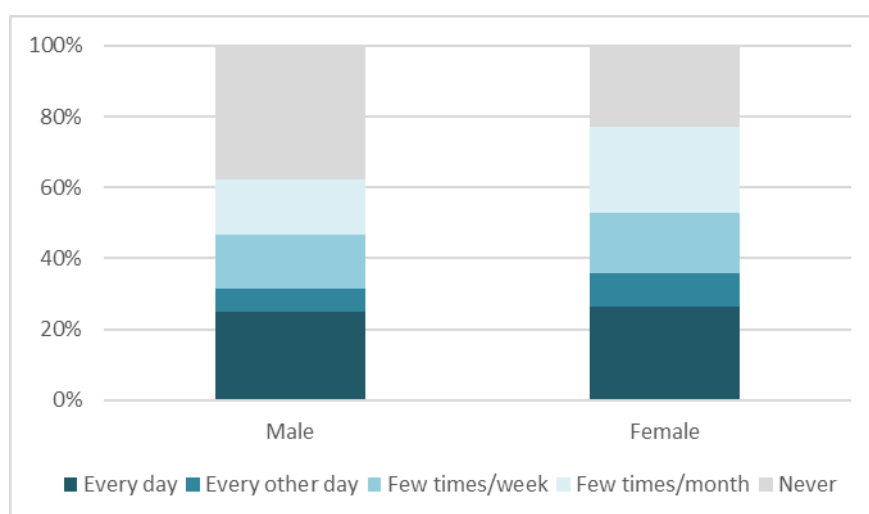
Graph 9 – Instagram's frequency of use per age



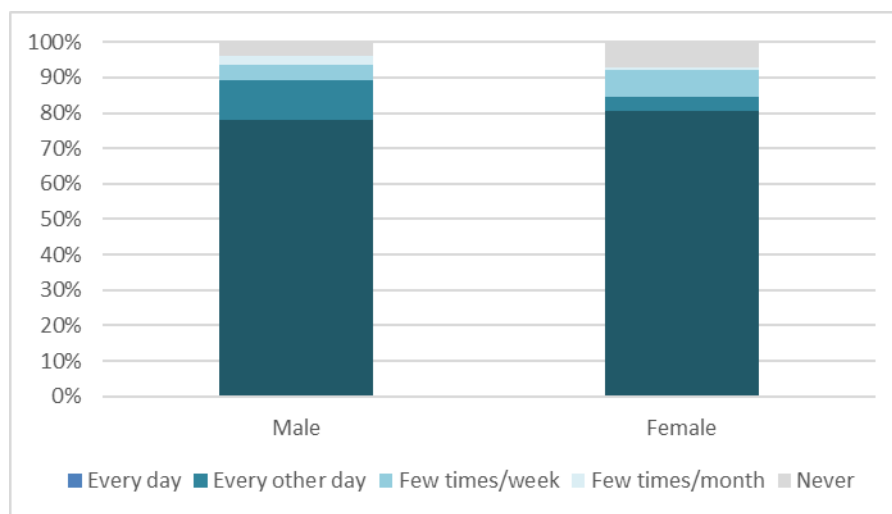
Graph 10 – TikTok's frequency of use per age



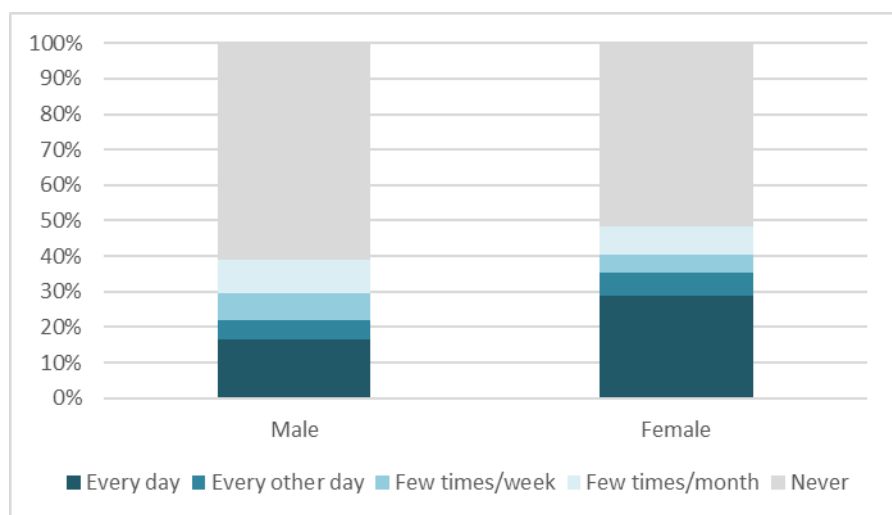
Graph 11 – Facebook's frequency of use per gender



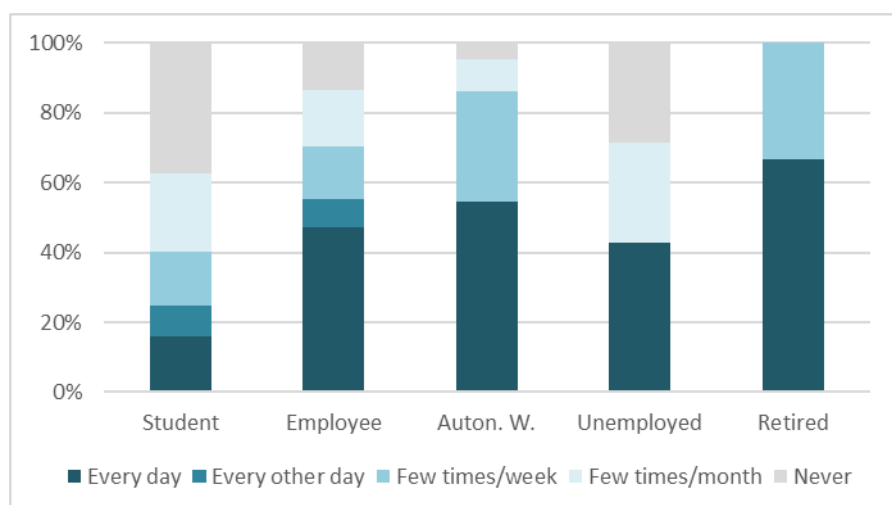
Graph 12 – Instagram’s frequency of use per gender



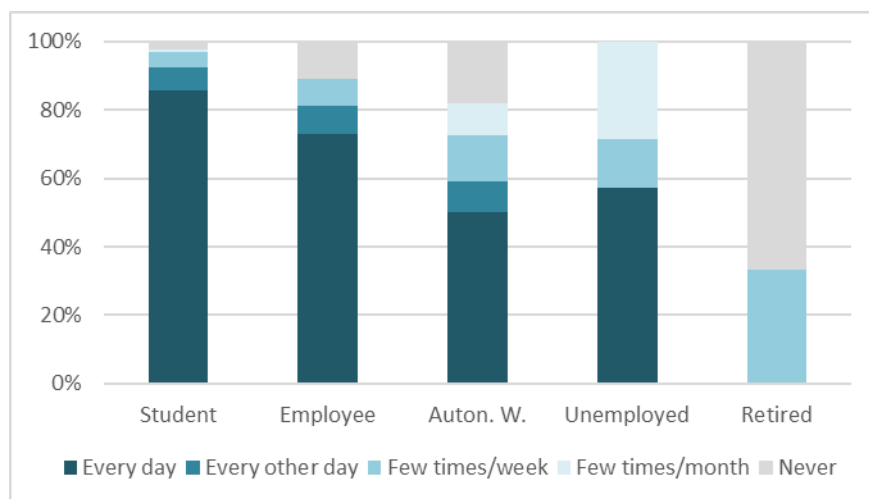
Graph 13 – TikTok’s frequency of use per gender



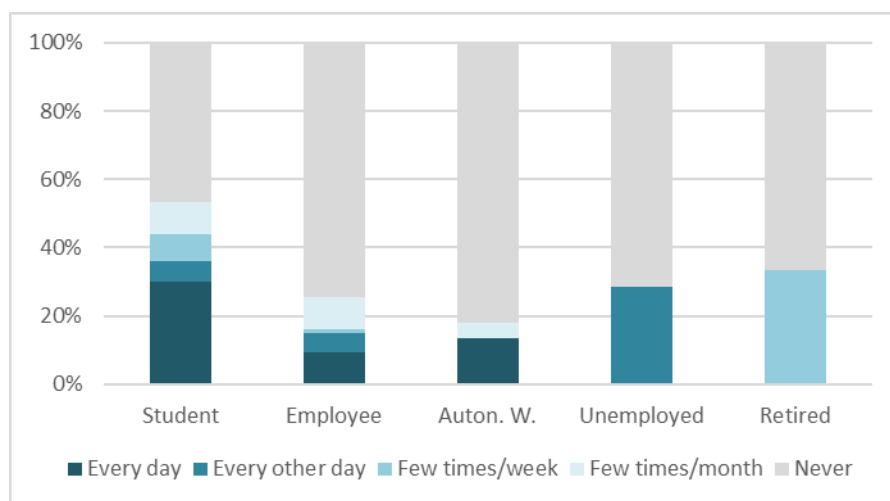
Graph 14 – Facebook’s frequency of use per occupation



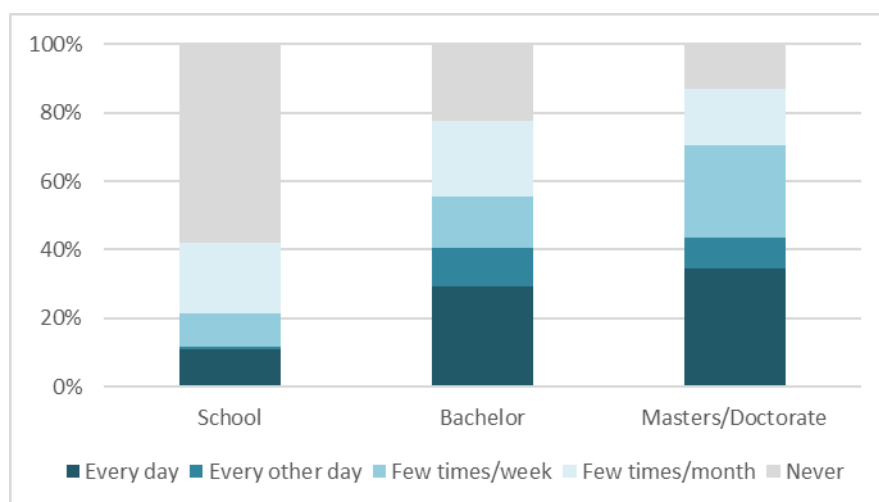
Graph 15 – Instagram's frequency of use per occupation



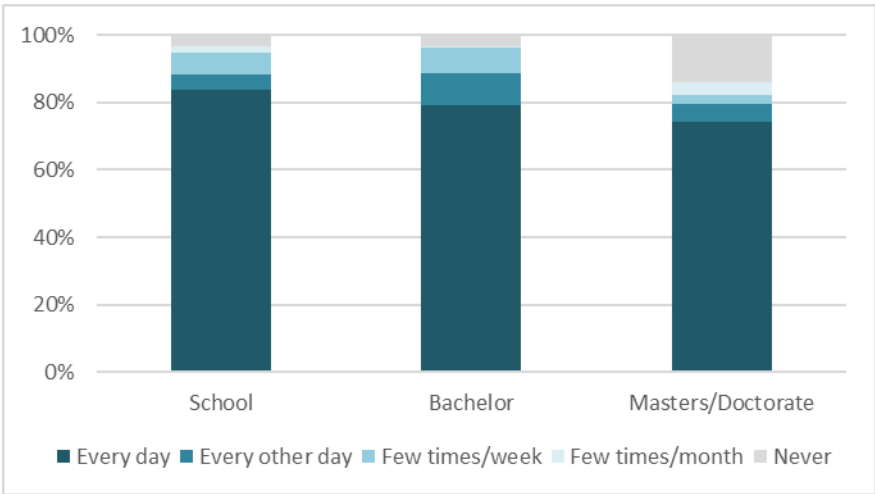
Graph 16 – TikTok's frequency of use per occupation



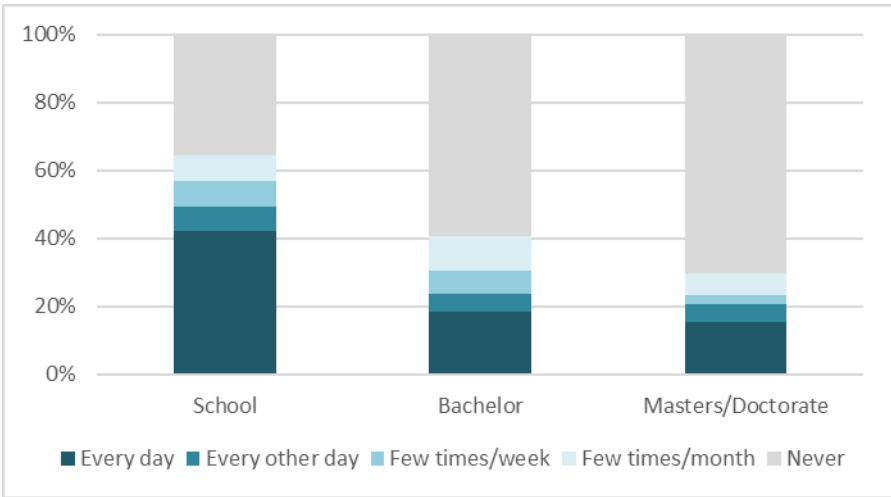
Graph 87 – Facebook's frequency of use per education level



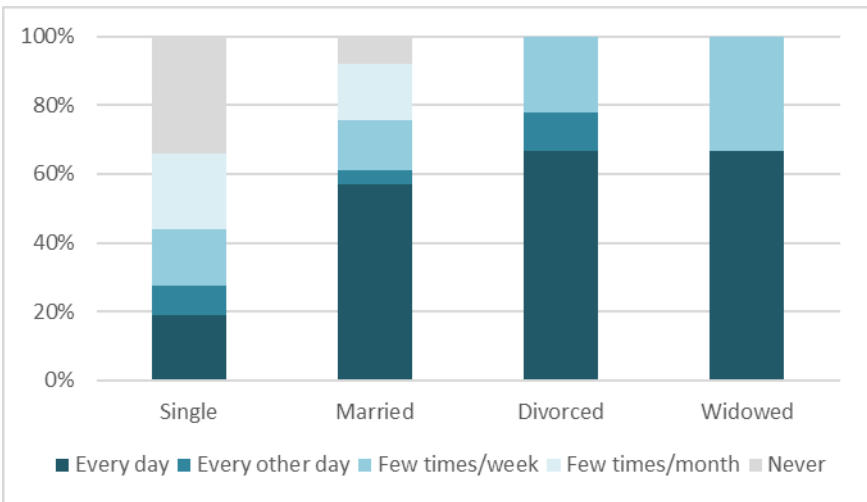
Graph 18 – Instagram’s frequency of use per education level



Graph 19 – TikTok’s frequency of use per education level

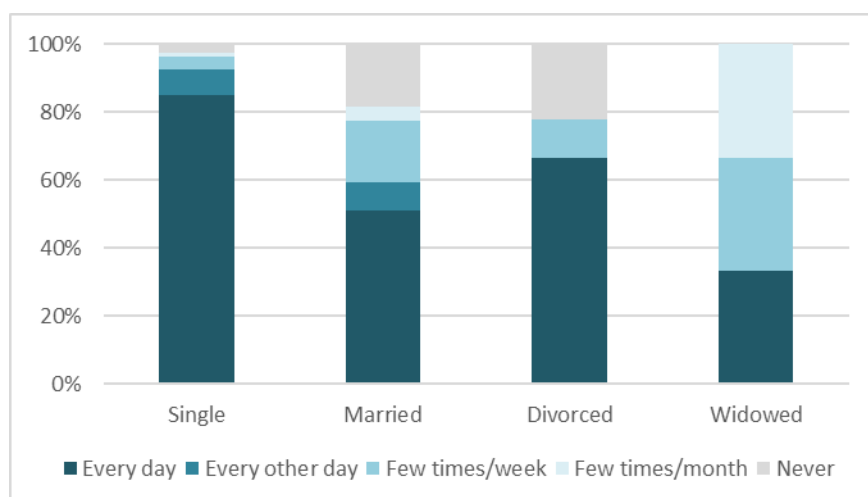


Graph 20 – Facebook’s frequency of use per marital status





Graph 22 – Instagram's frequency of use per marital status



Graph 23 – TikTok's frequency of use per marital status

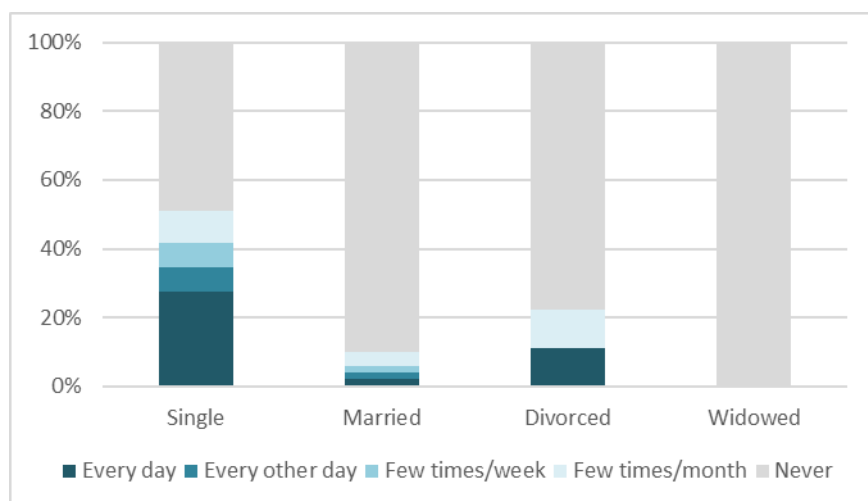


Table 50 – Instagram's frequency of use per Facebook's frequency of use

Facebook frequency	Instagram frequency				
	Every day	Every other day	Few times/week	Few times/month	Never
Every day	68%	7%	8%	3%	14%
Every other day	86%	10%	0%	0%	3%
Few times/week	78%	7%	7%	3%	5%
Few times/month	82%	10%	5%	0%	3%
Never	86%	6%	7%	1%	1%

Table 51 – Facebook's frequency of use per Instagram's frequency of use

TikTok frequency	Instagram frequency				
	Every day	Every other day	Few times/week	Few times/month	Never
Every day	91%	3%	2%	0%	3%
Every other day	81%	14%	5%	0%	0%
Few times/week	91%	5%	0%	0%	5%
Few times/month	84%	6%	6%	0%	3%
Never	72%	9%	9%	3%	8%

Table 52 – TikTok's frequency of use per Instagram's frequency of use

Instagram frequency	TikTok frequency				
	Every day	Every other day	Few times/week	Few times/month	Never
Every day	27%	6%	7%	9%	51%
Every other day	12%	12%	4%	8%	65%
Few times/week	9%	5%	0%	9%	77%
Few times/month	0%	0%	0%	0%	100%
Never	15%	0%	5%	5%	75%

Table 53 – Instagram's frequency of use per TikTok's frequency of use

TikTok frequency	Instagram frequency				
	Every day	Every other day	Few times/week	Few times/month	Never
Every day	91%	3%	2%	0%	3%
Every other day	81%	14%	5%	0%	0%
Few times/week	91%	5%	0%	0%	5%
Few times/month	84%	6%	6%	0%	3%
Never	72%	9%	9%	3%	8%

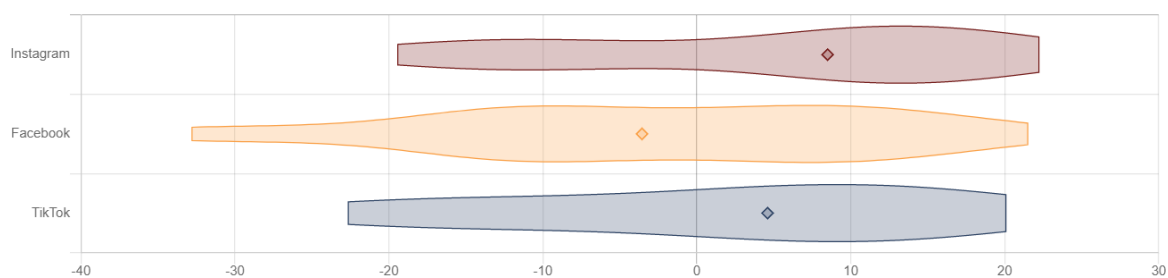
Table 54 – Facebook's frequency of use per TikTok's frequency of use

TikTok frequency	Facebook frequency				
	Every day	Every other day	Few times/week	Few times/month	Never
Every day	14%	3%	13%	19%	51%
Every other day	5%	10%	14%	33%	38%
Few times/week	5%	9%	23%	27%	36%
Few times/month	29%	13%	19%	19%	19%
Never	35%	9%	17%	19%	21%

Table 55 – TikTok's frequency of use per Facebook's frequency of use

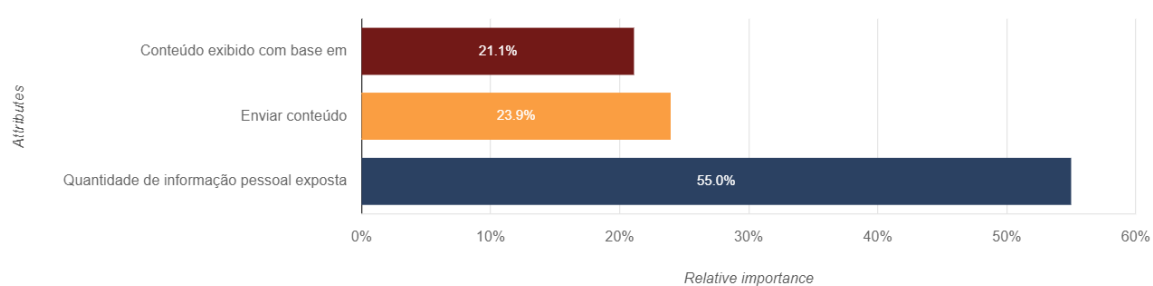
Facebook frequency	TikTok frequency				
	Every day	Every other day	Few times/week	Few times/month	Never
Every day	13%	1%	1%	10%	75%
Every other day	10%	7%	7%	14%	62%
Few times/week	19%	5%	9%	10%	57%
Few times/month	22%	10%	8%	8%	52%
Never	41%	7%	7%	6%	38%

## Appendix 21 – Brand Preferences

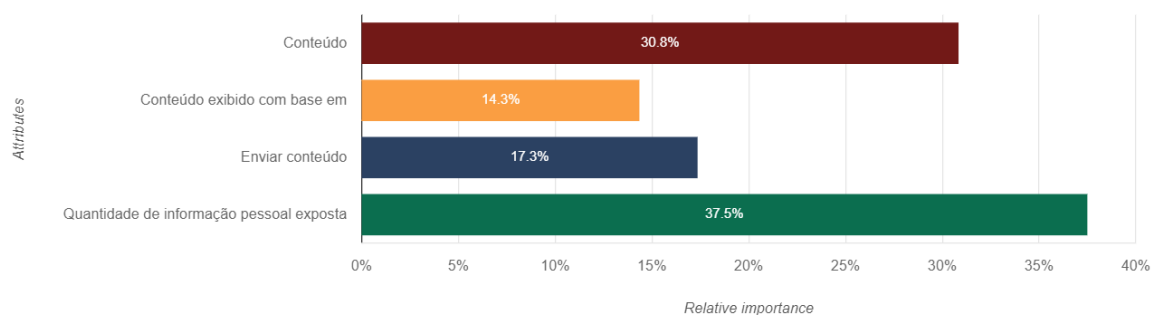


## Appendix 22 – Attribute Importance

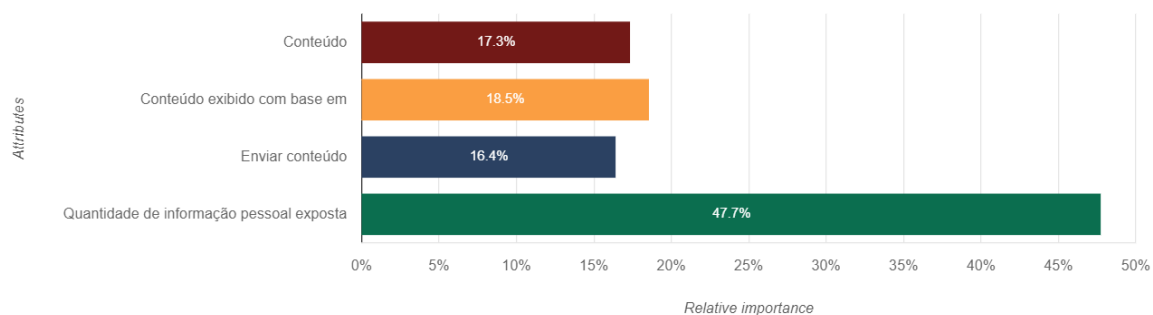
Graph 24 – Relative Importance of TikTok



Graph 25 - Relative Importance of Facebook

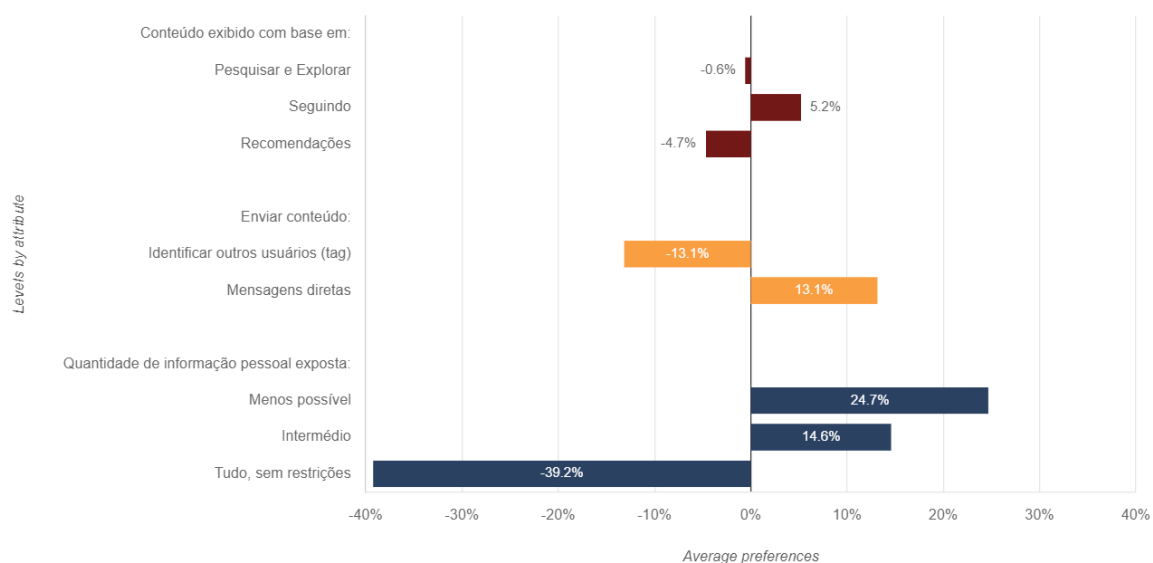


Graph 26 - Relative Importance of Instagram

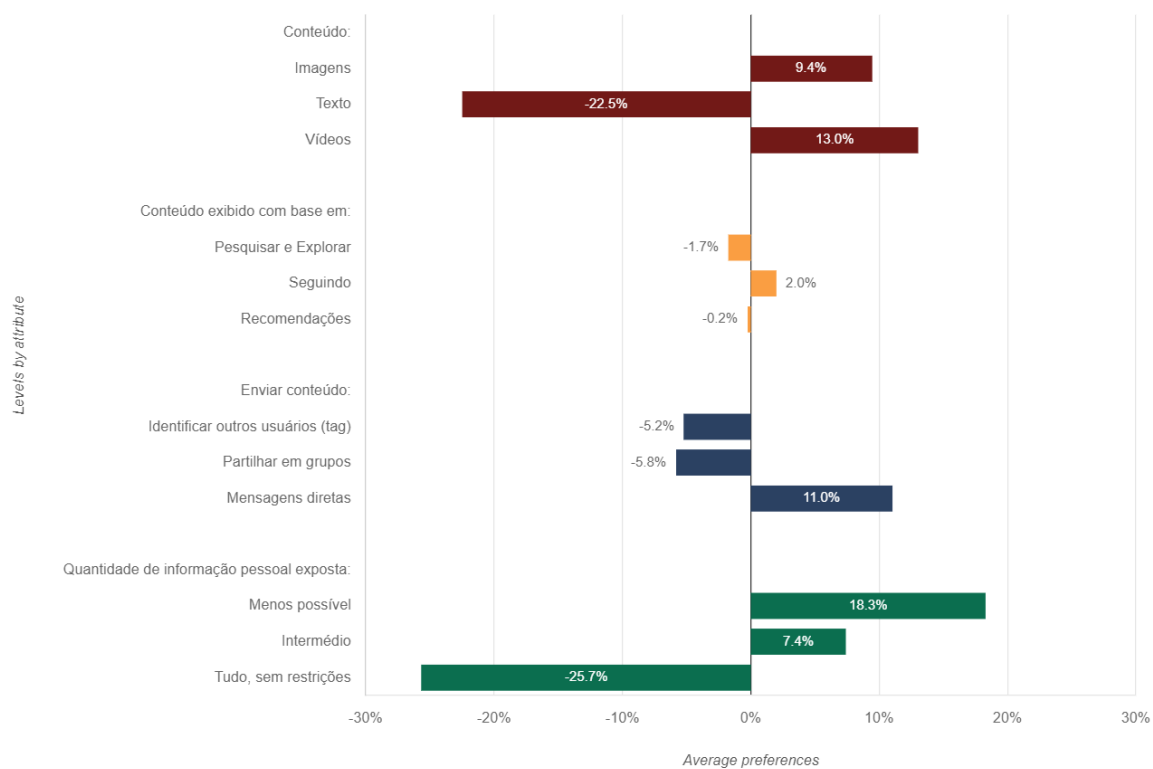


## Appendix 23 – Preference for levels

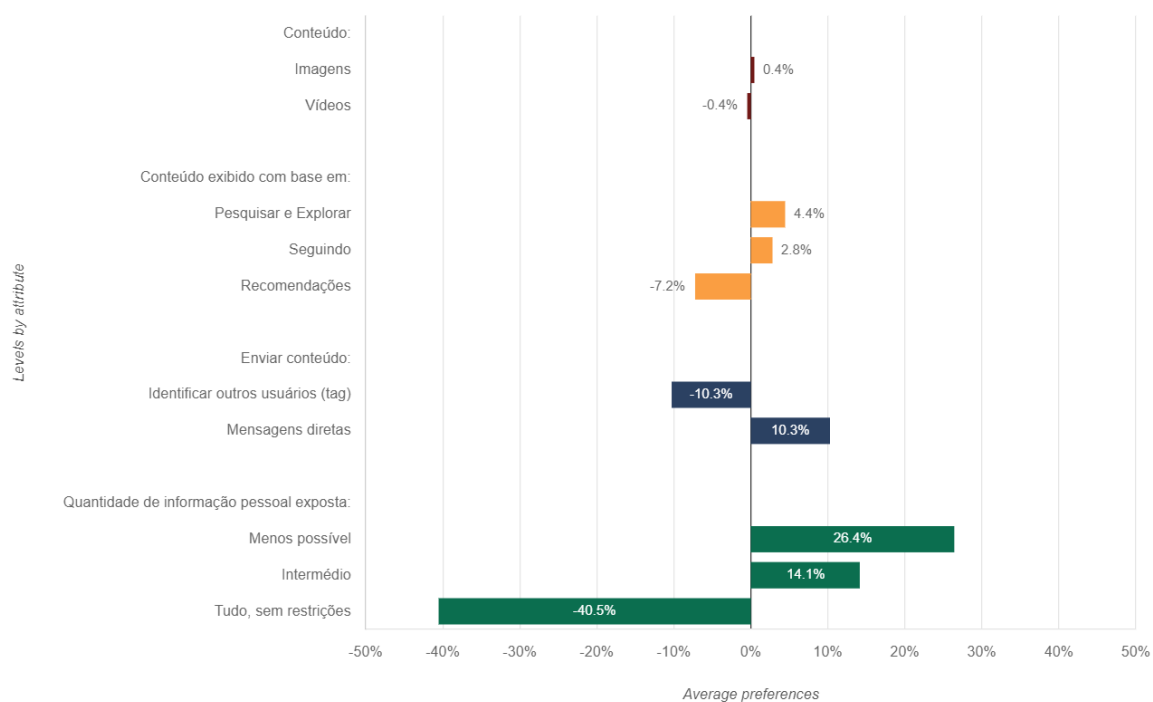
Graph 27 – Average Preferences TikTok



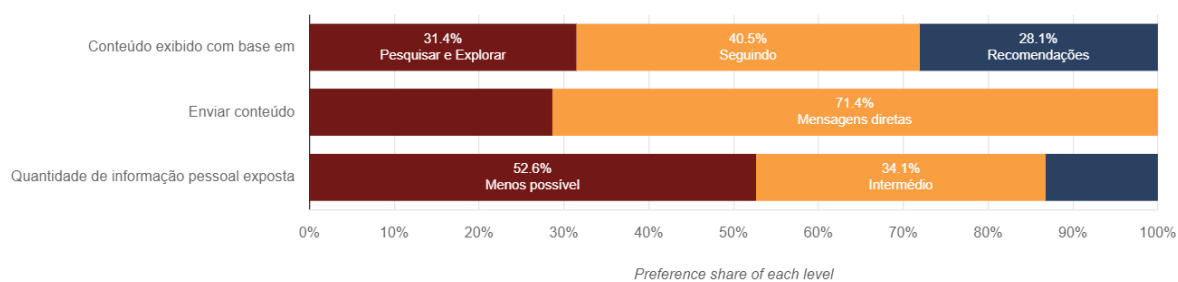
Graph 28 - Average Preferences Facebook



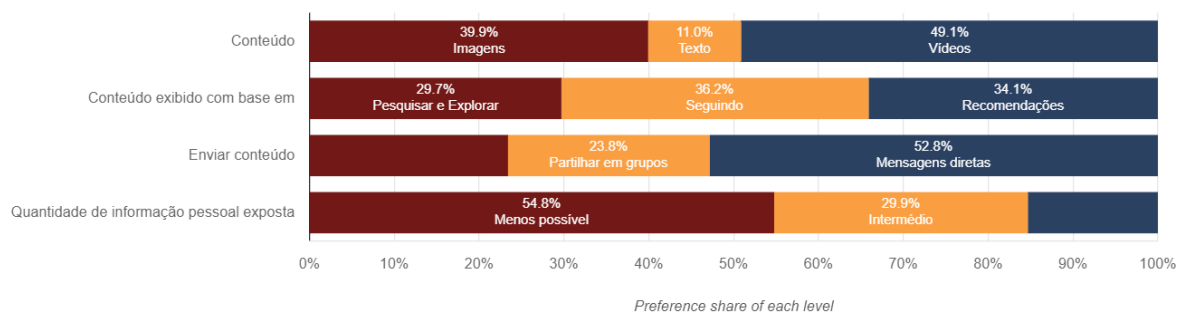
Graph 29 - Average Preferences Instagram



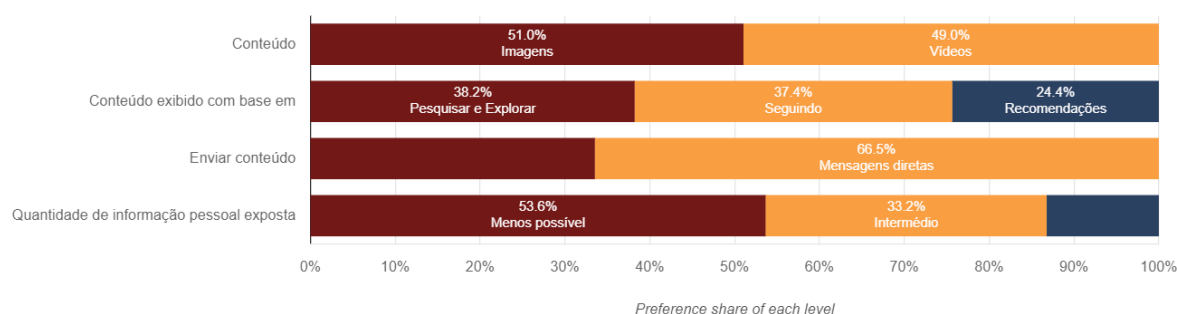
Graph 30 - Preference share for each level TikTok



Graph 31 - Preference share for each level Facebook



Graph 329 - Preference share for each level Instagram



## Appendix 24 – Ranked list of concepts

Redes Sociais	Conteúdo	Conteúdo exibido com base em	Conteúdo com tempo limitado (ex: stories)	Enviar conteúdo	Quantidade de informação pessoal exposta	Value to customers	Rank
Instagram	Imagens	Pesquisar e Explorar	Conteúdo com tempo limitado	Mensagens diretas	Menos possível	22.2	1
Instagram	Videos	Pesquisar e Explorar	Conteúdo com tempo limitado	Mensagens diretas	Menos possível	21.8	2
Instagram	Imagens	Seguindo	Conteúdo com tempo limitado	Mensagens diretas	Menos possível	21.5	3
Facebook	Videos	Seguindo	Conteúdo com tempo limitado	Mensagens diretas	Menos possível	21.5	4
Instagram	Videos	Seguindo	Conteúdo com tempo limitado	Mensagens diretas	Menos possível	21.2	5
Facebook	Videos	Recomendações	Conteúdo com tempo limitado	Mensagens diretas	Menos possível	20.3	6
TikTok	Videos	Seguindo	Sem conteúdo de tempo limitado	Mensagens diretas	Menos possível	20.1	7

## Appendix 25 – Demographics vs Preferences

Table 56 – Brand preferences per age

Brand	<18	18 - 24	25 - 34	35 - 44	45 - 54	>54	All responses
Instagram	6.4	8.3	11.7	8.0	6.1	5.6	8.5
TikTok	2.8	4.8	5.0	-0.9	5.5	3.6	4.6
Facebook	-1.2	-2.9	-3.1	-1.7	-2.4	0.9	-3.6

Table 57 – Instagram's attribute preferences per age

Attribute	<18	18 - 24	25 - 34	35 - 44	45 - 54	>54	All responses
Content Media	21.2%	16.1%	18.8%	19.6%	22.7%	10.0%	17.3%
Content Displayed Based On	21.6%	18.8%	15.1%	16.5%	19.0%	19.1%	18.5%
Send Content	15.5%	17.4%	14.7%	15.9%	14.6%	13.0%	16.4%
Amount of Exposed Personal Information	41.8%	47.7%	51.4%	48.0%	43.7%	58.0%	47.7%
Sum	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 58 – Instagram's level preferences per age

Attribute	Level	<18	18 - 24	25 - 34	35 - 44	45 - 54	>54	All responses
Content Media	Images	-5.2%	-0.0%	1.1%	8.6%	3.6%	0.2%	0.4%
Content Media	Videos	5.2%	0.0%	-1.1%	-8.6%	-3.6%	-0.2%	-0.4%
Content Displayed Based On	Search & Explore	-4.4%	4.3%	4.3%	6.1%	6.4%	10.8%	4.4%
Content Displayed Based On	Following	9.6%	2.4%	3.3%	0.2%	3.2%	-2.8%	2.8%
Content Displayed Based On	Recommendations	-5.3%	-6.6%	-7.6%	-6.3%	-9.6%	-8.0%	-7.2%
Send Content	Tagging	-13.9%	-11.2%	-7.6%	-7.8%	-7.8%	-2.2%	-10.3%
Send Content	Direct messages	13.9%	11.2%	7.6%	7.8%	7.8%	2.2%	10.3%
Amount of Exposed Personal Information	Less possible	6.7%	26.4%	29.1%	19.8%	24.7%	34.2%	26.4%
Amount of Exposed Personal Information	Intermedium	20.1%	13.9%	12.7%	15.2%	11.8%	8.1%	14.1%
Amount of Exposed Personal Information	All, with no restrictions	-26.8%	-40.3%	-41.7%	-34.9%	-36.4%	-42.3%	-40.5%

Table 59 – Facebook's attribute preferences per age

Attribute	<18	18 - 24	25 - 34	35 - 44	45 - 54	>54	All responses
Content Media	36.1%	30.7%	31.8%	32.4%	30.2%	20.6%	30.8%
Content Displayed Based On	13.8%	14.9%	13.0%	14.3%	14.6%	11.1%	14.3%
Send Content	17.6%	17.9%	16.3%	15.6%	17.4%	13.8%	17.3%
Amount of Exposed Personal Information	32.5%	36.6%	39.0%	37.8%	37.8%	54.5%	37.5%
Sum	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 60 – Facebook's level preferences per age

Attribute	Level	<18	18 - 24	25 - 34	35 - 44	45 - 54	>54	All responses
Content Media	Images	8.6%	8.9%	9.2%	13.1%	11.2%	8.5%	9.4%
Content Media	Text	-30.1%	-22.3%	-19.8%	-20.6%	-21.7%	-10.2%	-22.5%
Content Media	Videos	21.4%	13.3%	10.6%	7.5%	10.4%	1.7%	13.0%
Content Displayed Based On	Search & Explore	-4.5%	-1.8%	0.6%	1.8%	-4.2%	3.13e-05	-1.7%
Content Displayed Based On	Following	4.5%	1.7%	2.2%	0.3%	3.1%	-0.6%	2.0%
Content Displayed Based On	Recommendations	-1.591e-05	0.2%	-2.7%	-2.1%	1.1%	0.6%	-0.2%
Send Content	Tagging	-6.4%	-5.3%	-3.5%	-8.0%	-5.6%	-2.1%	-5.2%
Send Content	Partilhar em grupos	-6.0%	-6.3%	-6.6%	-1.6%	-1.0%	-4.0%	-5.8%
Send Content	Direct messages	12.4%	11.6%	10.1%	9.6%	6.6%	6.1%	11.0%
Amount of Exposed Personal Information	Less possible	2.0%	17.6%	21.8%	18.3%	20.5%	32.8%	18.3%
Amount of Exposed Personal Information	Intermedium	9.3%	7.8%	4.5%	8.1%	6.6%	4.5%	7.4%
Amount of Exposed Personal Information	All, with no restrictions	-11.3%	-25.4%	-26.3%	-26.4%	-27.1%	-37.2%	-25.7%

Table 61 – TikTok's attribute preferences per age

Attribute	<18	18 - 24	25 - 34	35 - 44	45 - 54	>54	All responses
Content Displayed Based On	22.3%	21.1%	18.7%	21.8%	24.2%	18.7%	21.1%
Send Content	25.7%	24.8%	21.0%	24.0%	23.3%	17.8%	23.9%
Amount of Exposed Personal Information	52.1%	54.1%	60.3%	54.2%	52.5%	63.5%	55.0%
<b>Sum</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>



Table 62 – TikTok's level preferences per age

Attribute	Level	<18	18 - 24	25 - 34	35 - 44	45 - 54	>54	All responses
Content Displayed Based On	Search & Explore	-8.0%	-1.0%	1.6%	4.8%	-1.7%	6.8%	-0.6%
Content Displayed Based On	Following	8.9%	5.1%	5.0%	4.3%	5.2%	2.2%	5.2%
Content Displayed Based On	Recommendations	-0.9%	-4.1%	-6.5%	-9.1%	-3.5%	-9.0%	-4.7%
Send Content	Tagging	-18.8%	-13.7%	-10.1%	-12.2%	-13.5%	-5.7%	-13.1%
Send Content	Direct messages	18.8%	13.7%	10.1%	12.2%	13.5%	5.7%	13.1%
Amount of Exposed Personal Information	Less possible	11.7%	24.4%	27.5%	22.5%	24.6%	32.6%	24.7%
Amount of Exposed Personal Information	Intermedium	16.9%	14.7%	13.5%	16.7%	15.3%	7.4%	14.6%
Amount of Exposed Personal Information	All, with no restrictions	-28.6%	-39.1%	-40.9%	-39.2%	-39.9%	-40.1%	-39.2%

Table 63 – Brand preferences per gender

Brand	Male	Female	All responses
Instagram	7.7	9.2	8.5
TikTok	5.0	4.0	4.6
Facebook	-2.5	-3.2	-3.6

Table 64 – Instagram's attribute preferences per gender

Attribute	Male	Female	All responses
Content Media	18.5%	16.1%	17.3%
Content Displayed Based On	18.9%	18.3%	18.5%
Send Content	17.2%	15.9%	16.4%
Amount of Exposed Personal Information	45.4%	49.7%	47.7%
<b>Sum</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Table 65 – Instagram's level preferences per gender

Attribute	Level	Male	Female	All responses
Content Media	Images	-0.5%	1.3%	0.4%
Content Media	Videos	0.5%	-1.3%	-0.4%
Content Displayed Based On	Search & Explore	4.0%	4.7%	4.4%
Content Displayed Based On	Following	3.6%	2.1%	2.8%
Content Displayed Based On	Recommendations	-7.7%	-6.8%	-7.2%
Send Content	Tagging	-10.6%	-10.0%	-10.3%
Send Content	Direct Messages	10.6%	10.0%	10.3%
Amount of Exposed Personal Information	Less possible	26.0%	26.0%	26.4%
Amount of Exposed Personal Information	Intermedium	14.1%	13.9%	14.1%
Amount of Exposed Personal Information	All, with no restrictions	-40.2%	-39.9%	-40.5%

Table 66 – Facebook's attribute preferences per gender

Attribute	Male	Female	All responses
Content Media	30.9%	30.6%	30.8%
Content Displayed Based On	14.7%	14.1%	14.3%
Send Content	18.3%	16.6%	17.3%
Amount of Exposed Personal Information	36.1%	38.6%	37.5%
<b>Sum</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Table 67 – Facebook's level preferences per gender

Attribute	Level	Male	Female	All responses
Content Media	Images	9.2%	9.8%	9.4%
Content Media	Text	-23.2%	-21.9%	-22.5%
Content Media	Videos	14.0%	12.1%	13.0%
Content Displayed Based On	Search & Explore	-2.5%	-1.1%	-1.7%
Content Displayed Based On	Following	2.3%	1.8%	2.0%
Content Displayed Based On	Recommendations	0.2%	-0.7%	-0.2%
Send Content	Tagging	-5.5%	-5.2%	-5.2%
Send Content	Share in Groups	-5.2%	-6.2%	-5.8%
Send Content	Direct Messages	10.7%	11.4%	11.0%
Amount of Exposed Personal Information	Less possible	17.3%	19.0%	18.3%
Amount of Exposed Personal Information	Intermedium	7.3%	7.5%	7.4%
Amount of Exposed Personal Information	All, with no restrictions	-24.6%	-26.5%	-25.7%

Table 68 – TikTok's attribute preferences per gender

Attribute	Male	Female	All responses
Content Displayed Based On	21.3%	20.8%	21.1%
Send Content	25.3%	23.0%	23.9%
Amount of Exposed Personal Information	53.4%	56.2%	55.0%
<b>Sum</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Table 69 – TikTok's level preferences per gender

Attribute	Level	Male	Female	All responses
Content Displayed Based On	Search & Explore	-1.2%	-0.0%	-0.6%
Content Displayed Based On	Following	5.5%	4.9%	5.2%
Content Displayed Based On	Recommendations	-4.3%	-4.9%	-4.7%
Send Content	Tagging	-14.0%	-12.7%	-13.1%
Send Content	Direct Messages	14.0%	12.7%	13.1%
Amount of Exposed Personal Information	Less possible	23.7%	25.3%	24.7%
Amount of Exposed Personal Information	Intermedium	14.9%	14.4%	14.6%
Amount of Exposed Personal Information	All, with no restrictions	-38.6%	-39.7%	-39.2%

Table 70 – Brand preferences per occupation

Brand	Student	Employed	Autonomous worker	Unemployed	Retired	All responses
Instagram	8.5	8.6	8.1	11.5	9.3	8.5
TikTok	5.2	3.0	3.5	4.3	-9.4	4.6
Facebook	-2.8	-3.3	-2.9	-3.7	0.3	-3.6

Table 71 – Instagram's attribute preferences per occupation

Attribute	Student	Employed	Autonomous worker	Unemployed	Retired	All responses
Content Media	16.8%	17.9%	20.5%	21.4%	15.9%	17.3%
Content Displayed Based On	18.6%	18.6%	19.4%	14.9%	21.8%	18.5%
Send Content	16.7%	16.7%	14.5%	13.1%	8.0%	16.4%
Amount of Exposed Personal Information	47.9%	46.8%	45.7%	50.6%	54.4%	47.7%
<b>Sum</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Table 72 – Instagram's level preferences per occupation

Attribute	Level	Student	Employed	Autonomous worker	Unemployed	Retired	All responses
Content Media	Images	-0.5%	2.1%	4.6%	2.9%	3.2%	0.4%
Content Media	Videos	0.5%	-2.1%	-4.6%	-2.9%	-3.2%	-0.4%
Content Displayed Based On	Search & Explore	4.1%	3.4%	8.9%	6.1%	11.5%	4.4%
Content Displayed Based On	Following	2.7%	3.9%	-0.4%	3.4%	-0.2%	2.8%
Content Displayed Based On	Recommendations	-6.9%	-7.3%	-8.5%	-9.5%	-11.3%	-7.2%
Send Content	Tagging	-10.7%	-10.2%	-6.5%	-8.0%	0.3%	-10.3%
Send Content	Direct Messages	10.7%	10.2%	6.5%	8.0%	-0.3%	10.3%
Amount of Exposed Personal Information	Less possible	26.4%	25.2%	21.7%	23.7%	30.7%	26.4%
Amount of Exposed Personal Information	Intermedium	13.9%	13.7%	17.0%	15.2%	8.9%	14.1%
Amount of Exposed Personal Information	All, with no restrictions	-40.3%	-38.9%	-38.7%	-38.9%	-39.6%	-40.5%

Table 73 – Facebook's attribute preferences per occupation

Attribute	Student	Employed	Autonomous worker	Unemployed	Retired	All responses
Content Media	31.0%	31.1%	29.4%	34.1%	21.2%	30.8%
Content Displayed Based On	14.6%	13.7%	14.0%	13.9%	10.1%	14.3%
Send Content	17.3%	17.9%	17.3%	15.9%	13.2%	17.3%
Amount of Exposed Personal Information	37.1%	37.3%	39.2%	36.2%	55.4%	37.5%
<b>Sum</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Table 74 – Facebook's level preferences per occupation

Attribute	Level	Student	Employed	Autonomous worker	Unemployed	Retired	All responses
Content Media	Images	8.8%	10.2%	13.8%	10.7%	9.4%	9.4%
Content Media	Text	-22.7%	-22.1%	-20.5%	-20.7%	-10.7%	-22.5%
Content Media	Videos	13.8%	11.8%	6.7%	10.0%	1.3%	13.0%
Content Displayed Based On	Search & Explore	-1.7%	-2.4%	-1.5%	0.4%	4.4%	-1.7%
Content Displayed Based On	Following	1.9%	1.8%	3.2%	3.2%	-0.6%	2.0%
Content Displayed Based On	Recommendations	-0.3%	0.6%	-1.7%	-3.7%	-3.9%	-0.2%
Send Content	Tagging	-5.0%	-6.3%	-5.7%	-3.3%	0.9%	-5.2%
Send Content	Share in Groups	-6.3%	-4.5%	-2.9%	-6.3%	-7.5%	-5.8%
Send Content	Direct Messages	11.2%	10.8%	8.6%	9.6%	6.6%	11.0%
Amount of Exposed Personal Information	Less possible	17.5%	18.8%	18.6%	19.8%	28.9%	18.3%
Amount of Exposed Personal Information	Intermedium	7.4%	7.2%	9.2%	6.2%	-0.2%	7.4%
Amount of Exposed Personal Information	All, with no restrictions	-24.9%	-26.1%	-27.8%	-26.0%	-28.7%	-25.7%

Table 75 – TikTok's attribute preferences per occupation

Attribute	Student	Employed	Autonomous worker	Unemployed	Retired	All responses
Content Displayed Based On	21.2%	20.2%	24.7%	18.2%	19.5%	21.1%
Send Content	24.1%	24.8%	21.3%	25.3%	9.0%	23.9%
Amount of Exposed Personal Information	54.7%	55.0%	54.0%	56.5%	71.5%	55.0%
<b>Sum</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Table 76 – TikTok's level preferences per occupation

Attribute	Level	Student	Employed	Autonomous worker	Unemployed	Retired	All responses
Content Displayed Based On	Search & Explore	-0.9%	-0.7%	0.8%	3.8%	9.0%	-0.6%
Content Displayed Based On	Following	5.3%	5.3%	4.2%	6.4%	-4.9%	5.2%
Content Displayed Based On	Recommendations	-4.4%	-4.6%	-5.0%	-10.2%	-4.1%	-4.7%
Send Content	Tagging	-13.2%	-13.9%	-13.1%	-9.9%	1.2%	-13.1%
Send Content	Direct Messages	13.2%	13.9%	13.1%	9.9%	-1.2%	13.1%
Amount of Exposed Personal Information	Less possible	24.6%	24.0%	23.8%	24.9%	41.0%	24.7%
Amount of Exposed Personal Information	Intermedium	14.7%	14.3%	16.9%	13.7%	1.5%	14.6%
Amount of Exposed Personal Information	All, with no restrictions	-39.2%	-38.3%	-40.8%	-38.6%	-42.6%	-39.2%

Table 77 – Brand preferences per education level

Brand	Basic school	Highschool	Bachelor	Masters	Doctorate	All responses
Instagram	8.0	8.4	9.0	9.0	8.6	8.5
TikTok	-0.8	5.1	5.6	2.9	-0.9	4.6
Facebook	-1.9	-2.4	-4.2	-3.2	-1.5	-3.6

Table 78 – Instagram's attribute preferences per education level

Attribute	Basic school	Highschool	Bachelor	Masters	Doctorate	All responses
Content Media	16.5%	17.0%	17.6%	16.9%	20.3%	17.3%
Content Displayed Based On	19.0%	22.1%	17.3%	18.2%	13.0%	18.5%
Send Content	17.3%	14.8%	17.1%	15.7%	26.1%	16.4%
Amount of Exposed Personal Information	47.2%	46.0%	48.1%	49.2%	40.5%	47.7%
<b>Sum</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Table 79 – Instagram’s level preferences per education level

Attribute	Level	Basic school	Highschool	Bachelor	Masters	Doctorate	All responses
Content Media	Images	-1.6%	-2.0%	0.0%	2.8%	10.7%	0.4%
Content Media	Videos	1.6%	2.0%	-0.0%	-2.8%	-10.7%	-0.4%
Content Displayed Based On	Search & Explore	-1.5%	3.7%	5.2%	3.6%	2.7%	4.4%
Content Displayed Based On	Following	5.9%	3.9%	2.7%	1.7%	-0.7%	2.8%
Content Displayed Based On	Recommendations	-4.4%	-7.7%	-7.8%	-5.2%	-2.0%	-7.2%
Send Content	Tagging	-15.2%	-8.6%	-9.9%	-10.6%	-16.1%	-10.3%
Send Content	Direct Messages	15.2%	8.6%	9.9%	10.6%	16.1%	10.3%
Amount of Exposed Personal Information	Less possible	-0.7%	25.7%	27.6%	25.0%	10.3%	26.4%
Amount of Exposed Personal Information	Intermedium	28.5%	15.6%	12.0%	14.6%	15.7%	14.1%
Amount of Exposed Personal Information	All, with no restrictions	-27.8%	-41.4%	-39.6%	-39.6%	-26.0%	-40.5%

Table 80 – Facebook’s attribute preferences per education level

Attribute	Basic school	Highschool	Bachelor	Masters	Doctorate	All responses
Content Media	37.6%	30.5%	30.5%	31.2%	32.3%	30.8%
Content Displayed Based On	11.9%	16.8%	14.0%	13.5%	6.5%	14.3%
Send Content	18.2%	17.4%	17.2%	17.3%	19.5%	17.3%
Amount of Exposed Personal Information	32.3%	35.3%	38.3%	38.1%	41.7%	37.5%
<b>Sum</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Table 81 – Facebook’s level preferences per education level

Attribute	Level	Basic school	Highschool	Bachelor	Masters	Doctorate	All responses
Content Media	Images	9.7%	8.5%	9.3%	9.4%	15.4%	9.4%
Content Media	Text	-28.2%	-23.5%	-22.0%	-20.6%	-22.1%	-22.5%
Content Media	Videos	18.5%	15.0%	12.6%	11.2%	6.6%	13.0%
Content Displayed Based On	Search & Explore	-2.3%	-3.2%	-1.5%	-1.2%	2.1%	-1.7%
Content Displayed Based On	Following	5.5%	2.2%	1.8%	1.7%	-0.3%	2.0%
Content Displayed Based On	Recommendations	-3.1%	0.9%	-0.3%	-0.5%	-1.9%	-0.2%
Send Content	Tagging	-7.7%	-4.7%	-4.4%	-6.6%	-11.8%	-5.2%
Send Content	Share in Groups	-4.3%	-5.6%	-6.4%	-4.5%	-2.2%	-5.8%
Send Content	Direct Messages	12.0%	10.3%	10.8%	11.1%	14.1%	11.0%
Amount of Exposed Personal Information	Less possible	-1.5%	16.1%	19.3%	19.7%	9.4%	18.3%
Amount of Exposed Personal Information	Intermedium	13.2%	8.0%	6.3%	8.1%	11.6%	7.4%
Amount of Exposed Personal Information	All, with no restrictions	-11.8%	-24.1%	-25.6%	-27.8%	-21.0%	-25.7%

Table 82 – TikTok’s attribute preferences per education level

Attribute	Basic school	Highschool	Bachelor	Masters	Doctorate	All responses
Content Displayed Based On	20.3%	23.4%	20.9%	19.3%	20.8%	21.1%
Send Content	28.4%	23.0%	23.6%	24.8%	31.7%	23.9%
Amount of Exposed Personal Information	51.2%	53.6%	55.5%	55.9%	47.5%	55.0%
<b>Sum</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>



Table 83 – TikTok's level preferences per education level

Attribute	Level	Basic school	Highschool	Bachelor	Masters	Doctorate	All responses
Content Displayed Based On	Search & Explore	-5.9%	-2.1%	0.4%	-1.1%	0.6%	-0.6%
Content Displayed Based On	Following	0.3%	7.0%	4.8%	5.6%	-6.8%	5.2%
Content Displayed Based On	Recommendations	5.6%	-5.0%	-5.3%	-4.5%	6.2%	-4.7%
Send Content	Tagging	-19.9%	-12.3%	-12.2%	-14.2%	-21.5%	-13.1%
Send Content	Direct Messages	19.9%	12.3%	12.2%	14.2%	21.5%	13.1%
Amount of Exposed Personal Information	Less possible	6.3%	24.4%	25.7%	23.7%	9.9%	24.7%
Amount of Exposed Personal Information	Intermedium	21.1%	14.5%	14.1%	14.1%	17.1%	14.6%
Amount of Exposed Personal Information	All, with no restrictions	-27.5%	-38.9%	-39.8%	-37.8%	-27.0%	-39.2%

Table 84 – Brand preferences per marital status

Brand	Single	Married	Divorced	Widowed	All responses
Instagram	8.4	9.0	6.1	0.5	8.5
TikTok	4.7	3.7	2.7	11.5	4.6
Facebook	-2.4	-0.2	-1.7	6.0	-3.6

Table 85 – Instagram's attribute preferences per marital status

Attribute	Single	Married	Divorced	Widowed	All responses
Content Media	17.1%	19.1%	16.5%	10.5%	17.3%
Content Displayed Based On	18.8%	16.3%	23.6%	18.4%	18.5%
Send Content	16.9%	14.6%	13.6%	5.9%	16.4%
Amount of Exposed Personal Information	47.2%	50.0%	46.2%	65.2%	47.7%
<b>Sum</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Table 86 – Instagram’s level preferences per marital status

Attribute	Level	Single	Married	Divorced	Widowed	All responses
Content Media	Images	-0.1%	1.9%	8.9%	1.8%	0.4%
Content Media	Videos	0.1%	-1.9%	-8.9%	-1.8%	-0.4%
Content Displayed Based On	Search & Explore	3.7%	6.7%	8.6%	12.3%	4.4%
Content Displayed Based On	Following	3.5%	-0.5%	3.1%	-3.7%	2.8%
Content Displayed Based On	Recommendations	-7.2%	-6.1%	-11.7%	-8.6%	-7.2%
Send Content	Tagging	-11.0%	-6.9%	-6.1%	0.2%	-10.3%
Send Content	Direct Messages	11.0%	6.9%	6.1%	-0.2%	10.3%
Amount of Exposed Personal Information	Less possible	26.1%	28.6%	19.9%	33.9%	26.4%
Amount of Exposed Personal Information	Intermedium	14.6%	12.3%	10.1%	7.4%	14.1%
Amount of Exposed Personal Information	All, with no restrictions	-40.6%	-40.9%	-30.0%	-41.3%	-40.5%

Table 87 – Facebook’s attribute preferences per marital status

Attribute	Single	Married	Divorced	Widowed	All responses
Content Media	31.6%	28.2%	26.7%	13.5%	30.8%
Content Displayed Based On	14.4%	13.7%	13.7%	9.7%	14.3%
Send Content	17.6%	16.6%	14.9%	5.3%	17.3%
Amount of Exposed Personal Information	36.3%	41.5%	44.6%	71.5%	37.5%
<b>Sum</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Table 88 – Facebook’s level preferences per marital status

Attribute	Level	Single	Married	Divorced	Widowed	All responses
Content Media	Images	9.2%	9.5%	17.6%	5.5%	9.4%
Content Media	Text	-23.1%	-18.5%	-14.6%	-7.2%	-22.5%
Content Media	Videos	13.9%	9.0%	-3.0%	1.7%	13.0%
Content Displayed Based On	Search & Explore	-1.7%	-2.4%	1.5%	3.0%	-1.7%
Content Displayed Based On	Following	2.0%	1.8%	1.9%	-0.7%	2.0%
Content Displayed Based On	Recommendations	-0.3%	0.6%	-3.5%	-2.3%	-0.2%
Send Content	Tagging	-5.2%	-4.7%	-6.2%	-2.8%	-5.2%
Send Content	Share in Groups	-6.3%	-3.8%	0.6%	2.3%	-5.8%
Send Content	Direct Messages	11.5%	8.5%	5.7%	0.5%	11.0%
Amount of Exposed Personal Information	Less possible	17.1%	24.1%	22.0%	35.2%	18.3%
Amount of Exposed Personal Information	Intermedium	7.4%	6.4%	6.4%	6.4%	7.4%
Amount of Exposed Personal Information	All, with no restrictions	-24.5%	-30.5%	-28.4%	-41.7%	-25.7%

Table 89– TikTok’s attribute preferences per marital status

Attribute	Single	Married	Divorced	Widowed	All responses
Content Displayed Based On	21.1%	20.3%	21.8%	26.5%	21.1%
Send Content	24.6%	21.5%	20.0%	11.5%	23.9%
Amount of Exposed Personal Information	54.3%	58.2%	58.1%	62.0%	55.0%
<b>Sum</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Table 90 – TikTok's level preferences per marital status

Attribute	Level	Single	Married	Divorced	Widowed	All responses
Content Displayed Based On	Search & Explore	-1.1%	2.0%	2.8%	6.3%	-0.6%
Content Displayed Based On	Following	5.6%	3.6%	0.3%	6.1%	5.2%
Content Displayed Based On	Recommendations	-4.5%	-5.6%	-3.1%	-12.4%	-4.7%
Send Content	Tagging	-13.5%	-10.7%	-13.0%	-2.9%	-13.1%
Send Content	Direct Messages	13.5%	10.7%	13.0%	2.9%	13.1%
Amount of Exposed Personal Information	Less possible	24.0%	28.3%	25.2%	32.9%	24.7%
Amount of Exposed Personal Information	Intermedium	14.8%	12.8%	17.7%	9.7%	14.6%
Amount of Exposed Personal Information	All, with no restrictions	-38.8%	-41.1%	-42.9%	-42.6%	-39.2%

## Appendix 26 – Segmentation results

Table 91 – Platform's frequency of use by personas

	Ana (N = 11)	António (N = 42)	Tiago (N = 12)	All responses (N = 359)
<b>Q13: With what frequency do you use Facebook?</b>				
Every day	0.0%	16.7%	50.0%	25.6%
Every other day	0.0%	11.9%	0.0%	8.1%
A few times a week	0.0%	21.4%	25.0%	16.2%
A few times a month	18.2%	19.0%	25.0%	20.3%
Never	81.8%	31.0%	0.0%	29.8%
<b>Q14: With what frequency do you use Instagram?</b>				
Every day	90.9%	76.2%	66.7%	79.4%
Every other day	0.0%	19.0%	8.3%	7.2%
A few times a week	9.1%	2.4%	16.7%	6.1%
A few times a month	0.0%	0.0%	8.3%	1.7%
Never	0.0%	2.4%	0.0%	5.6%
<b>Q15: With what frequency do you use TikTok?</b>				
Every day	81.8%	16.7%	0.0%	24.0%
Every other day	9.1%	0.0%	0.0%	5.9%
A few times a week	0.0%	4.8%	0.0%	6.1%
A few times a month	0.0%	19.0%	8.3%	8.6%
Never	9.1%	59.5%	91.7%	55.4%

Table 92 – Brand preferences per persona

Brand	Ana	António	Tiago	All responses
Instagram	4.0	7.8	5.6	8.5
TikTok	8.2	8.7	-4.8	4.6
Facebook	-0.6	-3.5	0.0	-3.6

Table 93 – Instagram's attribute preferences per persona

Attribute	Ana	António	Tiago	All responses
Content Media	26.4%	18.8%	24.4%	17.3%
Content Displayed Based On	21.0%	15.9%	15.7%	18.5%
Send Content	14.9%	18.8%	17.6%	16.4%
Amount of Exposed Personal Information	37.7%	46.5%	42.3%	47.7%
<b>Sum</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Table 94 – Instagram's level preferences per persona

Attribute	Level	Ana	António	Tiago	All responses
Content Media	Images	-12.8%	-2.9%	7.1%	0.4%
Content Media	Videos	12.8%	2.9%	-7.1%	-0.4%
Content Displayed Based On	Search & Explore	-5.7%	4.8%	4.0%	4.4%
Content Displayed Based On	Following	6.9%	2.5%	0.8%	2.8%
Content Displayed Based On	Recommendations	-1.1%	-7.3%	-4.8%	-7.2%
Send Content	Tagging	-14.3%	-9.2%	-13.5%	-10.3%
Send Content	Direct Messages	14.3%	9.2%	13.5%	10.3%
Amount of Exposed Personal Information	Less possible	-11.5%	27.5%	12.2%	26.4%
Amount of Exposed Personal Information	Intermedium	21.9%	8.7%	18.9%	14.1%
Amount of Exposed Personal Information	All, with no restrictions	-10.4%	-36.2%	-31.1%	-40.5%

Table 95 – Facebook's attribute preferences per persona

Attribute	Ana	António	Tiago	All responses
Content Media	42.6%	29.4%	36.1%	30.8%
Content Displayed Based On	12.4%	13.2%	9.4%	14.3%
Send Content	16.3%	19.0%	17.8%	17.3%
Amount of Exposed Personal Information	28.7%	38.4%	36.8%	37.5%
<b>Sum</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Table 96 – Facebook's level preferences per persona

Attribute	Level	Ana	António	Tiago	All responses
Content Media	Images	5.1%	6.7%	12.9%	9.4%
Content Media	Text	-29.7%	-19.5%	-28.8%	-22.5%
Content Media	Videos	24.6%	12.8%	15.9%	13.0%
Content Displayed Based On	Search & Explore	-4.6%	-3.4%	-1.4%	-1.7%
Content Displayed Based On	Following	4.0%	2.6%	3.2%	2.0%
Content Displayed Based On	Recommendations	0.6%	0.8%	-1.8%	-0.2%
Send Content	Tagging	-4.7%	-3.0%	-9.7%	-5.2%
Send Content	Share in Groups	-5.3%	-7.3%	-0.6%	-5.8%
Send Content	Direct Messages	10.0%	10.3%	10.3%	11.0%
Amount of Exposed Personal Information	Less possible	-9.8%	19.2%	10.9%	18.3%
Amount of Exposed Personal Information	Intermedium	12.0%	5.7%	8.6%	7.4%
Amount of Exposed Personal Information	All, with no restrictions	-2.2%	-24.9%	-19.5%	-25.7%

Table 97 – TikTok's attribute preferences per persona

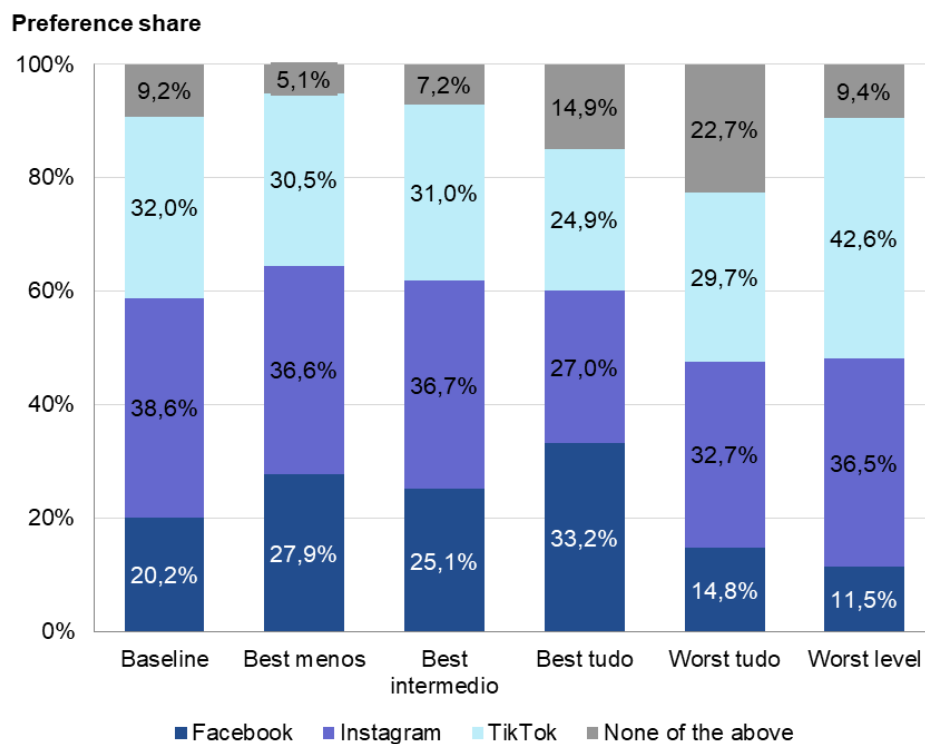
Attribute	Ana	António	Tiago	All responses
Content Displayed Based On	25.6%	21.9%	19.8%	21.1%
Send Content	28.0%	24.6%	26.9%	23.9%
Amount of Exposed Personal Information	46.4%	53.5%	53.3%	55.0%
<b>Sum</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Table 98 – TikTok's level preferences per persona

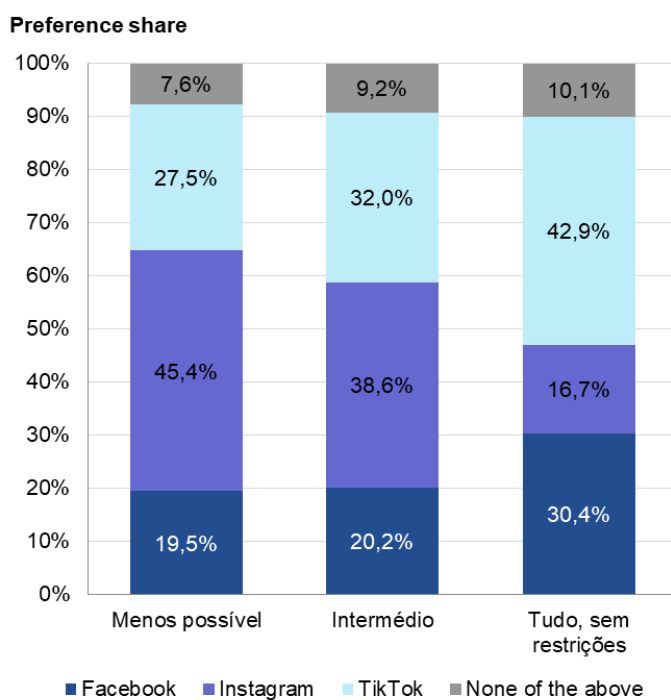
Attribute	Level	Ana	António	Tiago	All responses
Content Displayed Based On	Search & Explore	-11.3%	-0.2%	0.8%	-0.6%
Content Displayed Based On	Following	2.1%	5.3%	-1.7%	5.2%
Content Displayed Based On	Recommendations	9.1%	-5.2%	0.9%	-4.7%
Send Content	Tagging	-20.8%	-12.5%	-19.3%	-13.1%
Send Content	Direct Messages	20.8%	12.5%	19.3%	13.1%
Amount of Exposed Personal Information	Less possible	-4.5%	25.8%	19.5%	24.7%
Amount of Exposed Personal Information	Intermedium	21.2%	13.1%	19.6%	14.6%
Amount of Exposed Personal Information	All, with no restrictions	-16.7%	-38.8%	-39.1%	-39.2%

## Appendix 27 – Simulations

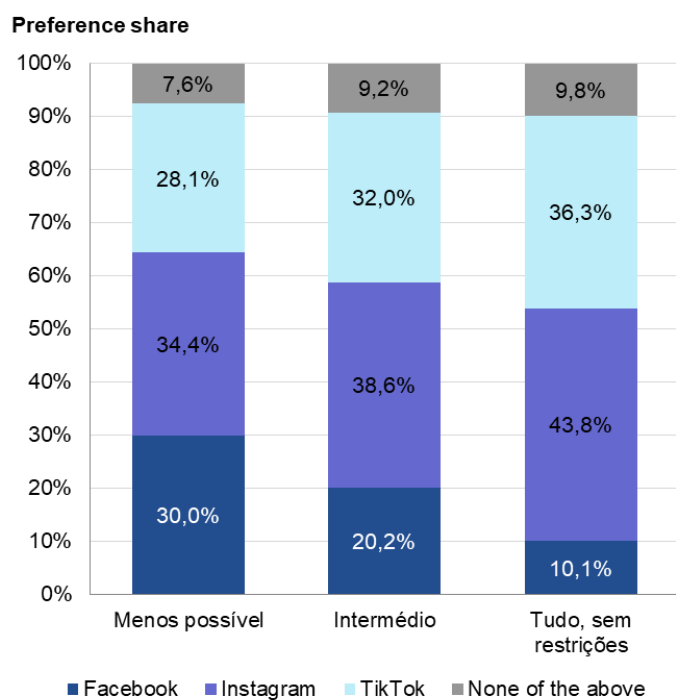
Graph 33 – Baseline, best and worst combinations



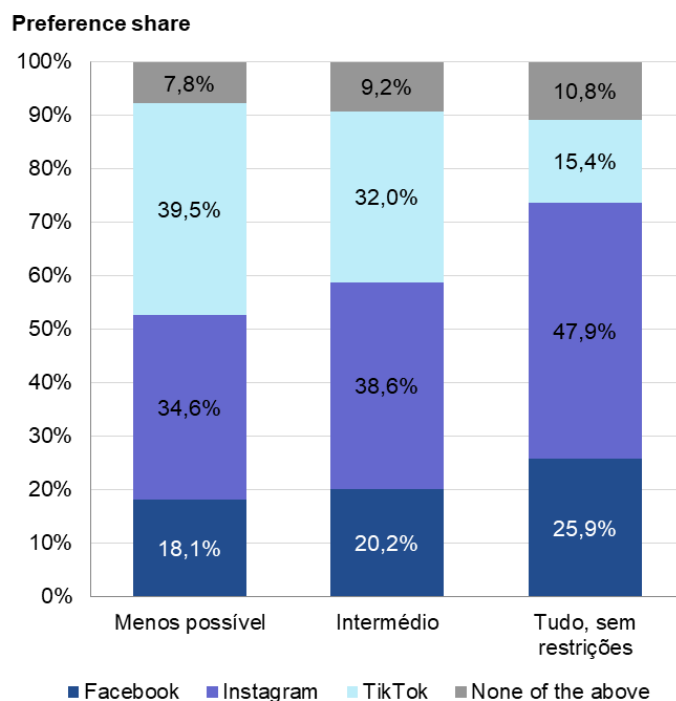
Graph 34 – Instagram Sensitivity to Exposed Personal Information



Graph 35 – Facebook Sensitivity to Exposed Personal Information



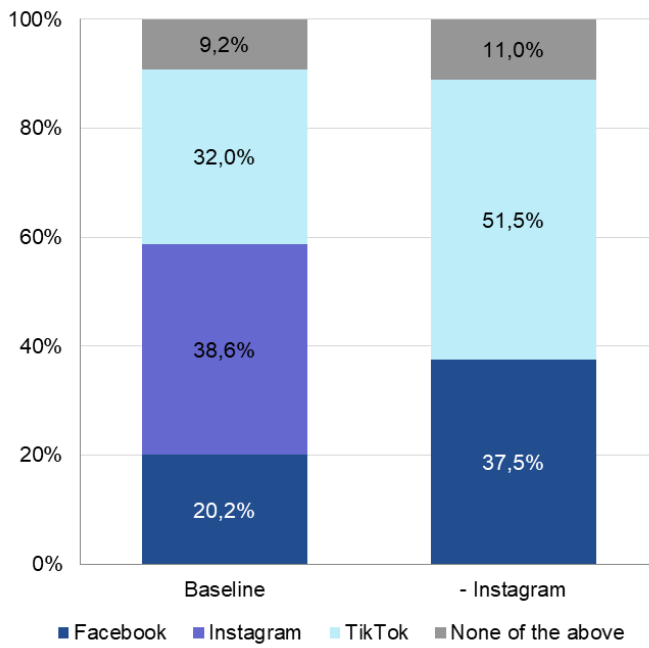
Graph 36 – TikTok Sensitivity to Exposed Personal Information



Graph 37 – Instagram Removal Scenario

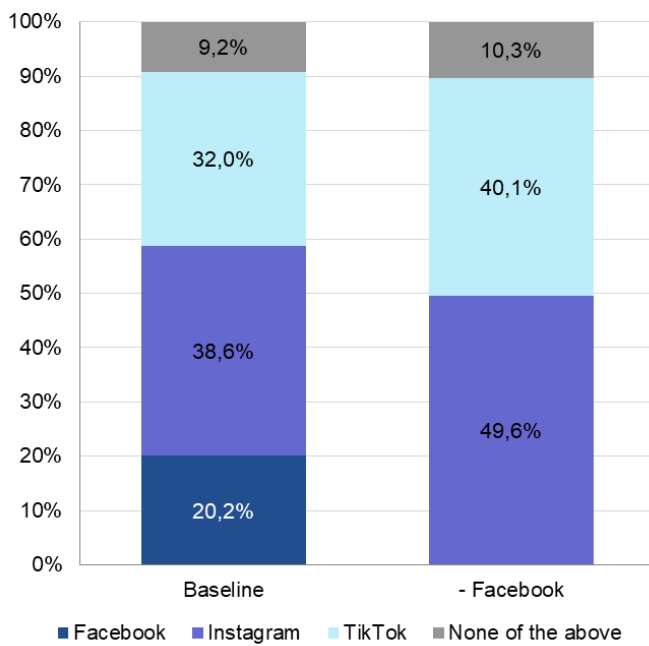


Preference share



Graph 38 – Facebook Removal Scenario

Preference share



Graph 39 – TikTok Removal Scenario

Preference share

