Summary

The development of the Internet allowed consumers to easily share their opinions about products and services, and discuss it with other consumers. In this context, online sources of recommendation became more reliable and relevant, specially among young people.

New opinion leaders start to arise on the Internet, being in some cases more reliable and relatable to young people than traditional endorsers, such as TV personalities.

A questionnaire applied to a convenience sample of 162 individuals from Portugal's resident population, aged between 15 and 29 years, with Internet access and that have watched at least one YouTube video in the last 6 months, revealed strong YouTube's awareness and usage as source of information and recommendation.

The study also revealed that YouTube recommendations are working as a purchase initiator, triggering problem recognition, as well as having impact in three other stages of consumer's purchasing decision. YouTube recommendations are considered an important or very important recommendation source during information search, evaluation of the alternatives and purchase decision.

Loyalty towards YouTube channels and trust on YouTubers opinion were also strongly marked among the sample. Furthermore, the trust on YouTubers' opinion seems to not even being negatively affected by partnerships with brands and recommendation of products sent for review consideration.

Yet, the research also concluded that, for the majority of recommendation sources, the credibility given to YouTube recommendation is still comparatively lower.

Keywords: YouTube; Recommendation; Decision-making process; Consumer behavior

JEL Classification System: D81- Criteria for Decision-Making under Risk and Uncertainty; M31- Marketing

Resumo

O desenvolvimento da Internet permitiu aos consumidores partilhar a sua opinião acerca de produtos e serviços e discuti-la com outros consumidores. Neste contexto, as fontes de recomendação *online* tornaram-se mais credíveis e relevantes, especialmente entre os mais jovens.

Novos líderes de opinião começaram a surgir na Internet sendo, em alguns casos, mais credíveis e mais relacionáveis para os jovens do que os líderes de opinião tradicionais.

Um questionário aplicado a uma amostra por conveniência composta por 162 indivíduos pertencentes à população residente de Portugal, com idades entre os 15 e os 29 anos, com acesso à Internet, e que assistiram a pelo menos um vídeo no Youtube nos últimos 6 meses, revelou um forte conhecimento do YouTube e uso do mesmo como fonte de informação e recomendação.

O estudo revelou ainda que as recomendações no YouTube funcionam como um iniciador da compra, levando o consumidor ao reconhecimento de um problema, e tendo também impacto noutras 3 fases do processo de decisão de compra. As recomendações no YouTube são consideradas fontes de informação importantes, ou muito importantes, durante as fases de procura de informação, avaliação das alternativas e decisão de compra.

A fidelização aos canais de YouTube e a confiança nas opiniões dos YouTubers, também se verificam fortemente na amostra, sendo que a confiança na opinião dos YouTubers parece não ser sequer negativamente afetada por colaborações com marcas, ou recomendação de produtos enviados pelas mesmas.

No entanto, o estudo concluiu que em comparação com a maioria das outras fontes, a recomendação no YouTube ainda é considerada menos credível.

Palavras-chave: YouTube; Recomendação; Processo de tomada de decisão; Comportamento do consumidor

JEL Classification System: D81- Criteria for Decision-Making under Risk and Uncertainty; M31-Marketing

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Index

Figures Index

Executive summary

The emergence and evolution of the Internet, as well as the continuous technological progress, had significant impacts on consumer behavior and marketing strategies.

Consumers have changed and are now more informed, demanding and empowered, using the Internet, not only to learn more about products and brands, but also as a way to communicate with companies and other consumers.

Consumers can express their opinion in a more effective way, spread it easily across the Internet and see other consumers' opinion.

Recommendations became electronic mediated and with high levels of reliability, particularly among young people. Simultaneously, the effectiveness of traditional advertising started to decrease, as well as the credibility of brand messages.

In this context, YouTube reviews started to gain relevance which had important impacts on consumer's purchasing decision process. YouTube personalities started to arise as new opinion leaders, being in some cases more reliable and relatable to young people than traditional endorsers such as TV personalities.

In this study it was applied an online questionnaire to a convenience sample of individuals from Portugal's resident population, aged between 15 and 29 years, with Internet access and that have watched at least one YouTube video in the last 6 months and it was obtained a total of 162 valid cases.

The investigation revealed that the studied individuals present strong habits of Internet and social networks usage, with more than 99% of the respondents stating to use the Internet every day and an average use of 2.37social networks.

In what concerns the use of YouTube, research revealed strong YouTube's awareness and usage as source of information and recommendation.

The study also revealed that YouTube recommendations are working as a purchase initiator, triggering problem recognition, as well as having impact in three other stages of consumer's purchasing decision.

YouTube recommendations revealed to be considered an important or very important recommendation source during information search, evaluation of the alternatives and purchase decision.

These aspects emphasize the impact of YouTube recommendation in consumer's behavior, particularly on consumer's decision making process.

The study also revealed that there is strong loyalty towards YouTube channels and trust on YouTubers opinion. 43.81% of the respondents stated to watch between 80% and 100% of all the YouTube videos posted on their favorite channel and 82.28% of the respondents stated to trust the opinion of the YouTubers they subscribe.

Research also showed that the trust on YouTubers' opinion seems to not be negatively affected by partnerships with brands and recommendation of products sent for review consideration, with the majority of the respondents stating that their level of trust keeps the same in these situations.

The role of YouTube personalities as new opinion leaders, specially for younger publics, was also confirmed. This highlights how important is for brands to adapt, and to understand the importance and influence of YouTubers for their marketing campaigns.

However, the analysis of the credibility of YouTube recommendation in comparison to other recommendation sources, revealed that the credibility given to YouTube recommendations is still lower than the credibility attributed to the majority of the other recommendation sources. This credibility was revealed to be equal or higher only for recommendations on blogs and on brands'official website.

These results bring important highlights about the topic applied to the Portuguese reality, as well as evidentiate serious implications for marketing and management, namely on the way brands communicate with consumers.

Brands need to consider the changes in consumers and manage their expectations and demands for a different type of relationship with brands.

Promoting engagement by replying to consumers on social media, rethinking and adapting their marketing campaigns and explore the advantages of the association with YouTube personalities are also indicated as important paths to be followed by brands.

1. Research problem and objectives

The emergence and evolution of the Internet, as well as the continuous technological progress, have changed our world in several aspects. Consumer behavior and marketing strategies are two fields that have suffered, and continue to suffer, profound and irreversible changes.

Consumers have changed and are now more informed, demanding and empowered, using the Internet, not only to learn more about products and brands, but also as a way to communicate with companies and other consumers.

The advent of Web 2.0 generated *"the potential for an ordinary consumer to communicate with and influence a mass audience"* (Daugherty, *et. al*,2008:1). Consumers can, therefore, express their opinion in a more effective way, spread it easily across the Internet and see other consumers' opinion.

The unilateral way that companies used to communicate became obsolete since the new environment demanded a dialogue (Dionísio, *et. al*, 2009).

According to Razorfish (2015) negative emotions began to be associated with forced ad repetition, leading consumers to actively avoid advertising. In the referred report, over 75% of consumers in the four studied markets (United States, United Kingdom, Brazil, China) stated hating hearing or seeing ads repeatedly on radio, TV or online.

These aspects led to a decreasing effectiveness of the traditional communication methods used by companies (Teixeira, 2010; Augusto, 2013) and reduced credibility of their messages (Razorfish, 2009).

In this context, the phenomenon of user generated content, referred from now on as UGC, appears and word-of-mouth communication, from now on referred as WOM communication, gains a new relevance.

Recommendations become electronic mediated, amplified by the network and considered true, even when they come from strangers. Therefore, electronic WOM (e-WOM) grows to be an important information source, especially for young people (Teixeira, 2010). In addition, *"consumers find product reviews posted by their peers*

more trustworthy than marketer-produced brand information" (Morrison, *et. al*, 2013: 98).

YouTube reviews are one example of UGC that have been gaining extremely relevance having huge influence on consumers' purchasing decision (DEFY MEDIA, 2016). In a study from DEFY MEDIA (2015), a leading independent creator and distributor of digital content, focused on people from 13 to 34 years old, 63 percent of the respondents stated they would try a product or brand recommended by a YouTube personality.

YouTube is already considered one of the biggest successes of web 2.0 (Dionísio, *et. al*, 2009) and research shows that it reaches more US adults ages 18-34 than any cable network, having more than 1 billion users visiting YouTube each month (YouTube, 2015). YouTube has also expressive results in Portugal, presenting an impressive growing tendency among Internet users. A study from Marktest's NetPanel (2010) shows that from February 2008 to March 2010 the percentage of Portuguese Internet users, who live in mainland Portugal and with ages equal or superior to four years-old, who accessed YouTube, grew from 8.2% to 48.1%. Nowadays, this number is even higher, with YouTube being the third most visit website in Portugal in 2015 (Alexa, 2015).

Furthermore, YouTube video bloggers, now called vlogers, are also becoming strong opinion leaders overcoming in influence and popularity traditional opinion makers, like TV and movie stars, specially among younger publics (DEFY Media, 2015; DEFY Media, 2016).

With marketing and advertisement suffering relevant changes, the growing reservations about the effectiveness of the traditional communication tools (Rust & Varki, 1996) and a more demanding and informed "New Consumer", understanding the impact of the new instruments that affect consumer's decision becomes critical.

Therefore, this thesis will try to answer the following question: what is the impact of YouTube recommendation on consumer's decision-making process?

Answering this question will imply to analyze and explore the phenomenon of YouTube recommendations and its influence on consumer's behavior, particularly on consumer's decision-making process.

For that reason, the main objectives are:

- Understand how YouTube recommendations influence each specific step of consumer's decision-making process;
- Understand how YouTube recommendations are changing the traditional steps consumer's undertake to make a purchasing decision;
- Explore how the influence of YouTube recommendations vary for different product categories;
- Examine how brands can adapt to and take advantage of YouTube recommendations;
- Explore the phenomenon of vloggers as new opinion leaders.

2. Literature review

2.1. Consumers' purchasing decision

Every day consumers face numerous situations that require decisions, i.e. the selection of an option from two or more alternatives. These decisions are, usually made, without thinking about what is involved in the decision-making process, itself (Schiffman & Kanuk, 2007).

When purchasing a product or service consumers face a large number of choices and make several decisions. These decisions include, for example, whether to buy or not the product or service, which product or service categories to choose from and which stores, or brands, to buy from (Sheth *et al.*1999).

Therefore, the actual act of purchasing is just one step of a broader process that comprises mental and physical activities, preceding or following the actual buying (Loudon & Bitta, 1988). Decisions are an important part of this process.

According to Helfer & Orsoni (1996), consumers' purchasing decision is influenced by a large number of factors that can be divided in two big groups. The first group is related to surrounding environment, including all sociological and psychological elements that affect the consumer. In this group we can find influential aspects such as culture, subculture, social class, reference group, contact group and family. Conversely, the second group comprises individual factors that make each consumer unique, aspects such as motivation, experiences, self-image, personality and attitudes. All this factors work together and affect the choices each person makes. Additionally, Teixeira (2010) states that decisions are mainly based on the assessment of concrete and contextual situation of each individual and the perception he builds from the limited information possessed.

It is also accepted that consumers' have different strategies to make decisions and take in serious consideration the effort required to make any particular choice (Solomon, 2009). The effort and importance given to each of the steps of the purchase decision-making process is conditioned by the risk associated to the purchase, the product type and the involvement of consumers, as well as the easiness to learn, and past experiences (Lindon *et al.*, 2004).

Nelson (1974) studied the differences in Purchase Decision-making Process, associated with different product types and made the distinction between search goods and experience goods. Search goods are defined as the ones whose qualities can be determined by the consumer before buying. In contrast, experience goods are the ones whose qualities cannot be determined before the purchase. Due to the differences in the nature of these products the processes that lead to purchasing decisions are also different. For example, for experience goods, consumers are more willing to search and ask for recommendations before deciding on a specific product.

As referred, the level of effort is also influenced by the level of involvement, i.e. the importance of the perceived consequences of the purchase to the individual. Being this involvement higher when the individual believes the purchase has potentially negative consequences. In other words, when the perceived risk is higher (Solomon & Stuart, 2000).

In high-involvement purchases the consumer is likely to search for and process all the available information, thinking carefully before buying an item. In this type of decisions it is widely accepted by marketeers that consumer decision-making is an ongoing process that Solomon & Stuart (2000) propose to organize in five steps:

1. Problem recognition
2. Information search
3. Evaluation of the alternatives
4. Product choice
5. Postpurchase evaluation

2.1.1. Problem recognition

According to Helfer & Orsoni (1996) problem recognition occurs when the individual is subjected to a tension due to a difference between his aspirations and his current situation.

Within problem recognition, Solomon & Stuart (2000) identified two different situations: opportunity recognition and need recognition.

Opportunity recognition occurs when the ideal state is moved upward, usually when the individual is exposed to different or better-quality items. On the other hand, need recognition occurs, for example, when the individual run's out of a product or is not satisfied with his current situation.

2.1.2. Information search

According to Teixeira (2010), purchasing decisions are often made in a context of highly uncertainty. Therefore, the consumer feels the need to develop strategies in order to reduce the perceived risk. Information search is one way of diminishing the uncertainty associated to purchasing decision.

According to Solomon (2009) information search can be divided into two types: internal and external. Internal search occurs when the individual rely on its own memory and past experiences to scrutinize different product alternatives. On the other hand, external search, consist in collecting information about the product or service from external reliable sources, such as experts and opinion leaders.

Information search is not always deliberate since, sometimes, consumers acquire information in a passive manner. Consumers are exposed to advertising, promotions and several other approaches, even from brands or products they are not interested in, at that particular moment. This fact results in *incidental learning* that can be, therefore, used, or influence future purchasing decisions (Solomon, 2010).

2.1.3. Evaluation of the Alternatives

After collecting all the needed information, consumer will, first, identify a small number of alternatives in which he is interested in, and then, narrow down his options, choosing the alternatives considered feasible based on evaluative criteria.

According to Semenik and Bamossy (1996), consumers consider three different aspects as evaluative criteria, functional product features, such as price and performance, emotional perceived satisfaction and future benefits that may arise from the use of the product or service.

The consumer will, finally, compare the pros and cons of the remaining alternatives.

The evaluation of alternatives might be really difficult considering the increasing number of alternatives consumer faces. In some cases the consumer faces hundreds of different brands and, even, different variations of the same brand (Solomon, 2010).

2.1.4. Product choice

In this step the consumer selects an alternative among the other options and acts on his choice (Solomon & Stuart, 2000).

2.1.5. Postpurchase evaluation

Postpurchase evaluation is the last step of the purchasing decision-making process. In this step the consumer evaluates his decision.

According to Solomon & Stuart (2000) the evaluation of the product results in a level of consumer satisfaction or dissatisfaction that can be determined by the feelings or attitudes a person has about a product after buying it.

Customer satisfaction is determined by to which extent a product, or service, meets or exceeds customer expectations. Consumers compare the product their bought to a performance standard that results of a "*mixture of information from marketing communication, information sources such as friends and family, and their own experience with the product category."* (Solomon & Stuart, 2000:143).

Assuming that the purchase decision is the result of a process that involves well-defined stages is a simplification of the reality (Helfer & Orsoni, 1996). Although these steps are followed by people when making important decisions, it is not realistic to assume that this process is undertaken for all the products people buy. In low-involvement situations, for example, consumers often decide as a response to environmental cues (Solomon & Stuart, 2000).

Studies in behavioral economics show that decisions are made in a context of bounded rationality (Simon, 1957) and recent search (Zajonc, 1984 & Bornstein, 2004) has revealed that purchases are made, predominantly, based on symbolic and emotional reasons and not so much on rational motives.

Therefore, consumers may rely on decision rules or heuristics to simplify choices instead of going for a prolonged information search, even though these shortcuts may not lead the consumer to the decision that would better serve his interests (Solomon, 2009).

2.2. WOM communication

According to Mowen & Minor (1998:491), Word-of-Mouth communication *refers to an exchange of comments, toughts, or ideas between two or more consumers, none of whom is a marketing source".* Solomon (2009) defines it as product or service information that individuals transmit to other individuals.

This type of communication is often referred as one of the oldest and most powerful forms of Marketing (Sirma, 2009) and have an extremely strong impact on consumer purchasing-decision (Loudon & Bitta, 1988; Mowen & Minor, 1998; Goldenberg et al., 2001), shaping consumers' attitudes and behaviors (Brown & Reingen, 1987).

In the survey from Pruden & Vavra (2004), entitled *Controlling the Grapevine*, 69 % of the interviewees affirmed that, over the course of a year, they relied on a personal recommendation to choose a restaurant, at least once. Interviewees also said to rely on friends to choose where to travel (36%) and to use referrals to decide on computer software and hardware (22%) (Solomon, 2009). Other study, referred by Mowen & Minor (1998), found that WOM influence was twice as effective as radio advertising, four times as effective as personal selling, and seven times as effective as newspapers and magazines. Also, according to Razorfish (2015), consumers rate WOM with more importance than traditional advertising in all the markets considered in the study.

According to Solomon (2010) WOM can capture consumer's attention and, since the information comes from someone the consumer knows, it tends to be more reliable and trustworthy than messages from more formal marketing channels.

It is, therefore, interesting to understand what make consumers talk about products and their personal consumption experience. Solomon (2009) indicates the following reasons:

- The consumer have high level of involvement with a type of product or activity enjoying, therefore, talking about it;

- The consumer is knowledge about a product, using conversation as a way to show it to others;
- The consumer has genuine concern for others, wanting to inform them about a product.

WOM can be either positive or negative. Positive WOM is defined by Sirma (2009:8) as *"product-related information transmitted by satisfied consumers to others"* and it is a possible outcome of a consumer's favorable attitude towards brands. On the other hand, negative WOM happens when an unsatisfied consumer expresses its dissatisfaction about a product or service and it is weighted more heavily than positive WOM *i.e.* WOM communication has a negativity bias (Solomon, 2009; Mowen & Minor, 1998).

Research from Smith & Vogt (1995) showed that negative WOM affects the credibility of brands and companies' advertising and influences consumers' attitude towards the product, as well as their intention to buy. In contrast, positive WOM about a specific product increases the likelihood of a consumer to buy it (Solomon, 2009).

Fitzsimons and Lehmann (2001) also stress the importance of recommendations in decision-making as a phenomenon of group pressure. When consumers receive a recommendation but decide against it, they experience less satisfaction and increased difficulty in choosing the product.

Solomon (2009) presents a study (Myers & Robertson, 1999) that shows that sometimes the influence of other's opinion is more powerful than individuals' own perception. In the referred study "*consumer's estimates of how much their friends would like the furniture was a better predictor of purchase than what they thought of it*." (Solomon, 2009:443).

2.2.1. Electronic WOM and user generated content

The Web 2.0 changed the technological world in several ways and one of the most noticeable changes was the *"advent of the online spaces that have enabled consumers to post comments, blog, and interact with other Internet users regarding products and brands."* (Morrison *et.al,* 2013:97), generating *"the potential for an ordinary consumer to communicate with and influence a mass audience."* (Daugherty, *et. al,* 2008:1).

The changes brought by web 2.0, as well as the intrinsic nature of the Internet, have enhanced content and file sharing applications, allowing the appearance and distribution of UGC (Daugherty, *et. al*, 2008).

UGC is defined as *"media content created or produced by the general public rather than by paid professionals and primarily distributed on the Internet"* (Daugherty, *et. al*, 2008:2) and it is manifested in contexts that facilitate information sharing among users such as, blogs, social networking sites and online communities. Including, for example some of the most popular sites like YouTube, Facebook or Wikipedia (Morrison *et.al*, 2013; Daugherty, *et. a,l* 2008).

The growing popularity of the UGC phenomenon makes its study and empirical scrutiny an imperative (Dylko, 2014) and since some forms of UGC, such as brand recommendations and product reviews, include brand or product related information (Morrison *et.al*, 2013) companies must also pay attention to it in order to gain a better understanding of its impacts on advertising.

According to studies presented by Razorfish agency in its FEED report (2009), 69% of the inquired consumers have, at least once, provided feedback to a brand, either through its web site or a third-party service, 73% have posted a product or brand review on a web site like Amazon, Yelp, Facebook, or Twitter and 52% have blogged about a brand's product or service.

The ease with which consumers share their experiences, opinions, and feedback regarding products, services, or brands, in the form of online reviews (Filieri, 2014) is also generating large amounts of WOM and e-WOM (Morrison *et.al*, 2013).

E-wom is defined by Hennig-Thurau *et al*. (2004:39) and cited by king *et al*. (2014) as "*Any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet.*"

Online reviews from other consumers on the Internet are seen as a source of recommendation and research shows that consumer decision-making process is heavily influenced by it (Goldenberg et al. 2001). Furthermore, "*the reach of e-WOM is not limited to the online environment"* influencing also offline opinions (Morrison *et.al*, 2013:97).

In a recent study from PricewaterhouseCoopers (PWC), presented in Razorfish report (2015), 80% of consumers stated looking at online reviews before making major purchases. Being this number even higher for specific product categories, such as automotive. Also, in a study from ExpoTV, stated by Teixeira (2010), 92% of the American mothers claimed trusting the description made by other consumers about brands they are considering to buy and 78 % said that watching a video posted online by other consumers helped them to make a purchase.

Customer product reviews are also becoming a key driver of satisfaction and loyalty. In a survey presented by Solomon (2009) approximately half of the respondents who bought a product online remembered seeing customer product reviews. The participants that recalled the recommendation presented 5% more satisfaction with the online shopping experience than the ones, who didn't.

2.3. The evolution of the Internet and the "new consumer"

Advances in information technology, as well as the progresses in communication, have led to increasingly significant changes in consumer behavior (Cantallops & Salvi, 2013). Social and cultural forces created new preferences and technology empowered consumers with new tools and features (Maras, 2015).

The technology evolution, along with the powerful network effect of the web, were two crucial elements that justified these fast, sustained and disruptive changes (Dionísio, *et. al,* 2009) that had a profound impact on, not only shopping trends, but also on the relationship between brands and consumers (Deloitte, 2014).

Since the emergence of the Internet "*scholars began predicting a shift in power from the marketer to the consumer, suggesting a new form of consumer–firm relationship."* (Labrecque *et.al*, 2013:257).

As referred, the advent of Web 2.0 enabled consumers to express their opinion in a more effective way, spread it easily across the Internet and see other consumer's opinion.

During all this evolution, digital tools, such as e-mail, made easier for the consumer to communicate with brands. As a result, the communication between brands and consumers has evolved from a monologue to a dialogue, allowing the exchange of ideas, opinions and experiences, and changing the passive role of consumers to a more proactive one (Dionísio, *et. al*, 2009).

With consumers easily spreading their opinion over the Internet, an increasing disbelief and discredit towards advertising started to arise. These aspects led to a decreasing effectiveness of the traditional communication methods used by companies (Teixeira, 2010; Augusto, 2013) and reduced the credibility of their messages (Razorfish, 2009).

In addition, negative emotions begin to be associated with forced ad repetition leading consumers to actively avoid advertising. According to Razorfish (2015) study, over 75% of consumers in the four studied markets (United States, United Kingdom, Brazil, China) stated hating hearing or seeing ads repeatedly on radio, TV or online.

According to Razorfish (2015), third-party consumer endorsements are now more influential than advertising, with online reviews from other consumers appearing as the second aspect that most influences purchasing decision for three of the four studied markets. Being WOM in the first position for all the four markets studied.

Another interesting fact is that consumers, specially younger consumers, seem more tolerant towards advertising when this is part, or is related with YouTube content. More than 80% of the inquired consumers in the study presented by DEFY MEDIA (2016) agreed that five second intro or end-screen showing brand sponsor, product placement in video, and digital celebrities announcing or demonstrating products, were "always or sometimes okay". Even 30 seconds and 1 minute preroll were accepted by 67 and 53% of the respondents, respectively (DEFY MEDIA, 2016).

Internet also provided consumers the access to vast amounts of information (Labrecque *et.al*, 2013), allowing them to be more informed.

More information combined with a more competitive market led to higher consumer's expectations and made consumers more demanding (Dionísio, *et.* al, 2009).

All these evolution was accompanied and reinforced by changes and transformations in consumer's behavior. Consumer behavior was, therefore, not only, conditioned by all

the alterations referred, but also responsible for urging and promoting some of the changes. It is, consequently, important to understand the evolution that consumers have been trough.

According to Consumer Evolution report from Deloitte (2014), this evolution comprehended three phases: *Connected Consumer*, *Empowered Consumer* and Consumer-in-Chief's.

"First, we watched the rise of the Connected Consumers, those who demanded the ability to engage with brands when they wanted, no matter where they happened to be" (Deloitte, 2014:2). Facing this reality, brands started to increase their presence on the Internet where these new consumers were, guaranteed their presence on social media and invested on e-commerce, allowing consumers to shop anytime, anywhere and any way they want (Deloitte, 2014).

The changes in consumer's behavior continued and *Connected Consumers* gave place to *Empowered Consumers.* In this stage consumers started questioning the "truths" about the traditional ways and steps of shopping, *"straying from the tried-and-true way of shopping to follow their own path to purchase"* (Deloitte, 2014:3). Multiple opportunities to compare prices and product characteristics started to appear, becoming increasingly common for consumers to collect all sorts of information about a product or service before going to the point of sale or making the purchase (Dionísio, *et.* al, 2009). According to Deloitte (2014), 75 to 85% of consumers pre-shop online and, for Millenials, mobile usage dominates their shopping experience (Razorfish, 2015). According to 2015 Global Digital Marketing report, from Razorfish, 67% of the U.S. Millenials claim to frequently price check items on their phones, while in store.

Consumer evolution didn't stop there, it continued and it is still happening nowadays. The broad diffusion of Internet technologies and their associated characteristics, such as, the power conferred by the demand, network, information and crowd, influenced the emergence and evolution of consumer empowerment (Labrecque *et.al*, 2013; Kozinets, R., *et. al*. 2010). Nowadays, consumers are more in command (Dionísio, *et.* al, 2009), for that reason, the third stage of consumer evolution is *Consumer-inChief*. In this stage consumers are more demanding, taking into consideration all the steps of the chain, *i.e*. not only, the aspects until the purchase *per si*, but also post-purchase aspects. *"The*

Consumer-in-Chief demands choice, flexibility and personalized attention after the purchase is made: in-store purchases shipped home, online purchases picked up in-store, delivery to a community locker or even drive-through pickup and easy returns" (Deloitte, 2014:3).

Summarily, consumers nowadays are more informed than ever, having increased mobility and global access. They spend more time on the Internet and are more connected with brands. These consumers are willing to invest their time searching and comparing prices and product characteristics before going to the point of sale. New consumers are also harder to please, demanding a seamless and more personalized experience that meets their needs in an accurate and convenient way during all the purchase and post-purchase process (Dionísio, *et.* al, 2009; Deloitte, 2014). *"Consumers want to be able to browse and buy what they want, how they want, and when they want."* (Deloitte, 2014:6).

The characteristics of the new consumer are in accordance with the global consumer trends for 2016, presented in the Top 10 Global Consumer Trends for 2016 report, from Euromintor International, particularly in two of the trends presented: Agnostic Shoppers and Over-connected Consumers (Daphne, 2016).

Agnostic shoppers are *"emboldened by a post-recessionary, hyper-informed, savvy-shopping zeal, with multiple opportunities to compare prices at their disposal, they are less bothered about labels and recognized products"* (Daphne, 2016:2). These consumers, more than searching for bargains and quality, look for products that inspire them and appreciate finding quality in unknown, or unadvertised brands (Daphne, 2016). Consumers are also searching for value around utility, 86% of consumers in the U.S. state to value more brands that are useful, rather than brands that are interesting (Razorfish, 2015). *"The most successful brands are those that are becoming truly user-centric and designing services that help make people's lives better."* (Razorfish, 2015:12).

Over-connected consumers are also indicated as a consumer trend for 2016. In 2016 is expected that Internet users hit three billions, increasing the number of consumers connected to the web. Additionally, the growing use of Smartphones and the higher availability of Wi-Fi and mobile Internet allowed consumers to be connected wherever

they want (Daphne, 2016). Between 2012 and 2015, the average time, per day, spent on the mobile web has jumped from 1.24 hours to 1.99 hours (GlobalWebIndex, 2015).

"Because of the revolution in mobile, the amount of time we spend online, the number of things we do online, and the attention we spend on platforms has exploded."(Bell, 2016). This is particularly true for the youngest generations, *"Millennials' constantly connected smartphones mean they no longer see a difference between "online" and "offline." Technology has become an integral part of their lives, and it is how they interact with and experience brands, even when in traditionally "offline" environments."* (Razorfish, 2015:4).

New consumers spend more time in interactive and online channels than in the traditional ones (Dionísio, *et.* al, 2009) and TV is losing relevance, especially among younger publics, attracting fewer viewers and for fewer hours than digital media. According to DEFY Media Constant Content study (2016), this happens because digital suits better the lifestyle of the younger public and presents more relatable content than traditional TV (DEFY MEDIA, 2016).

In this context, there is also a shift from TV in what concerns opinion leadership to the new consumer. Online and digital "celebrities", like bloggers and YouTube vloggers, gain relevance, becoming more relatable and appealing, particularly for the new generations (DEFY MEDIA, 2016).

2.4. YouTube

YouTube is a video-sharing web-site, launched in May 2005 and bought by Google in 2006, being, since then, a Google company. YouTube allows people to watch and share originally-created videos (YouTube, 2015) and provides brands new advertisement tools to impact their publics and to measure these impacts (Almeida, 2015). Two examples of these tools are TrueView and Brand Lift.

TrueView is a service that allows brands to have video ads before YouTube videos and Brand Lift is a tool that carries out surveys for viewers after watching video ads, allowing the brand to understand the impact of the video, for example in terms of awareness or intention to buy (Almeida, 2015).

According to the statistics provided by Google, YouTube has over a billion users, which represent almost a third of all Internet users. Every day, hundreds of millions of hours of YouTube videos are seen, generating billions of views. Furthermore, the number of hours people spent watching videos on YouTube has increased 60% over the last year (YouTube, 2015). Although YouTube is growing in all platforms, the mobile platform is the one that is growing more significantly, around 200% per year. This platform is already responsible for more than half of the watching time (Almeida, 2015).

YouTube allows navigation in a total of 76 different languages and has local versions in more than 70 countries.

YouTube reaches more 18-34 and 18-49 year-olds than any cable network in the U.S. (YouTube, 2015) and in a recent GlobalWebIndex survey, made to Internet users aged 16-64, more people said that they had visited YouTube in the past month than any other channel in the survey, beating even the number one social network in the world, Facebook.

Although globally Facebook remains the network with higher numbers in what concerns membership and active usage, YouTube has already higher levels of visitation (GlobalWebIndex, 2015).

YouTube growth has been followed closely by brands and the company have been collecting more and more attention and investment. For example, the investment of the top 100 UK brands that announce on YouTube has increased 60% when compared to the previous year (Almeida, 2015).

YouTube has also significant results in Portugal, presenting an impressive growing tendency among Internet users. A study from Marktest shows that from February 2008 to March 2010 the percentage of Portuguese Internet users that accessed YouTube grew from 8.2% to 48.1%. "*According to Vademo, the Portuguese public is spending around 14 hours per month watching videos on YouTube, more 50% than last year."* (Almeida, 2015:43) The average of likes and shares per user has also increased more than 60%, showing the growing involvement among Portuguese users (Almeida, 2015).

The popularity of some Portuguese YouTube channels, such as Fer0m0nas, with more than two point six million subscribers, DrM4ster, with almost seven hundred thousand subscribers, or TheRemedyChannel with approximately three hundred thousand

subscribers, are also evidences of the interest and participation of the Portuguese public on YouTube (Socialbakers, 2015).

Considering the dimension of YouTube, that already become the world's second largest search engine (Fitzgerald, 2015), marketing researchers started to study and explore the advantages of YouTube videos as marketing tools, as well as, the opportunities YouTube brings.

Consumers are turning to online video, not only to look for inspiration or information, but also to discover new things, or make decisions. These behaviors matter to brands since they contribute to shape consumer's preferences and to consumers' decision making (Black, 2015).

According to Google UK Country Sales Director, Peter Fitzgerald (2015), "*this unique go-to resource for people in need of answers and ideas presents a profound opportunity for brands to be present where audiences are."*

The Report *Future of Retail Study,* from Walker Sands Communications, states that YouTube videos have influenced a purchase at least once for 53% of the consumers and, according to *Quarterly Insights for Brands from Google and YouTube,* YouTube influences recent purchases more strongly than TV in what concerns beauty products, smartphones and even automotive vehicles (Google, 2014).

Pixability, a marketing company, undertook several studies about YouTube and came to the same conclusion. YouTube is changing consumer behavior. For example, in the beauty industry, which concerns all the beauty content focused on makeup, skincare, hair, nails and perfumes, shoppers are switching major brands for beauty personalities and YouTubers, when looking for product recommendations (Pixability, 2015). Among young females, in particular, YouTubers' tutorial consumption frequently replaces visits to beauty stores when the purpose is receiving trusted cosmetics advice and comparing beauty products (Pixability, 2014).

The beauty market is not the only example of the influence of YouTube videos on consumer behavior. In the Electronics market the same phenomenon is happening. Consumers are shifting their decisions about electronic devices away from physical points of sale onto YouTube. "*YouTube has become the primary destination for*

audiences to research consumer electronics products, discover new devices, and watch reviews before making purchasing decisions." (Pixability, 2014:7). For example, according to research conducted by Compete and Google, 48% of tablet buyers watch product videos on YouTube before making a purchase and 61% of smartphones purchases are influenced by YouTube. This influence comes mainly from independent content creators and not from electronic brands.

2.5. Opinion leaders

An opinion leader is defined by Solomon (2010: 456) as "*a person who is frequently able to influence other's attitudes or behaviors"* and for Rogers & Cartano (1962:435), opinion leaders are *"individuals who exert an unequal amount of influence on the decisions of others".*

Evidences show that some people's recommendation is weighted more heavily than others. In the case of opinion leaders' recommendation, is extremely valuable since they exert a disproportionate amount of influence on other consumers' decision (Flynn *et. al,*1994), having the ability to affect their opinion and behavior (Solomon, 2009).

The importance of opinion leaders is demonstrated by the number of academic studies on the theme, the relevance of the topic in consumer behavior works and the effort market players put in maintaining good relationships with them (Flynn *et. al,*1994).

Properties that make opinion leaders have been widely explored and discussed in the literature (Momtaz *et al.*, 2013) and there are several factors that are agreed to identify people as opinion leaders. Solomon (2009) indicates the following specific factors to consider someone as an opinion leader:

- Being technically competent, having, therefore, expert power;
- Being able to prescreen, evaluate and synthesize product information in an unbiased way, having, therefore, knowledge power;
- Being socially active and highly interrelated with a specific community;
- Having a personal status that legitimates power;
- Being similar to consumer in what concerns values and beliefs, having, therefore, referent power;

- Being among the first to have new products, absorbing the risk and reducing uncertainty to others.

Momtaz *et al.* (2013) combine the studies and approaches of different authors and purpose the organization of these factors in three comprehensive categories including structural, behavioral or relational and personal factors.

Considering structural factors, Momtaz *et al.* (2013) identify three specifications defended by authors, exposure of the agent, prominence and central position, and shorter distance with network members. In terms of relational factors, the specifications are: similarity between opinion leader and its followers, strength and type of the relationship and trust. Finally, in personal factors the authors specify aspects such as, innovation, high social involvement, prestige, socioeconomic factors like social class, knowledge, demographic aspects and reputation.

Initial studies on opinion leadership assumed that there were generalized opinion leaders, i.e. people that would exert an overall influence on a community.

However, later work started to question the idea of someone whose recommendations were sought for all type of purchases. Sociologists explored the question and distinguished two types of opinion leaders, *monomorphic* and *polymorphic.*

Monomorphic opinion leaders are the ones that are experts in a limited field and *polymorphic* opinion leaders are the ones that are experts in several fields.

According to Solomon (2009), opinion leaders who are polymorphic, tend to concentrate their expertise on one broad domain, for example technology or beauty. It is, therefore, rare to find a generalized opinion leader.

Early conceptions also assumed that the role of opinion leaders was a one way process, i.e. the opinion leader absorb information from media and transmit it to opinion receivers. However, recent studies prove that opinion leaders are also likely to be opinion seekers. They are more involved in a product category and actively search for information, therefore they tend, not only to talk with others about products, but also to solicit others' opinion (Solomon, 2009).

Although opinion leaders can be very valuable, companies simultaneously love and fear them. On one hand, *"she or he represents an effective and fertile source of new ideas, on the other hand, just one comment from her or him might prompt the most resounding failure of a new product or service launch that has required a costly investment."*(Sahelices-Pinto & Rodríguez-Santos, 2014:248). For this reason, research about opinion leadership is both attractive and crucial for companies and investors (Sahelices-Pinto & Rodríguez-Santos, 2014).

Marketers and companies are, therefore, interested in identifying and interacting with opinion leaders and, in some cases, trying to directly involve them in their marketing efforts (Solomon, 2009). For example, according to Kotler & Keller (2009) companies can take advantage of opinion leaders to start positive buzz. In order to do that it is necessary to identify influential individuals and put extra effort on them, supply opinion leaders with product samples and provide compelling information that customers want to pass along.

With the growth of Internet users and e-WOM phenomenon, opinion leadership started to emerge also on the Internet. These opinion leaders have increased capacity to disseminate and collect information, being then, not only sources of information about just launched products and services, but also sources of valuable information about the emerging needs and ideas arising on their network or community (Sahelices-Pinto & Rodríguez-Santos, 2014).

The growing importance of opinion leaders on the online world makes it is crucial for brands to engage with bloggers and other online influencers as a way to reach authentic and trustworthy presence among online communities (Sahelices-Pinto & Rodríguez-Santos, 2014). YouTube personalities are included in this group, becoming also recognized as opinion leaders in the online world. YouTubers are the true opinion makers nowadays, ensure Debbie Weinstein, EMEA head of Branding Solutions on Google (Almeida, 2015). Furthermore, according to the third Annual Acumen Report, online personalities are the most relatable and influential for the public between 13 and 24 years-old, showing greater influence among this set, when compared to the biggest names in TV and films. According to the same study, YouTubers are the modern day role models for the Millennial set and, 63 percent of all respondents declared they

would try a product or brand if recommended by a YouTube personality (DEFY Media, 2015).

Variety magazine conducted a study with the purpose to measure the awareness, likability and purchase influence of YouTube stars and traditional TV/Movie stars among 13-18 year olds. The results confirmed the growing influence of YouTubers, six of the top ten personalities were YouTubers (DEFY Media, 2015).

Being YouTubers the new opinion leaders, brands started to include them on their marketing campaigns and nowadays there are thousands of examples of these collaborations, which have become a common practice. In the UK, for example, the grocery retailer Sainsbury's launched a YouTube channel and created an online cooking show called 'Food with Fleur & Mike". Weekly, Fleur, the beauty and fashion vlogger from the channel Fleur De Force, that counts with more than 1.3 million subscribers, and her husband, Mike, post a cooking video where they use Sainsbury's products to try new recipes or to cook their favorite dishes. Also, Turkish Airlines used Youtubers to create new associations for the brand, such as exploration and adventure. The airline sent 10 YouTubers to secret locations around the world so they could show how it is to fly Turkish Airlines, document their travel and share it with their subscribers. In this campaign, Turkish Airlines, not only explored the influence of these YouTubers, but also, the loyalty and extent of their audiences that were exposed to the videos (Econsultancy, 2015). These brands recognized that YouTubers are the new prescribers and that followers trust their opinion and choices. With partnerships with YouTubers brands expect the transference of this trust to the brand itself (Almeida, 2015).

In Portugal, YouTubers are also starting to become relevant and interesting to brands. According to Inês de la Mata, head of Branding in Google Portugal, Portuguese brands had a late start to the YouTube phenomenon, but they are giving signs of rapidly adopting this reality (Almeida, 2015). The new multichannel marketing campaign from Agros is one example of this. This campaign has the collaboration of the Portuguese Youtuber Miguel Campos from the channel Fer0m0nas. The motto of this campaign is "Sabem qual é o segredo do Feromonas?" that can be translated to "Do you know the secret of Feromonas?". The purpose of this campaign is to increase the engagement

among young consumers by meeting their interests (Briefing, 2015) and the use of a YouTube personality meets perfectly this purpose.

According to Sandra Martins, manager of the milk category from Agros, "YouTubers are the daily companion of the new generations, influencing their opinion and behavioral standards. Therefore, the association with Feromonas allows the brand to get closer to the language and social codes of these new generations (Almeida, 2015).

The brand WTF, from NOS, has also seen the potential of YouTubers in marketing campaigns and currently has a contract with eleven YouTubers that make regular videos to promote the brand (Visão, 2014).

Brands also, recurrently, send YouTubers, products for promotional and review consideration. This involves sending products as gifts, hopping to get a full product review or, at least, the brand name referred in a video. Usually, there is no obligation in this kind of relationship, thus the YouTuber is not committed to say favourable things about the product, or even talk about it (Levine, 2014).

The review, or reference, to products offered by brands may interfere with the credibility and impartiality that consumer's usually impute to YouTubers (Federal Trade Commission, 2015). This aspect combined with the growing amount of free products that YouTubers and bloggers receive from brands, the influence they have on their audiences and, the need to guarantee the transparency in this type of relationship, made the U.S Federal Trade Commission to publish official directives that explain the rules applied to this specific situation (Mejia, 2011).

According to the referred institution, when there is this sort of relationship between a vlogger and a brand, it is important for the viewers to know about this connection, since this can affect the way a product or service is reviewed. Therefore, the U.S Federal Trade Commission guides state that if there's a connection that consumers' would not expect between the vlogger and the marketer, and if that might affect the way consumers evaluate the product or service referred, that connection should be disclosed. These guides are based on the basic truth-in-advertising principle that endorsements must be honest and not misleading. An endorsement must reflect the honest opinion of the endorser (Federal Trade Commission, 2015).

3. Research framework

The lack of data and studies concerning e-Wom, UGC and YouTube recommendation in Portugal, led this investigation to focus on the Portuguese case.

Thus, all study hypotheses will focus youngsters and young adults, belonging to Portugal's resident population and with access to the Internet. This group will form the studied universe, explained in more detail in the section universe and sample.

It was, therefore, important to study, in first place, the knowledge and utilization patterns of YouTube among the studied universe, as well as understand if it is familiar with YouTube recommendations and YouTube personalities, as it is suggested in the studies previously presented (Marktest's NetPanel, 2010; Alexa, 2015). In order to verify this, it was created the Hypothesis 1 (H1).

H1: YouTube is well known among the studied universe and it is used as a source of information and recommendation;

According to Teixeira (2010), online reviews from other consumers on the Internet are seen as a source of recommendation, furthermore, research shows that consumer decision-making process is heavily influenced by it (Goldenberg et al. 2001).

It was then necessary to understand if YouTube recommendation was a recommendation source with high importance for the studied universe, as well as understand if the level of importance was equally high along all the considered steps of consumer's decision-making process. For that reason Hypothesis 2(H2) was constructed and subdivided in Hypotheses 2a (H2a), 2b (H2b) and 2c (H2c).

H2: YouTube recommendation is an important or very important recommendation source for the studied universe, when a) searching for information about products and services b) evaluating product and service alternatives c) making purchase-decisions;

Studies like the one presented by the Razorfish agency (2009) in its Fluent report, indicate that the impact of online recommendation is not equal for all the phases of the consumer's decision-making process. The third hypothesis (H3) was, then, formulated to access this aspect.

H3: The studied universe gives equal importance to YouTube recommendations when a) searching for information about products and services b) evaluating product and service alternatives c) making purchase-decisions;

It was also pertinent to understand if YouTube recommendations were equally relevant for all products or if its relevance varies according to the product category.

As was referred in the literature review, the type of product is one of the aspects that affect the effort and importance given to the different steps of the purchase decision-making process.

Nelson (1974) studies the differences in purchase decision-making process associated with different product types, and makes the distinction between search goods and experience goods. According to the author, consumers are more willing to search and ask for recommendations before deciding on a specific product, when buying experience goods (Nelson, 1974).

However, studies seem to show that the importance of YouTube recommendation is also substantial for search goods. For example, a Pixability study shows that in the electronic market "*YouTube has become the primary destination for audiences to research consumer electronics products, discover new devices, and watch reviews before making purchasing decisions"* (Pixability, 2014:7), and in the beauty industry, among young females in particular, YouTubers' tutorial consumption, frequently replaces visits to beauty stores when the purpose is receiving trusted cosmetics advice and comparing beauty products (Pixability, 2014).

The hypothesis 4 (H4), was, therefore, created to test if there are significant differences in the relevance attributed to YouTube recommendations when considering search goods and experience goods, and in which phases of the purchase decision-making process these differences are manifested.

H4: The importance that the studied universe gives to YouTube recommendation is higher for experience goods than for search goods when: a) searching for information about the product or service b) evaluating the alternatives and c) making the purchase decision.

As stated before, according to Black (2015) consumers are turning to online video, not only to look for inspiration or information, but also to discover new products, services, or even trends. Furthermore, the Ipsos study, stated by David Black on his article *Turn On, Lean In, Connect: YouTube Unites Consumers with Brands* (2015), affirm that 23% of UK consumers said they discovered new products or brands while watching online video.

Therefore, it was also important to understand if in Portugal YouTube recommendations and YouTube personalities are also operating as initiators of the purchase decision-making process, inducing or making consumers acknowledge their needs, having, this way, influence in consumer's problem recognition. In order to test this, the Hypothesis 5 (H5) was formulated.

H5: Individuals from the studied universe experience problem recognition triggered by YouTube recommendation.

In addition to verify if YouTube personalities are operating as initiators of consumers' purchasing decision process, it is also important to clarify if there is loyalty towards the contents they produce. This will be relevant to understand if recommendation has further impacts on other stages of consumer's purchasing decision process.

YouTube allows viewers to subscribe to their favorite channels. Once viewers subscribe to a channel they receive updates whenever that channel uploads new contents. Furthermore, every time the user visits their YouTube homepage all new videos from their subscriptions appear in the subscriptions feed (YouTube Help, 2016). This makes easier for the viewer to keep up with the content that their favorite channels produce, contributing to promote loyalty towards the chosen channels.

Furthermore, according to YouTube creator academy, subscribers spend more time watching videos on YouTube than casual visitors and they also tend to be responsible for many more views on a new video than non-subscribers. *"People are tuning in to watch great content from their favorite creators and, as a result, the number of hours people spend watching videos on YouTube is up 60% year-on-year."* (Black, 2015).

Being this true, there are several important implications to be considered. If the subscribers watch more videos and during more time they will be more exposed, not

only, to the recommendations made by the YouTubers they subscribe, but also to the products they use.

Therefore it was important to test if there is, indeed, this loyalty towards certain YouTubers and to which extent. The Hypothesis 6 (H6) was then created with this intention.

H6: The individuals from the studied universe are loyal towards their favorite channels, watching the majority of their videos

Simultaneously, it is crucial to explore the level of trust and credibility that youngsters and young adults living in Portugal put on these recommendations and personalities.

YouTubers are becoming recognized opinion leaders in the online world, mainly among younger publics. According to the third Annual Acumen Report, online personalities are the most relatable and influential for the public between 13 and 24 years-old, showing greater influence among this set, when compared to the biggest names in TV and films. According to the same study, YouTubers are the modern day role models for the Millennial set and, 63% of all respondents declared they would try a product or brand if recommended by a YouTube personality (DEFY Media, 2015).

Also, according to Debbie Weinstein, EMEA head of Branding Solutions on Google, YouTubers are the true opinion makers nowadays (Almeida, 2015).

As opinion makers, their recommendation has more influence on consumers than recommendations from others (Solomon, 2010).

The fifth study hypothesis (H5) was formulated with the aim of analysing the trust that the studied universe has on these personalities.

H7: The studied universe trusts the opinions of the YouTubers they subscribe

Brands always used opinion leaders on their marketing strategies (Almeida, 2015) and, being YouTubers the new opinion leaders, brands started to include them on their marketing campaigns.

These partnerships have become a common practice in countries like the U.S. and the U.K. and are starting to gain relevance in Portugal too. According to Inês de la Mata, head of Branding in Google Portugal, Portuguese brands had a late start to the YouTube

phenomenon, but they are giving signs of rapidly adopting this reality (Almeida, 2015). It was, thereupon, pertinent to study if these partnerships affect consumer's trust towards the involved YouTuber.

As previously explained brands also, recurrently, send YouTubers products for promotional and review, consideration.

The review, or reference, to products offered by brands may also interfere with the credibility and impartiality that consumer's usually impute to YouTubers (Federal Trade Commission, 2015).

Hypothesis 8 (H8) was then formulated to assess if the trust on YouTube recommendations is affected by the referred aspects.

H8: The trust of the studied universe on YouTube recommendations is not negatively affected by a) partnerships with brands b) recommendation of products sent by brands.

As previously referred, e-WOM has grown to be an important information source, specially for young people (Teixeira, 2010) and according to Morrison, *et. al,(2013:98) "consumers find product reviews posted by their peers more trustworthy than marketer-produced brand information"*.

Furthermore, according to Razorfish report (2009) an increasing disbelief and discredit towards advertising started to arise, leading to reduced credibility of its messages (Razorfish, 2009).

Also, as explained before, YouTube vloggers are becoming strong opinion leaders overcoming, in influence and popularity, traditional opinion makers, like TV and movie stars (DEFY Media, 2015) and YouTube reviews have been gaining extremely relevance, having a huge impact on consumers' purchasing decision (DEFY MEDIA, 2016).

In this context**,** it was considered important to test the credibility given to YouTube recommendation in comparison to the credibility attributed to other recommendation sources, namely friends and family, magazines and newspapers, blogs, brands' official

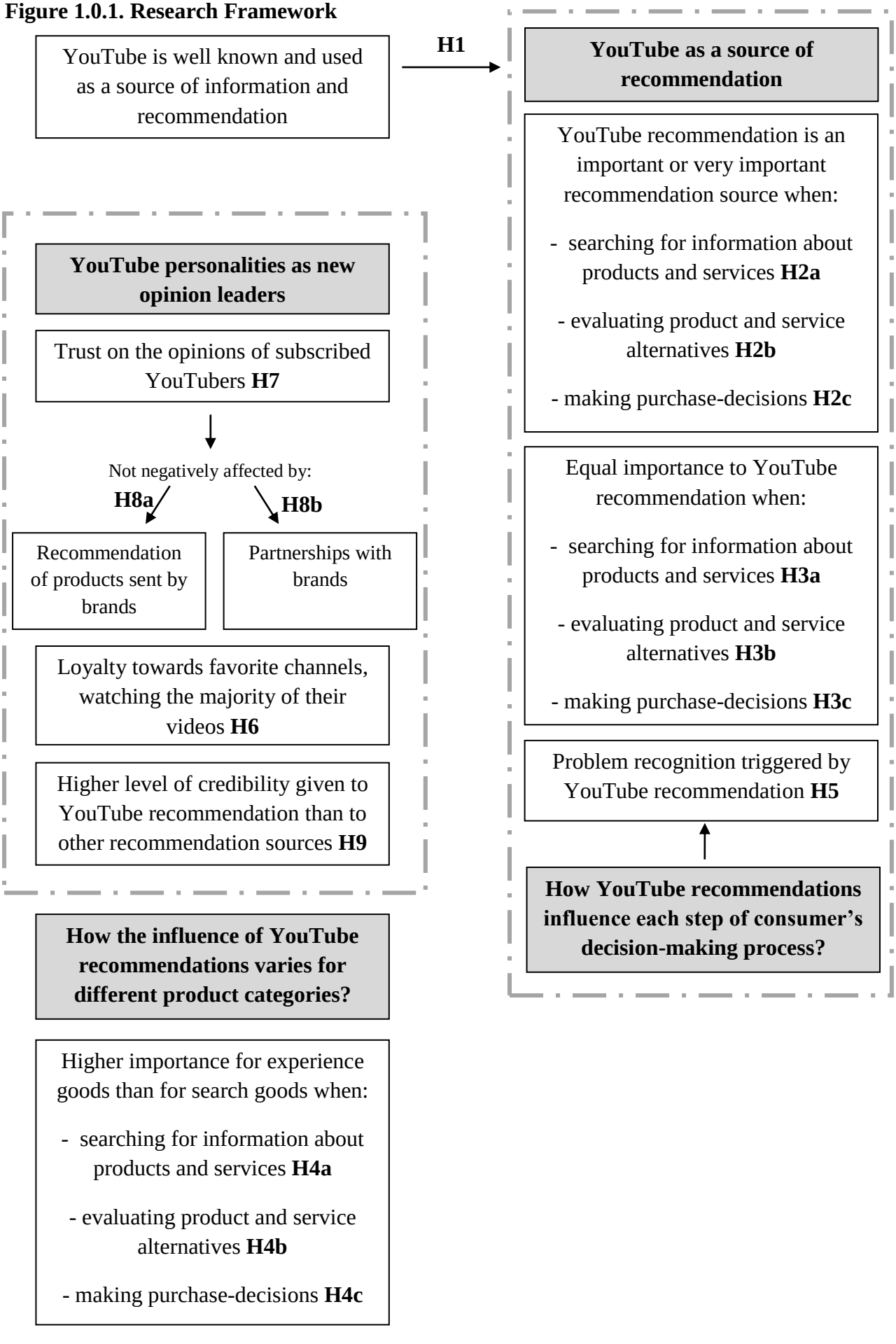
websites, brands' video-ads, traditional advertising means (TV, radio, press) and public figures.

Therefore, the ninth and last hypothesis was created with the purpose of testing exactly this aspect.

H9: On average, the level of credibility given to recommendations from YouTubers and other consumers on YouTube videos is equal or higher than the level of credibility given to each one of the other recommendation sources.

To finalize, this research framework is graphically illustrated in Figure 1.1.

Figure 1.0.1. Research Framework



4. Methodology

In this chapter research hypothesis are presented, as well as explanations and justifications for the adopted research strategy. It is also explained the techniques and analytical tools used to collect and analyse data, as well as the selected variables.

4.1. Investigation method

In this dissertation the Hypothetical-Deductive scientific method was used. There was a systematic investigation on the subject to describe and explain the impact of YouTube recommendation on consumer's purchasing decision, based on carefully collected and treated data. In order to perform this investigation and test the formulated hypothesis there were used quantitative methods, namely research by questionnaire, drawn upon a convenience sample.

This study has also an empirical approach since it aspires to make suitable observations for the construction of adequate explanations and theories in order to better understand the studied phenomenon (Hill & Hill, 2008).

This study consist in an extension of previous work presented on literature, since the hypotheses previously tested for WOM, e-WOM and social networks in general were applied to the specific phenomenon of YouTube recommendation. As a result, this study can bring new and important insights, particularly, for the Portuguese reality.

In terms of the research design, i.e. the framework used to conduct the research (Malhotra, 2006), it was used the single cross-sectional conclusive descriptive design.

The main purpose of descriptive research is to describe an aspect (Malhotra, 2006), in this particular case it is used to describe the impact of YouTube recommendations on consumer's behavior, by determining to which degree the marketing variables are associated. According to Malhotra (2006), descriptive research is suitable for this type of study since it is very adequate to describe consumer's characteristics (eg. the most favorable to, the ones that are "heavy users"…). This was important for understanding, for example, how the use of YouTube and other social networks, varies for different types of consumers. Descriptive research is also used to estimate the percentage of individuals exhibiting a certain behavior, which in this study, was applied to estimate

for example, the percentage of individuals that buy a product after watching a YouTube review video.

Descriptive researches can be either, cross-sectional, or longitudinal. In this case it is a cross-sectional research since the collection of information was made from the sample only once, instead of repeatedly made to the same sample in order to assess the evolution of the phenomenon over time, which is made in longitudinal designs (Malhotra, 2006).

Cross-sectional design can be then classified as single cross-sectional or multiple cross-sectional (Malhotra, 2006). In this case it is a single cross-sectional design since only one sample was used.

4.2. Universe and sample

In order to conduct an empirical research it is necessary to collect data. Data is information in the form of observations or measurements of the value of one or more variables. These values are usually provided by a set of entities including families, individuals and businesses and which are called cases of investigation (Hill & Hill, 2008).

To the total set of cases on which it is intended to draw conclusions is given the name of population or universe and its nature and size are defined by the purpose of each specific research (Hill & Hill, 2008).

The universe considered in this study is "youngsters and young adults, aged between 15 and 29 years old, belonging to Portugal's resident population, with access to Internet, and that have watched, at least one YouTube video in the last 6 months".

Resident population is defined as all persons who are "usually resident" in a specific geographic area, according to the present definition used by INE it is *"The group of people, whether present or absent in a given housing at the time of observation, lived in their usual place residence for a continuous period of, at least, 12 months preceding the time of observation, or that arrived to their usual residence during the period corresponding to the 12 months preceding the time of observation, with the intention to stay there for a minimum of one year."*(INE, 2009).

The selection of this universe is justified by the high penetration of Internet in this age segment as well as indications from previous studies that show higher predominance of YouTube influence on young people. Furthermore, young people are recognized as pioneers in the adoption, and dissemination of both new technologies, and social practices (Teixeira, 2010). Being YouTube recommendations a relatively recent phenomenon, it is reasonable to explore its impacts among this age segment in first place.

The study is targeted to Portugal's resident population mainly due to the lack of studies about YouTube recommendations in Portugal and its influence on consumers for the Portuguese reality. These aspects give further interest to this study. Furthermore, it would be very complicated to guarantee an acceptable number of respondents from other countries in order to support a work with a broader scale.

According to INE, Portugal's resident population aged between 15 and 29 years-old corresponds to around 1.68 million people. Within this segment, the percentage of people with access to the Internet is over 95%. The number of people included in universe suffers, therefore, a reduction of around 0,5%, becoming, then, approximately 1.60 million individuals. Taking into account the popularity of YouTube (the third most visited website in Portugal in 2015, according to Alexa), particularly among the younger public, it is reasonable to assume that the majority of them have watched at least one YouTube video in the last 6 months. Therefore, the dimension of the Universe considered was 1.60 million individuals.

Considering the large dimension of the considered universe and the limited time and resources to perform this study, it was used information from a sample obtained with non-casual sampling method, drawn by convenience and proliferation (snowball). Convenience sample allows fast results since it is the least time consuming of all sampling techniques. This type of sample is mostly used to generate ideas and insights about a specific topic (Malhotra, 2006).

The major limitation of this method is that the resulting sample is non-representative and, for that reason, the results and findings of the study cannot be extrapolated to the universe. However, according to Hill and Hill (2008), this type of sample is appropriate to academic studies and it is preferable to use it, in order to achieve a good research,

though in a limited scope, than do a weak large scope investigation due to limited time and resources.

The size of the targeted sample was determined based on the minimum number of cases needed to perform the statistical analysis required for the validation of the tested hypotheses. Furthermore, it was considered a sample size that allowed the implementation of the Law of Large Numbers in order to ensure that the distribution for the groups and sub-populations analyzed were, approximately, normal. For this to happen, it is required that each group or, sub-population, has, at least, 30 individuals (Hill & Hill, 2008).

The objective was, therefore, to collect information from a minimum of 200 individuals in order to have a safety margin. This margin would guarantee an appropriate number of responses even if it was necessary to exclude some answers for lack of responses or in the case of getting responses from individuals that didn't belong to the target.

In total, the number of responses obtained was 206. However, 20 individuals were excluded due to their age and 24 individuals were excluded for not belonging to Portugal's resident population. Therefore, the final sample comprised 162 valid individuals.

Although the sampling method preclude the possibility of extrapolate the results and findings of the study to the universe, it was considered that the obtained results allow the assessment of respondents' perceptions and the accomplishment of valid conclusions.

4.3. Variables

The variables used in this study were considered, and selected, mainly based on previous researches and studies.

Contributes came from broader studies focused on the impacts of WOM, e-WOM and social media, on consumers' purchasing decision. Contributes came as well from more specific studies, namely studies about the influence of YouTube and YouTube personalities on consumer's behavior.

From the first group, it was considered studies such as Razorfish (2009; 2015) and DEFY MEDIA (2015). Concerning more specific studies, it was used pixability studies (2014; 2015) and DEFY MEDIA's Acumen report (2016).

The master thesis entitled *O papel da recomendação online no processo de tomada de decisão dos jovens portugueses* (Teixeira, 2010) was also helpful in the process of choosing the variables, once it studies the impacts of e-WOM applied, specifically, to Portuguese youngsters.

Just as in the referred thesis, it was also accessed the differences in purchase decision-making process, associated with different product types (search goods and experience goods), which was proposed by Nelson (1974).

The variables were measured in terms of frequency, proportion, attitude and importance. The scales used were balanced scales, i.e scales with equal number of favourable and unfavourable categories, and with a neutral point. It was also included in the scales a *Do not know/Do not Answer* (DNK/DNA) option, as recommended by Malhotra (2006) and Foddy (1996). Without including this option, the respondents would have been forced to express an opinion, even if they didn't have one. This could have drawn the answers to the middle position, distorting, therefore, the measures of central tendency and variance. These answers were inserted in the data base with a specific number and considered as missing values when this was analyzed.

4.4. Instrument construction

The instrument used to collect data was an online questionnaire (Annex 1). Questionnaires consist in a formalized set of questions with the aim of obtaining information from the respondents (Malhotra, 2006).

The questionnaire was written in Portuguese since the universe considered in the study is youngsters and young adults belonging to Portugal's resident population. Hereupon, Portuguese was the most appropriate language to use, as it is the native language for the vast majority of the respondents, reducing, therefore, the problems with the interpretation and construction of questions.

The construction of the questionnaire was carefully considered, and followed the directions and recommendations proposed by Foddy (1996), Malhotra (2006) and Hill

& Hill (2008) in order to avoid common mistakes that could lead to the misrepresentation of the studied phenomenon.

In the beginning of the questionnaire, the respondents were informed that the survey was part of a master thesis about the influence of YouTube recommendations on consumers' purchasing decision and that the target was youngsters and young adults aged between 15 and 29 years old.

Even though the age target was specified, it was necessary to include some initial filter questions, which were meant to assure that only the intended target answered the survey.

There was an effort to make most of the questions as closed questions since it is, not only easier to analyse the resulting data, but also easier and quicker for the respondents to answer. This aspect contributes to higher rates of response (Foddy, 1996; Hill & Hill 2008). Specifically, the questionnaire comprises multiple-choice questions, dichotomous questions and open questions.

Before releasing the survey, pre-tests were performed in order to test the comprehension of the questions and to guarantee that the order of the questions followed a logical sequence.

Pre-tests were applied to 9 people, chosen by convenience and with the concern of including respondents from different backgrounds, areas of study and particularly different ages. In this study the pre-tests were primarily important to assess if the youngest segment of the target understood what was asked. These pre-tests were made, both online and in person, in order to answer and clarify some potential doubts and to ask the respondents what was their understanding of the questions. The answers resulting from the pre-test were not considered in the final sample.

Pre-tests contributed to the correction and adjustment of some questions and scales, as well as to do other minor corrections in the online functioning of the survey.

The final version of the questionnaire comprises, in total, 38 questions. However, for some respondents, it can have fewer questions. This may happen since according to the given answers, the respondents can be excluded from other questions related with the previous one. To illustrate this, if the respondent answers "*no*" to the question "*Do you*

subscribe any YouTube channel?", it is automatically excluded from the question "*Please, indicate one of the YouTube channels you subscribe*".

This option, as well as the option to treat the answers DNK/DNA as missing values, resulted in variations of the sample size for the different analysis.

4.5. Data collection procedures

As referred before, the data used to build the quantitative research, specifically to choose the variables, was gathered in an exploratory research, presented in the literature review. This data was collected from several sources, such as books, scientific journals and specialized magazines, as well as previous thesis, or studies on the subject.

The quantitative research was collected using a web-based survey, conducted online through the platform Google Forms. The survey was carried out between 17 of March and 7 of April 2016.

Considering the subject and object of study of this survey, a web-based questionnaire was considered the best option to use. Online surveys are usually more convenient to answer and allow a quicker and easier data collection and analysis. Furthermore, the fact that this questionnaire was available on the Internet also facilitated its dissemination, contributing to collect a larger number of responses. In addition, online questionnaires offer higher flexibility and reduce the potential for interviewer bias and group pressure (Malhotra, 2006).

The questionnaire link was shared on Facebook, both by the researcher and the supervisor. It was also sent through personal messages on Facebook messenger to personal and professional contacts known to be on the target. It was also requested to the respondents to share the questionnaire with their contacts.

The questionnaire was personal, and the answers were anonymous. In the beginning of the survey, it was ensured confidentiality and anonymity, as well as informed that the study had an academic purpose. The academic institution (ISCTE-IUL) was disclosed and the researcher's professional e-mail was provided. This e-mail could be used by the respondents to request to be informed about the study results.

As referred before, in order to assure that only the intended target answered the survey, it was necessary to include some initial filter questions. These questions concerned the age, country of residence, Internet access and YouTube knowledge and access on the last 6 months. Filter questions excluded respondents that didn't belong to the age group target, that didn't belong to Portugal's resident population, didn't have access to the Internet, didn't know what YouTube was and that haven't watched, at least, one YouTube video in the last 6 months.

4.6. Data analysis procedures

The software used to analyze the collected Data was the version 23 of the *Statistical Package for Social Sciences* (SPSS).

The platform where the questionnaire was made saved automatically all the respondents' answers and allowed the download of an Excel version with all the data. Therefore, there was no need for an inserting step for the majority of the variables.

The answers were revised and checked for completion and consistency and the data was then imported to SPSS.

The study hypotheses previously presented, were transformed into operational hypotheses that were subsequently tested. Attending to this, the presented results and conclusions concern directly the operational hypotheses and indirectly the research hypotheses.

In this section operational hypotheses will be presented as well as the explanation behind their formulation. This section also contains the explanation of the analyses and procedures used in each situation. In order to test the research hypotheses, it was performed a set of statistical analysis, including:

- Descriptive statistics such as frequencies, mean and median;
- Tests to assess statistical differences between proportions - binomial test;
- Inductive statistics analysis, both parametric and non-parametric, such as independent sample t-test, Kruskal-wallis test, one-sample t-test, unilateral t-student test, Friedman test and Wilcoxon signed-rank test.

To perform some statistical analysis, a set of distributions was considered normally distributed, by applying the Central Limit Theorem. This theorem assumes the approximation to normal distribution of variables with more than 30 observations (n> 30), allowing the implementation of parametric tests.

The value of the level of significance used as decision criteria on hypothesis testing was 0.05. This value is common used in social sciences and suggested in literature.

The following chapter presents in detail the referred statistical analysis, as well as the obtained results.

5. Data analysis and results

This section presents the results of the study, as well as the data analysis that was performed to validate the research hypotheses. This section is divided in three main parts, **socio demographic characterization of the sample**, **Internet usage** and **YouTube usage and experience**.

Considering the first part, socio **demographic characterization of the sample**, it will focus on the characteristics of the sample, namely age, gender and level of education;

The second block concerns **Internet Usage**, namely, time spent on the Internet, use of social networks and website visits.

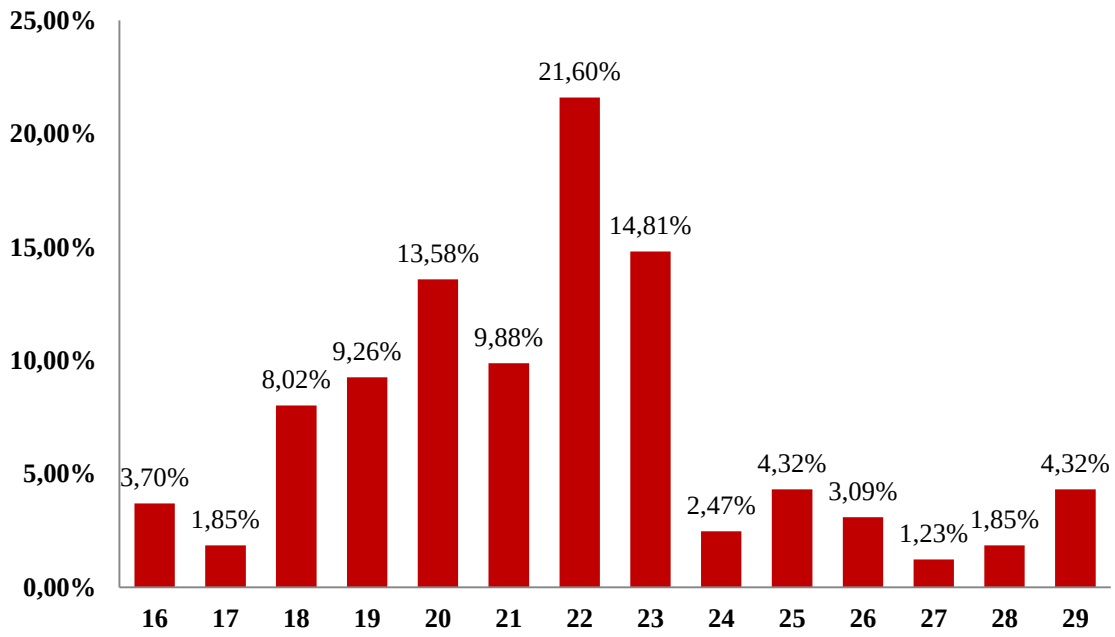
Finally, the third section, entitled **YouTube usage and experience,** is subdivided in 5 main topics:

- YouTube's watching frequency and time spent on YouTube per week;
- YouTube as a source of information and recommendation;
- Loyalty towards YouTube personalities and YouTube channels;
- Trust on YouTubers' opinion and recommendation;
- Credibility given to YouTube recommendation *versus* credibility given to other recommendation sources.
-

5.1. Socio demographic characterization of the sample

This study was limited to youngsters and young adults, aged between 15 and 29 years-old. The distribution of the sample by age is observed in figure 2.1.

Figure 2.1. – Distribution of the sample by age (in%)

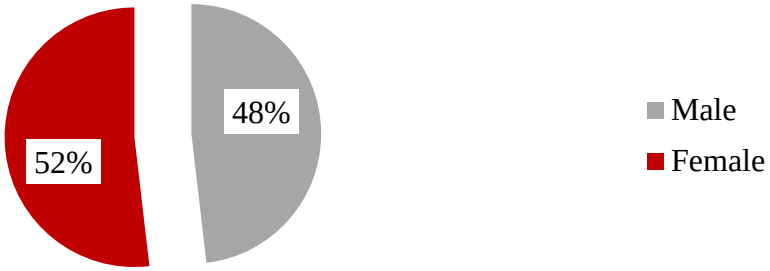


Although there were considered answers from respondents aged between 15 and 29, there were no valid responses from individuals with the age of 15. Therefore, the sample ages range between 16 and 29 years old.

For convenience, and in order to perform some of the statistical tests, it was created the variable AgeGroup. This variable groups individuals in 3 different age sets. First set is formed by individuals from 15 to 19, second from 20 to 24 and third from 25 to 29 years old.

In what concerns gender, there is a lightly predominance of female individuals, as it is possible to observe on the figure 2.2.

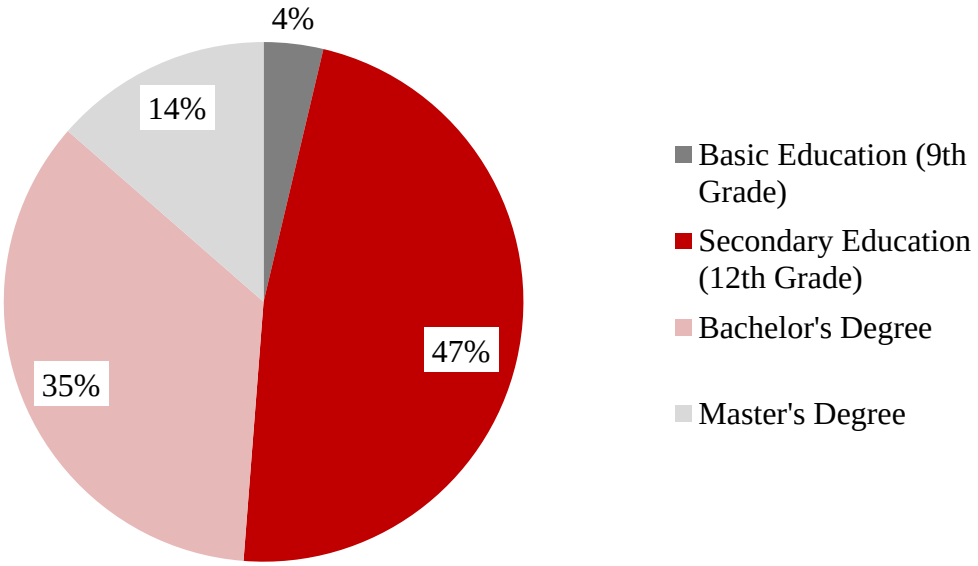
Figure 2.2. – Distribution of the sample by gender (in%)



The sample distribution for age and gender is not representative of the Portuguese resident population considering this age segment. This fact reinforces the previous clarification about the non-representativeness of this sample and emphasizes that the future results are not projectable for the whole population.

In order to assess the level of education of the respondents, they were asked about their highest completed level of education. For the majority of the respondents, the highest completed level of education is secondary education (47.53%), followed by bachelor's degree (35.19%), as shown in figure 2.3.

Figure 2.3. – Distribution of the sample by level of education (in%)



It is also worth notice that, although the options primary education and doctoral degree were present in the questionnaire, they had zero absolute frequency.

5.2. Internet usage

5.2.1. Time spent on the Internet per day

In order to understand the patterns of Internet usage, the respondents were inquired about their personal Internet usage habits.

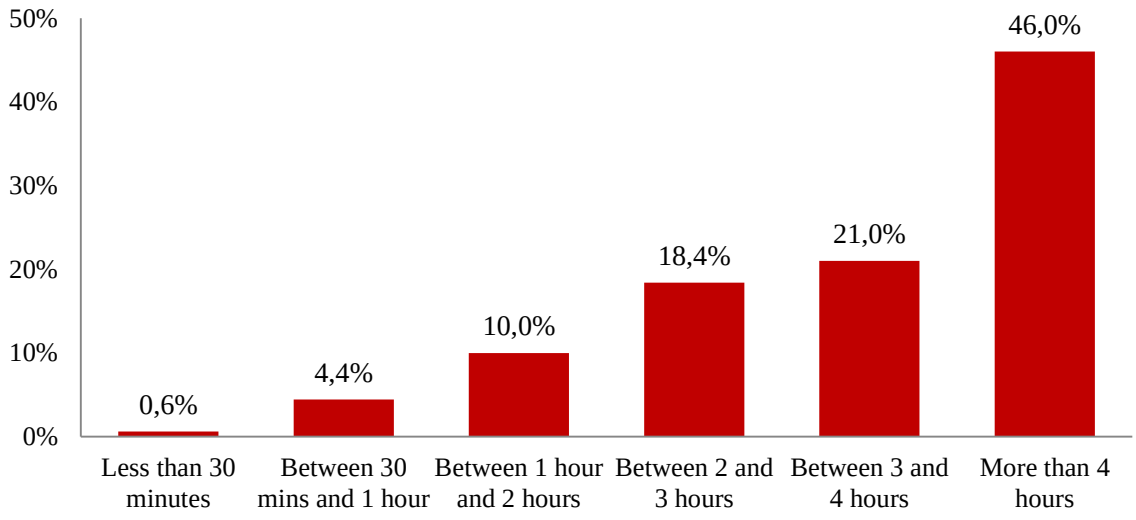
To the question *Do you use the Internet every day?*, in a total of 162 individuals, only one answered negatively. This meets the previous expectations of high Internet usage among the age segment represented in the sample.

Even with an expressive difference between the proportion of yeses and nos, it was performed a binomial test, as explained in Marôco (2010) in order to assess if there was a statistical difference between the proportions of individuals *using the Internet every day* and *not using the Internet every day*. Binomial tests have, as null hypothesis (H0), the equality of the proportions and the considered significance level was $\alpha = 0.05$.

In this test, the null hypothesis was rejected because the p-value *(Exact Sig. (2-tailed) = 0.000)* was inferior to the considered significance level and therefore, it can be stated with 95% of certainty that there is statistically significant differences between the proportions in study (see annex 2).

Considering the average time spent on the Internet, per day, 45.57% of the respondents stated to spend more than 4 hours on the Internet per day, whereas, only approximately 5% of the respondents stated to spend less than 1 hour (see figure 2.4.).

Figure 2.4. – Distribution of the sample by the time spent on the Internet per day (in%)



In order to conclude whether there were any differences between males and females concerning the average time spent on the Internet, an independent samples t-test was performed between the variables Gender and InternetTime (see Annex 3).

This test is used to compare the means between two unrelated groups on the same dependent variable, which in this case was InternetTime. The tested null hypothesis was the equality of the two means, or in other words the inexistence of statistical differences between the two groups, males and females.

The result of the t-test was a sig. of 0.255, which is higher than 0.05, our significance level. Therefore, H0 was not rejected, i.e. it was not reject the hypothesis of no statistical difference between males and females concerning the average time spent on the Internet per day.

To test if there was differences on this variable between the three age groups, it was used a Kruskal-wallis test, presented in Annex 4. This test is a non-parametric hypothesis test. Kruskal-wallis was used instead of ANOVA because the third age group has less than thirty elements, which challenges the normality assumption.

The null hypothesis for this test was the inexistence of statistical differences between the three age groups concerning the average time spent on the Internet, per day.

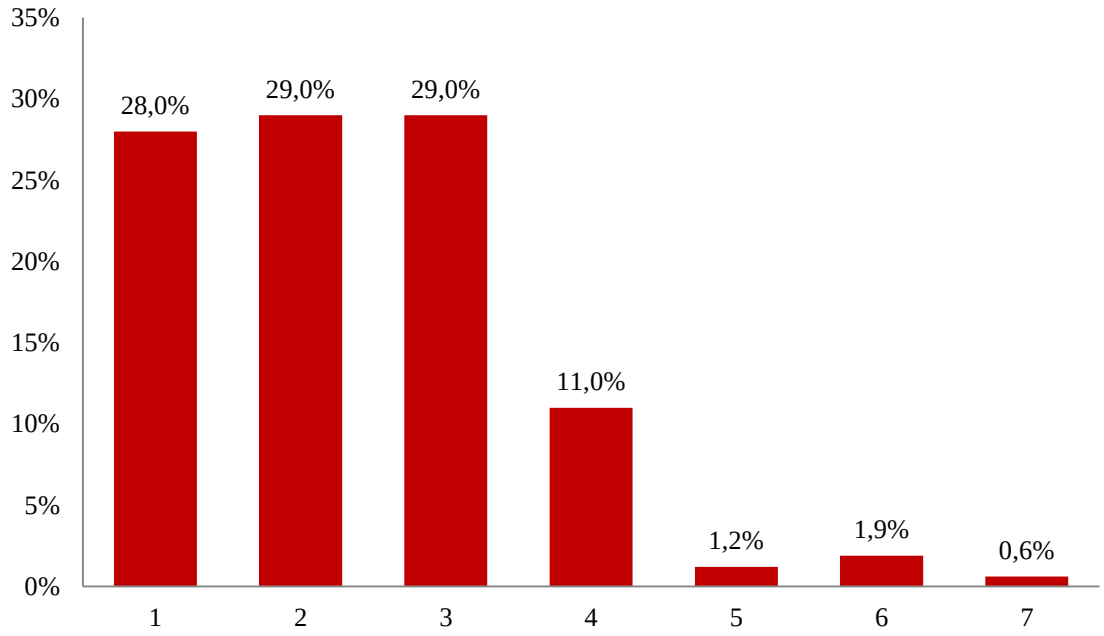
Since the result of the test was an Asymptotic sig. of, 0.148, which is higher than the significance level, H0 was not rejected, i.e. it was not reject the hypothesis of no statistical difference between the three age groups, concerning the average time spent on the Internet, per day.

5.2.2. Social networks

In this study, the assessment of the use of social networks was made through an open question. It was asked to the respondents if they use any social network and if so, what social network or social networks they use. The decision to make this an open question was mainly due to two aspects. First, to assess which social networks were pointed through spontaneous awareness and second to understand if the respondents considered YouTube a social network, by indicating it as one.

All of the respondents stated to use, at least, one social network. The responses to this question can be observed on the figure 2.5.

Figure 2.5. – Distribution of the sample by the number of social networks used (in%)



According to the answers, Facebook is the most used social network, being used by all of the respondents. The second most referred social network was Instagram, used by, approximately, 49% of the respondents, and the third was Snapchat, used by 24% of the respondents.

The average number of social networks used is 2.37 and, approximately, 15% of the individuals stated to use 4 or more social networks.

These values are quite low when compare to the values presented in other similar studies for the Portuguese younger population. The type of question used, open question, is possibly the reason for this discrepancy. According to Foddy (1996), individuals can't always remember all the aspects questioned or are not willing to make the effort to list them all. Furthermore, the individuals may not be completely aware of the definition of a social network, which is controvert and changes depending on the author, leading them to not classify some of the platforms used, as social networks.

This misclassification is one aspect that can justify the low number of respondents that answered YouTube when asked about the social networks they used. Although only two respondents were excluded of the sample for not knowing YouTube and one for haven't watched a YouTube video in the last 6 months, only 9.3% of the participants, pointed YouTube as one of the social networks they use. Additionally, when the respondents were asked which were the 3 websites they visited more often, YouTube appeared in, approximately, 49% of the answers and the same happened for the question: *which are the 3 web sites where you spend more time?*. In this case, YouTube appeared in approximately 66% of the answers.

These aspects seem to indicate that for the majority of the respondents, YouTube is not yet used, or perceived, as a social network. At least, its spontaneous awareness and categorization as a social network is still low among the participants.

5.2.3. Websites

When asked about the 3 most frequently visited websites, the website that the respondents most referred was Facebook, being on the top 3 of the most frequently visited websites, for 106 of the 150 respondents of this question.

Facebook was followed by YouTube which was in the top 3 of the most frequently visited websites for 74 respondents and by Gmail, in the top 3 for 38 of the respondents.

Concerning the 3 websites where the respondents spend more time, the most stated websites were Facebook, on the top 3, for 116 of the 146 respondents of this question and YouTube, on the top 3 for 97 of the respondents. Gmail was the third most stated website.

5.3. YouTube usage and experience

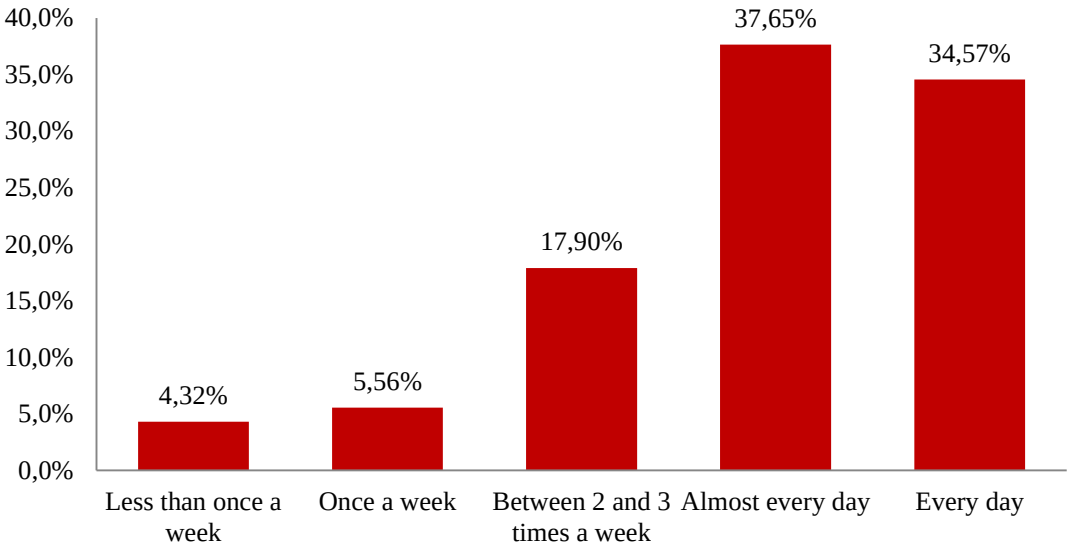
5.3.1. YouTube's watching frequency and Time spent on YouTube per week

As it was explored on the previous section, YouTube is both on the top 3, for the most frequently visited website and for the websites where the respondents spend more time.

34.57% of the respondents claim to watch YouTube videos every day and 36.65% to watch YouTube videos almost every day.

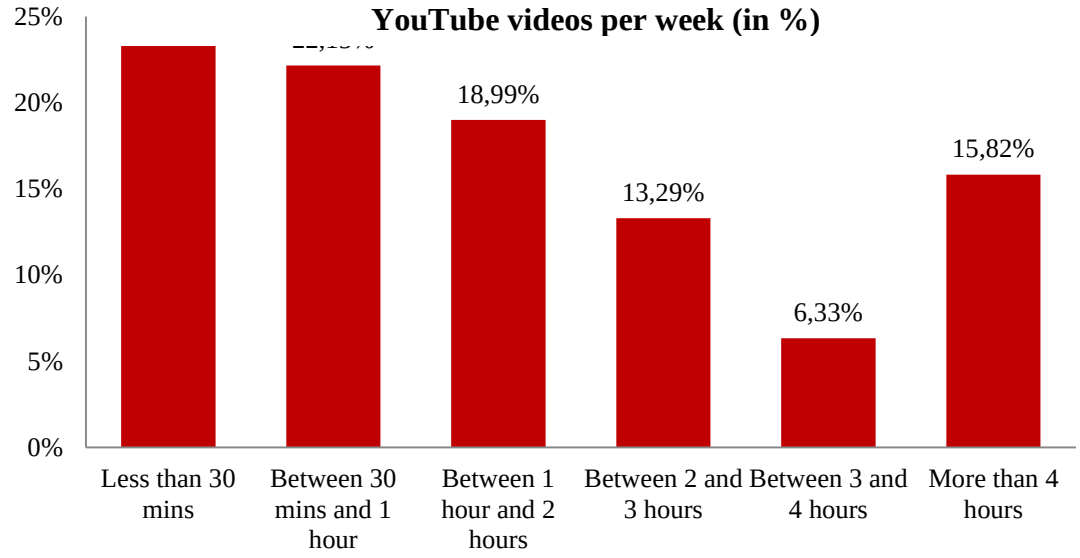
The percentage of respondents that watch YouTube videos once a week and less than once a week is inferior to 10% (see figure 2.6).

Figure 2.6. – Distribution of the sample by YouTube's watching frequency (in%)



In what concerns the time spent watching YouTube videos, a large percentage of the respondents (45.57%) state to spend less than one hour per week watching YouTube videos. On the other hand, there is also a considerable high percentage of individuals who state to spend more than 4 hours per week watching YouTube videos (see Figure 2.7).

Figure 2.7. – Distribution of the sample by the time spent watching YouTube videos per week (in %)



Among the individuals that spend more than 4 hours per week watching YouTube videos, 80% are males.

For this reason it was important to analyze possible differences between males and females, concerning the frequency and the time spent watching YouTube videos. Again it was used an independent samples t-test between the variables Gender and the variables that represent, respectively, how often the individuals watch YouTube videos, and how much time per week they spend on it (see Annex 3).

Both tests resulted in sig. values lower than the significance level. Therefore, H0 was rejected in the two tests performed. The equality of the means for the two samples was rejected and, for that reason, there is a statistical difference between males and females in what concerns the frequency and the average time spent watching YouTube videos per week.

To test if there were differences on the same two aspects, frequency and the time spent watching YouTube videos for the three age groups considered, it was, again, used Kruskal-wallis tests (see Annex 4).

The results of the tests were, for both variables, asymptotic sig. values higher than 0.05. Therefore, H0 was not rejected for both of the tests, i.e. it was not reject the hypothesis of no statistical difference between the three age groups, concerning frequency and the average time spent watching YouTube videos per week.

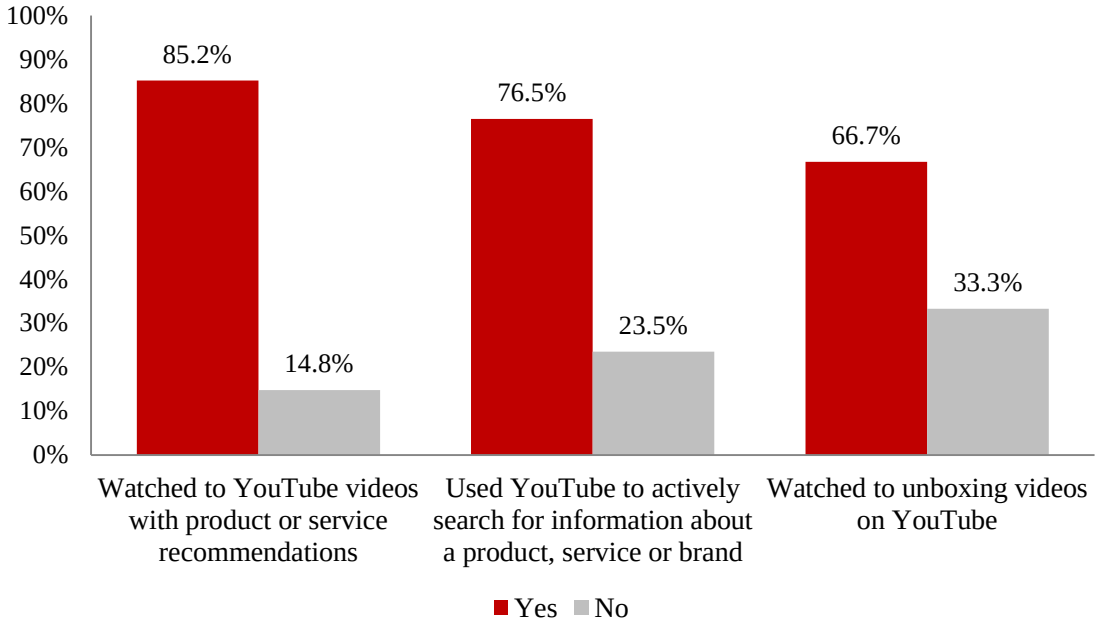
5.3.2. YouTube as a source of information and recommendation

In what concerns the use of YouTube as a source of information and recommendation, 85.2% of the respondents stated to have already watched YouTube videos that included product or service recommendations and 76.5% stated to have used YouTube, at least once, to actively search for information about a product, service or brand. In addition, 66.7% of the individuals said to have already watched unboxing videos on YouTube (see figure 2.8.)

The difference between the proportions of yesses and nos was tested for the three distributions using the binomial test. In the three cases the null hypotheses of no statistical significant difference between the two studied proportions was rejected (*Exact Sig. (2-tailed) = 0.000* for the three). Therefore, it can be stated with 95% of certainty

that there are statistically significant differences between the proportions in study for the three performed tests (see Annex 2).

Figure 2.8. – YouTube as a source of information and recommendation



88.7% of the respondents that stated to have used YouTube, at least once, to search for information about a product, service or brand, said to have already, specifically, searched for videos that showed the performance of a product.

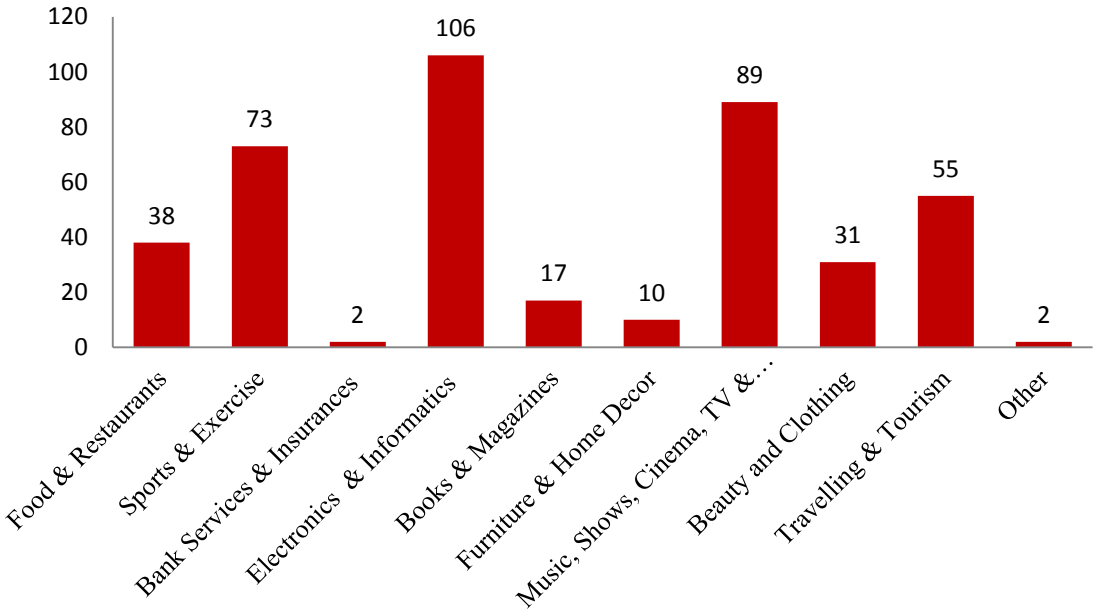
The respondents were also asked to identify the product or service categories that they have already searched on YouTube.

There were 9 pre-defined categories and the alternative to identify other category that wasn't considered in the answer alternative set. The most searched category among the respondents was Electronics & Informatics, which included, for example, gadgets, computers, smartphones and cameras, followed by Music, Shows, Cinema, TV & Parties.

Sports & Exercise was the third most searched category, as it is possible to observe on figure 2.9.

The least searched category was Bank Services & Insurances. This might be explained by the specificities of this category since bank services and insurances are sectors with

specific marketing singularities (Meidan, 1996). These services are perceived as more serious and the decisions about them require much more data and thought. Also, the information in these sectors is, not yet, fully understandable for all the consumers, which is particularly true for the younger consumers, who are unlikely to have ever required this type of services. Furthermore, these services are still perceived as cold, intimidating and distant from the consumer (Pires, 2013), making them less interesting to search for.



5.3.2.1. Testing H1: "YouTube is well known among the studied universe and it is used as a source of information and recommendation"

Resorting to the information explained in this previous section it was explored the first study hypothesis (H1).

H1: YouTube is well known among the studied universe and it is used as a source of information and recommendation.

H1 derives from the first operational hypothesis (HO1).

HO1: There is no incidence of the use of YouTube to search for products, services or brands in the studied universe.

In order to test HO1, it was performed a one-sample t-test to the variable SearchProdServ (see Annex 5). This variable represents the search of products or services on YouTube, and the respondents were asked if they ever searched for information about a product, service, or brand on YouTube. There were only two possible answers for this question, yes, or no.

The null hypothesis of this test was the mean of the distribution being equal to 0 and the significance level used was α=0.05.

In this case, the null hypothesis was rejected (Sig (2-tailed) = 0.000), leading, consequently, to the rejection of HO1 and **validation of the first study hypothesis.**

Furthermore, it was shown that YouTube is frequently visited and used by the respondents being the second most visited website. YouTube is also the second website where the respondents spend more time, which indicated that YouTube is well known among the sample.

Also, the questionnaire assessed that the high majority of the respondents (85.2%) have watched YouTube videos that included product or service recommendations and, moreover, 76.5% have used YouTube to actively search for information about a product, service or brand. These aspects show that YouTube is perceived and used by the respondents as a source of information.

5.3.2.2. Testing H2: "YouTube recommendation is an important or very important recommendation source for the studied universe, when searching for information about products and services, evaluating product and service alternatives and making purchase-decisions"

The previous referred aspects together with the information that 66.7% of the individuals have watched unboxing videos on YouTube and the high percentage of individuals that searched for videos with product's performance leave conditions to test the second study hypothesis.

H2: YouTube recommendation is an important or very important recommendation source for the studied universe when a) searching for information about products and services b) evaluating product and service alternatives c) making purchase-decisions;

H2 derives from the following operational hypothesis:

HO2: The importance given by the studied universe to YouTube recommendations when a) searching for information about products and services b) evaluating product and service alternatives c) making purchase-decisions and services is equal or less than neutral.

The rejection of any operational hypotheses will lead to the validation of the correspondent study hypothesis.

In order to test HO2 it was assessed if, on average, the individuals classify YouTube as neutral, unimportant or very unimportant recommendation source, on a scale of importance.

In the questionnaire the respondents were asked to classify the importance attributed to YouTube recommendations in each one of the three steps of consumer's purchasing decision process, for two different product categories. The answers were coded on a scale from 1, which corresponded to very unimportant, to 5 which corresponded to very important.

To test if, on average, the individuals classified YouTube as neutral, unimportant or very unimportant information source in each step of consumer's purchasing decision process, it was performed a parametric unilateral t-student test to the population mean for each step, and for each product category. The assumption of these tests were guaranteed, namely by assuming the approximation to the normal distribution by the Central Limit Theorem ($n > 30$), as described in Marôco (2010).

The null hypothesis considered for these tests was the population's mean being equal or inferior to 3, which corresponds to give less than neutral importance to YouTube recommendation.

The right unilateral p-value is equal to the p-value divided by 2, which is 0.000 for all the six tests performed. This value is inferior to 0.05 (probability of error type I) and, consequently, the null hypothesis was rejected for all the tests performed (see Annex 6).

We can affirm then, with 95% of certainty, that on average the individuals from the universe give more than neutral importance to YouTube recommendation when, searching for information about products and services, evaluating product and service alternatives and making purchase-decisions. Therefore, we **reject** HO2, leading, by interpretation, to the **validation of H2.**

5.3.2.3. Testing H3: "The studied universe gives equal importance to YouTube recommendations when, searching for information about products and services, evaluating product and service alternatives and making purchase-decisions"

Now that it was concluded that YouTube recommendations have more than neutral importance for the studied universe, it is also important to understand if this level of importance is equal through the different stages of consumer's purchasing decision process.

The **third study hypothesis (H3)** was then formulated to test exactly this aspect.

H3: The studied universe gives equal importance to YouTube recommendations when a) searching for information about products and services b) evaluating product and service alternatives c) making purchase-decisions;

In order to test H3, two Friedman tests were performed (see Annex 7). The purpose was to test the equality of the means among the distributions of the level of importance attributed to YouTube in each one of the three considered stages of consumer's purchasing decision process: information search, evaluation of the alternatives and decision-making. This test was firstly performed to the three distributions concerning a search good (electronic product) and secondly, concerning an experience good (touristic destination).

The null hypothesis for the first Friedman test was that there were no differences among the distribution of the importance given to YouTube recommendation when a) searching for information b) evaluating alternatives c) making the purchase-decision, all applied to a search good.

The asymptotic sig. value for this test (0.009) was inferior to 0.05 (probability of error type I), consequently, the null hypothesis was rejected. We can therefore affirm, with 95% of certainty, that there are differences between the level of importance given to YouTube recommendation across the three different stages of purchasing decision process, regarding a search good.

With this test it was possible to conclude that for a search good, the level of importance given to YouTube recommendation is not equal in the three studied stages. However, Friedman test, *per si*, do not allow understanding where the differences lie. To understand this aspect, there is the need to run Post Hoc tests. In this case, as suggested in Laerd statistics (2013), in 3 separate Wilcoxon signed-rank tests were performed.

The Wilcoxon test was performed to three different combinations, as observable in Annex 7 and the results were adjusted using Bonferroni adjustment, as indicated on Laerd statistics (2013). The need for this adjustment is due to the increasing likelihood of incurring in a Type I error by doing multiple comparisons. This adjustment is calculated by dividing the significance level used initially, by the number of tests that are being run. In this case, the initial significance level used (0.05) was divided by 3 and, therefore, the adjusted significance level used for the post hoc tests was 0.017. Thus, for p-values higher than 0.017 the null hypothesis was not rejected.

In the post hoc tests the null hypothesis of there being no statistically relevant differences between the level of importance attributed to YouTube recommendation, when searching for information about a search good, and evaluating the alternatives, concerning the same good, was not rejected (p-value = 0.208). However, the post hoc tests also revealed that level of importance attributed to YouTube recommendation when making the purchase decision about a search good is different from the level of importance attributed to this recommendation source in the other two considered stages, for the same good (see Annex 7).

Equivalentely, the median of the differences between the distribution of the level of importance attributed to YouTube recommendation when making a purchase decision for a search good and, respectively, the distribution of the level of importance attributed to YouTube recommendation when searching for information and evaluating the alternatives for the same good, is significantly different from zero.

Since the statistical tests indicated differences between the level of importance attributed to YouTube recommendation when making a purchase decision, relatively to a search good, and the other two stages, it was relevant to test in which of these stages YouTube was given more importance.

To achieve this, it was performed a new Wilcoxon test, this time a left unilateral test. This test had as null hypothesis, the distribution of the level of importance attributed to YouTube recommendation when searching for information about a search good is equal or higher than the distribution of the level of importance attributed to YouTube recommendation, when making a purchase decision for the same good.

The exact left unilateral p-value for this test (Exact Sig. (1-tailed) = 0.001) was inferior to the significance level used, which leads to the rejection of the null hypothesis (see Annex 7).

As referred before, there were no statically relevant differences between the distributions of the level of importance given to YouTube recommendations when searching for information and evaluating the alternatives for the same search good, therefore we can affirm with 95% of certainty that, when the considered universe is buying a search good the stage in which YouTube recommendation is given more importance is decision-making.

The same situation was explored considering experience goods. The null hypothesis for the second Friedman test was then, there are no differences among the distribution of the importance given to YouTube recommendation when a) searching for information b) evaluating alternatives and c) making the purchase-decision, this time applied to an experience good.

The asymptotic sig. value for this test (0.717) is higher than 0.05 (probability of error type I), consequently, in this case the null hypothesis is not rejected. We do not reject, therefore, the hypothesis of there being no differences between the level of importance given to YouTube recommendation across the three different stages of purchasing decision process, in what concerns an experience good.

In conclusion, and taking the presented aspects into consideration, **H3** was only **partly validated.** It's true that statistic tests indicate that the studied universe gives equal importance to YouTube recommendations when searching for information about

products and services, evaluating product and service alternatives and making purchase-decisions, but only in what concern experience goods. For search goods, on the other hand, statistic tests indicate differences between the distributions of the level of importance given to YouTube recommendation when making purchase-decisions and the level of importance given to YouTube recommendation on the other two stages. Namely, this level of importance appears to be higher when making the purchase-decision.

5.3.2.4. Testing H4: "The importance that the studied universe gives to YouTube recommendation is higher for experience goods than for search goods when searching for information about the product or service, evaluating the alternatives and making the purchase decision"

After exploring the changes in the level of importance attributed to YouTube recommendation across the different stages, both for experience and search goods, is also pertinent to explore if YouTube recommendations are equally relevant for this two types of products.

As explained before, early studies point to a higher importance to recommendations regarding experience goods (Nelson, 1974). However, more recent studies seem to show that the importance of YouTube recommendation is also substantial for search goods (Pixability, 2014).

The hypothesis 4 (H4) was, therefore, created to test if there are significant differences in the relevance attributed to YouTube recommendations when considering search goods and experience goods, and, in which phase, or phases, of the purchase decision-making process, these differences are manifested.

H4: The importance that the studied universe gives to YouTube recommendation is higher for experience goods than for search goods when a) searching for information about the product or service b) evaluating the alternatives and c) making the purchase decision.

H4 derives from the three following operational hypotheses:

HO4a: The importance that the studied universe gives to YouTube recommendation is higher for experience goods than for search goods when searching for information about the product or service;

HO4b: The importance that the studied universe gives to YouTube recommendation is higher for experience goods than for search goods when evaluating the alternatives;

HO4c: The importance that the studied universe gives to YouTube recommendation is higher for experience goods than for search goods when making the purchase decision.

To test the presented operational hypotheses, left unilateral Wilcoxon tests were performed and presented on Annex 8.

On the first test, considering HO4a, the null hypothesis was: the distribution of the level of importance attributed to YouTube recommendation when searching for information about an experience good is equal, or higher, than the distribution of the level of importance attributed to YouTube recommendation when searching for information about a search good.

The left unilateral p-value is given by the exact sig. (1-tailed) and is equal to 0.010. This value is inferior to 0.05 (probability of error type I), consequently, the null hypothesis of this test was rejected.

We can, therefore affirm, with 95% of certainty, that the level of importance attributed to YouTube recommendation when searching for information about an experience good is inferior to the level of importance attributed to YouTube recommendation when searching for information about a search good. Thus, **HO4a** was **rejected.**

The same method was used to test HO4b and HO4c. These tests had, respectively, the following null hypothesis: the distribution of the level of importance attributed to YouTube recommendation when evaluating the alternatives for an experience good is equal, or higher, than the distribution of the level of importance attributed to YouTube

recommendation when evaluating the alternatives for a search good and the distribution of the level of importance attributed to YouTube recommendation when making the purchase decision for an experience good is equal, or higher, than the distribution of the level of importance attributed to YouTube recommendation when making the purchase decision for a search good.

The left unilateral p-values were, respectively, 0.087 and 0.986. These value are both higher than 0.05 (probability of error type I) and consequently, both null hypothesis were not rejected.

We can, therefore affirm, with 95% of certainty, that the level of importance attributed to YouTube recommendation when evaluating the alternatives and making the purchase-decision for an experience good is equal, or higher, than the level of importance attributed to YouTube recommendation on the same steps of consumers' purchasing decision process, concerning a search good. Consequently, **HO4b** and **HO4c** were **not rejected.**

H4 was, therefore, **partially validated**. Although statistical evidences are in accordance with the theory proposed by Nelson (1974) for the stages of evaluation of the alternatives and purchase-decision, there is unconformity in what concerns information search. There is 95% certainty that the level of importance attributed by the studied universe to YouTube recommendation is higher for search goods than for experience goods in the stage of information search.

There are, therefore, differences in the relevance attributed to YouTube recommendations when considering search goods and experience goods, at least for information search.

5.3.2.5. Testing H5: "Individuals from the studied universe experience problem recognition triggered by YouTube recommendation"

The previous sections showed that YouTube recommendations are relevant to the studied universe, namely when searching for information about a product or service, evaluating the alternatives, and when making the purchase decision.

Therefore, it is also important to understand if YouTube recommendations and YouTube personalities are operating as initiators of the purchase decision-making

process, inducing or making consumers acknowledge their needs and, having this way, influence in consumer's problem recognition.

60.9% of the respondents that affirmed having watched YouTube videos with product or service recommendations stated to have, at least once, felt tempted to buy a product or service recommended by a YouTuber and 35.3% stated to have, in fact, bought the recommended product or service.

This appears to suggest that the respondents experience problem recognition triggered by YouTube recommendation, therefore Hypothesis 5 (H5) was created to test exactly this aspect.

H5: Individuals from the studied universe experience problem recognition triggered by YouTube recommendation.

H5 derives from the operational hypothesis HO5.

HO5: On the studied universe the incidence of individuals that have ever felt tempted to buy a product or service recommended by a YouTuber is zero.

In order to test HO5 it was performed a one-sample t-test to the variable Tempted (see Annex 9). This variable represents the appeal to acquire a product or service recommended by a YouTuber. In the questionnaire the respondents were asked if they have ever felt tempted to purchase a product or service recommended by a YouTuber and there were two possible answers for this question, yes, or no.

The null hypothesis of this test was the variable mean being equal to 0. The probability of error type I (α) considered was 0.05.

In this case the p-value (Sig (2-tailed) = 0.000) was inferior to 0.05 and consequently, the null hypothesis was rejected. This leads to the rejection of HO5 and, as a result, **validation of H5.**

5.3.3. Loyalty towards YouTube personalities and YouTube channels

It was also relevant to understand if the respondents only visited YouTube when they want to search for a specific subject or if they actively follow certain YouTube

personalities or contents. It was then necessary to investigate if the respondents followed any YouTube channel and, if so, who are they following.

Hereupon, it was asked the participants if they followed any YouTube channel and, if so, they were asked to name, at least, one.

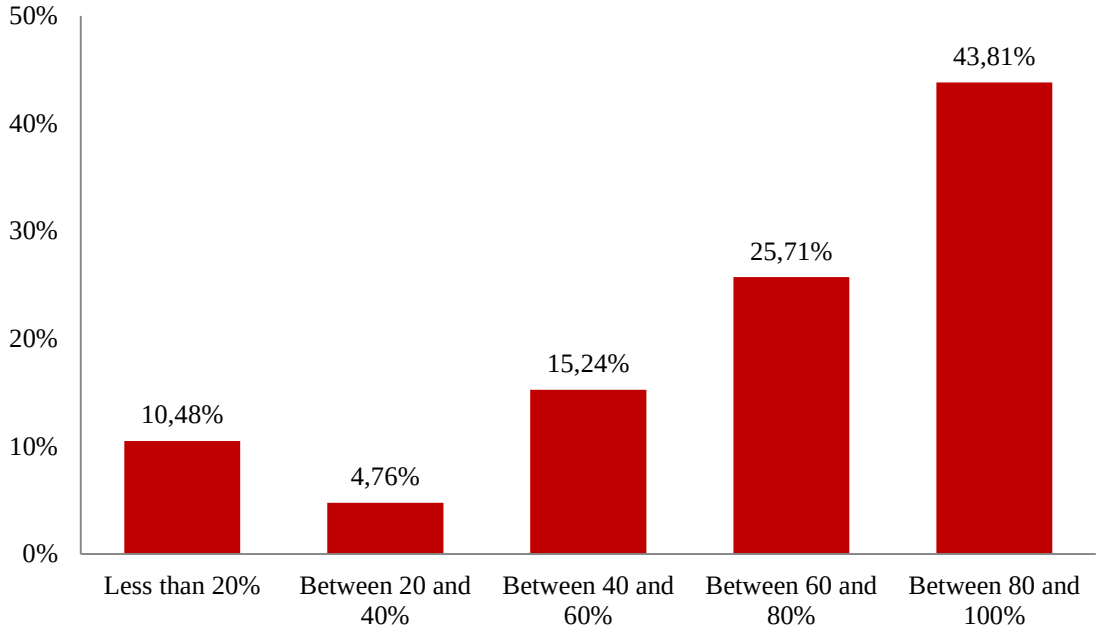
67.3% of the respondents stated to follow, at least one YouTube channel and, interestingly, 53 out of the 87 different channels referred, belonged to YouTube personalities. The remaining 34 belonged to music artists, radio and TV personalities, and shows.

This higher awareness of YouTube personalities may seem surprising since TV and music artists have much more projection in the traditional media and TV shows and Radios have much more means. Nevertheless, these results meet the arising positions that consider YouTubers as the new most relatable and influential personalities for the younger public, gathering more spontaneous awareness on YouTube.

Other relevant aspect that was worth to analyze was the loyalty towards the YouTube channels that the respondents like and subscribe. To understand this, the participants were asked about the portion of the videos posted on their favorite YouTube channel that they usually watch.

As shown on the figure 2.9., the majority of the respondents of this question (43.81%), stated to watch between 80% and 100% of all the YouTube videos posted on their favorite YouTube channel. The portion of respondents that watch less than 40% of all the videos is only 15.24%.

Figure 2.10. – Portion of videos watched (%) – favorite YouTube channel



5.3.3.1. Testing H6: "The individuals from the studied universe are loyal towards their favorite channels, watching the majority of their videos"

The previously explained aspects seem to indicate that the respondents are, in their majority, loyal towards their favorite YouTubers, making an effort to follow a big part of the contents they upload. The respondents are, therefore, more exposed to the opinion and recommendations of their favorite YouTubers since they watch a big fraction of what they produce.

It was then, pertinent, to test H6.

H6: The individuals from the studied universe are loyal towards their favorite channels, watching the majority of their videos.

H6 derives from the sixth operational hypothesis (HO6).

HO6: The individuals from the studied universe watch more than 60% of the videos posted on their favorite YouTube channel.

In order to test HO6 it was assessed if, on average, the individuals watch more than 60% of the videos posted on their favorite YouTube channel.

In the questionnaire the respondents were asked to state the portion of the videos posted on their favorite YouTube channel which they, on average, watch. The answers were coded on a scale from 1 to 5. 1 corresponded to watching, on average, less than 20% of all the videos posted on their favorite YouTube channel and 5 corresponded to watching, on average, between 80 and 100% of all the videos posted.

To test if the individuals watch on average more than 60% of the videos posted on their favorite YouTube channel it was performed a parametric unilateral t-student test to the population mean (see Annex 10).The assumption of this test was guaranteed, namely by assuming the approximation to the normal distribution by the Central Limit Theorem ($n > 30$), as described in Marôco (2010).

The null hypothesis considered for these tests was the population mean being equal or inferior to 3, which corresponds to watching, on average, less than 60% of the videos posted.

The right unilateral p-value is equal to the p-value divided by 2, which is 0.000. This value is inferior to 0.05 (probability of error type I), consequently, the null hypothesis is rejected.

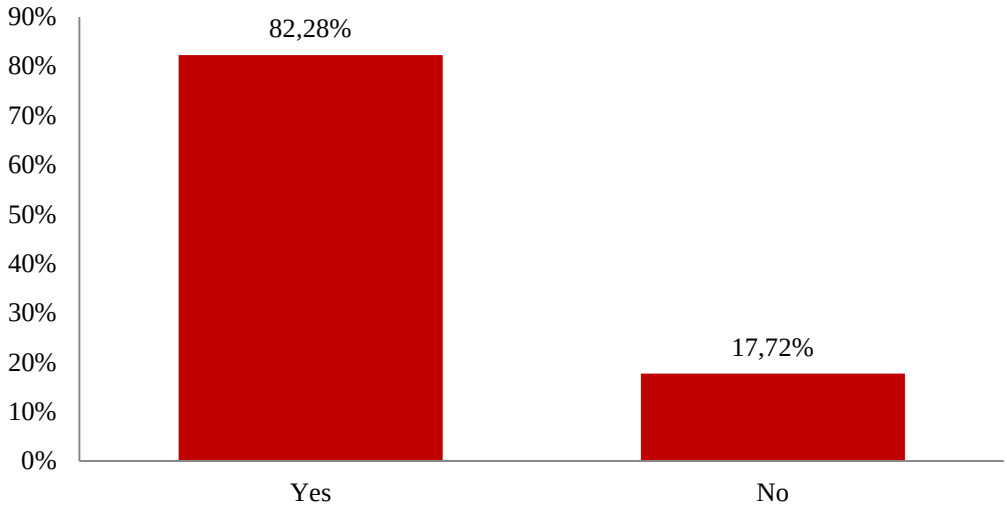
We can affirm then, with 95% of certainty, that on average the individuals from the universe watch more than 60% of the videos posted on their favorite YouTube channel. Therefore, we do **not reject** HO6, leading, by interpretation, to the **validation of H6.**

5.3.4. Trust on YouTubers' opinion and recommendation

It is then crucial to find out if the studied universe trust the opinions and recommendations of the YouTubers they follow and if this level of trust is affected by specific factors such as collaborations and partnerships with brands.

First, regarding the trust of the respondents on the opinions given by the YouTubers they subscribe, the figure 2.11. shows that 82.28% of the individuals who responded to this question stated to trust these opinions, against 17.72% that stated not trusting them.

Figure 2.11. – Trust on the opinions of subscribed YouTubers



5.3.4.1. Testing H7: "The studied universe trusts the opinions of the YouTubers they subscribe"

It was then appropriate to test the seventh study hypothesis (H7).

H7: The studied universe trusts the opinions of the YouTubers they subscribe.

H7 derives from HO7, which was, subsequently, tested.

HO7: The percentual incidence of trust in the opinion of the subscribed YouTubers among the studied universe is 0.

With the purpose to test HO7 it was performed a one-sample t-test to the variable Trust (see Annex 11). This variable represents the trust of the studied universe on the opinion of the YouTubers they subscribe and resulted from the question "*Do you trust the opinion of the YouTubers you subscribe?"*, which was asked to each respondent. There were two possible answers for this question, yes, or no.

The null hypothesis of the performed test was the mean being equal to 0 and the probability of error type I (α) considered was, again, 0.05.

The null hypothesis was rejected (Sig (2-tailed) = 0.000) leading, consequently, to the rejection of HO7 and, subsequent, **validation of H7.**

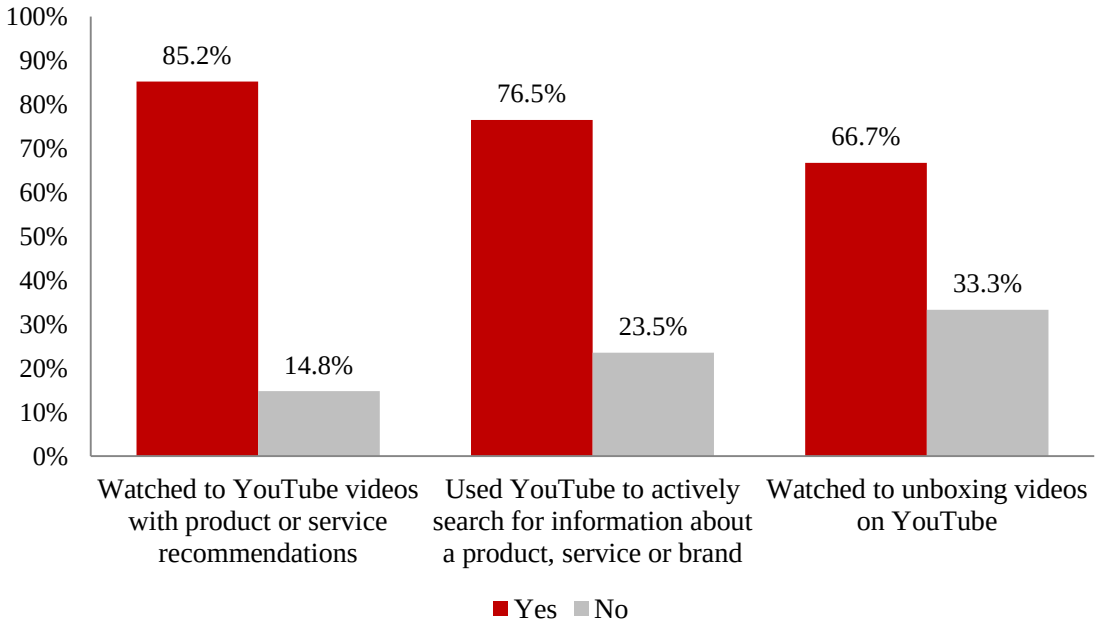
5.3.4.2. Impact of collaborations, and partnerships with brands, on trust towards YouTuber's opinion

The next step was to analyze whether the trust in YouTubers opinion is, or not, negatively affected by collaborations and partnerships with brands.

As it is possible to observe on the figure 2.12., for the majority of the respondents that have chosen to answer to this question, the level of trust on YouTuber's opinions and recommendations is not negatively affected, neither by the existence of partnerships between YouTubers and brands, nor by the recommendation of products sent to YouTubers by brands.

Furthermore, the portion of respondents that stated that their level of trust decreases when YouTubers announce partnerships with brands (16.67%), is lower than the portion who stated that, their level of trust, increases (18.33%).

Figure 2.12. – Impact of partnerships with brands & recommendation of products sent by brands on the trust on YouTuber's recommendation



5.3.4.2.1. Testing H8: "The trust of the studied universe on YouTube recommendations is not negatively affected by partnerships with brands, and recommendation of products sent by brands"

The eighth study hypothesis (H8) focuses the previously presented impacts, regarding partnerships with brands and recommendation of products sent by brands.

H8: The trust of the studied universe on YouTube recommendations is not negatively affected by a) partnerships with brands b) recommendation of products sent by brands.

The previous hypothesis derives from the following operational hypotheses:

HO8a: On average, the trust of the studied universe on YouTube recommendations maintains or increases when YouTubers announce partnerships with brands.

HO8b: On average, the trust of the studied universe on YouTube recommendations maintains or increases when the YouTubers recommend products sent by brands.

In order to test HO8a and HO8b it was assessed if, on average, the trust on YouTube recommendations maintains or increases in each one of these situations.

The respondents were asked to state if their trust increased, decreased, or if it was the same, attending to the two referred situations. The values were coded on a scale from -1 to 1, being -1 if their trust decreased, 0 if their trust kept the same or 1 if their trust increased.

Therefore to test if the trust was, or not, negatively affected by partnerships with brands and by the recommendation of products sent by brands, it was necessary to assess if, on average, the trust of the individuals on YouTube recommendations was maintained or increased following these aspects.

It was thus, performed a parametric unilateral t-student test to the population mean, to each one of the cases (see Annex 12). The assumption of this test was guaranteed,

namely by assuming the approximation to the normal distribution by the Central Limit Theorem (n > 30), as described in Marôco (2010).

The null hypothesis considered for these tests was the population mean being equal or superior to 0, which corresponds to keep or increase the trust on YouTubers opinion.

In the first test, concerning the effect of the partnerships, the null hypothesis, i.e. the mean being equal or superior to 0, was not rejected. The left unilateral p-value is equal to 1 minus the p-value (Sig. (2-tailed)) divided by 2, which is equal to 0.5855. This value is superior to 0.05 (probability of error type I), consequently, the null hypothesis is not rejected.

Therefore, we do **not reject HO8a** and consequently **validate H8a.**

About the test of HO8b, concerning the effect of the recommendation of products sent by brand, the null hypothesis, i.e. the mean being equal or superior to 0, was also not rejected. The left unilateral p-value is equal to 0.6795, which is superior to 0.05 (probability of error type I) and consequently, the null hypothesis is not rejected.

Therefore, we do **not reject** HO8b and consequently **validate H8b.**

H8 was validated, so we cannot affirm that the trust of the studied universe on YouTube recommendations is not negatively affected by, either partnership with brands, or recommendation of products sent by brands.

5.3.5. Credibility given to YouTube recommendation *versus* credibility given to other recommendation sources

5.3.5.1. Testing H9: "On average, the level of credibility given to recommendations from YouTubers and other consumers on YouTube videos is equal or higher than the level of credibility given to each one of the other recommendation sources"

Finally, after understanding that on average the studied universe trust the opinions of the YouTubers they subscribe, and that, this level of trust seem to not be affected by specific factors such as partnerships and recommendation of products sent by brands, it was also considered important to test the credibility given to YouTube recommendation

in comparison to the credibility attributed to other recommendation sources. With the ninth study hypothesis (H9) it is intended to test exactly this aspect.

H9: On average, the level of credibility given to recommendations from YouTubers and other consumers on YouTube videos is equal or higher than the level of credibility given to each one of the other recommendation sources.

The previous hypothesis derives from the following operational hypothesis:

HO9: The median of the differences between the distribution of credibility given to recommendations from YouTubers and other consumers on YouTube videos, and the distribution of the credibility attributed to each one of the other recommendation sources is positive or equal to zero.

The rejection of the operational hypotheses will lead to the rejection of H9.

To test HO9 it was necessary to test if the median of the differences between the distribution of credibility given to recommendations from YouTubers and other consumers on YouTube videos and the distribution of the credibility attributed to each one of the other recommendation sources, is positive, or equal to zero.

Therefore, to test the HO9 it was performed seven individual paired sample unilateral Wilcoxon tests with the general null hypotheses, the distribution of credibility given to recommendations from YouTubers, and other consumers, on YouTube videos, is equal or higher to the distribution of the credibility attributed to each one of the other seven recommendation sources (see Annex 13).

To reject the null hypotheses, the p-value of each test should be inferior to the significance level of 0.05.

Based on the outputs of the paired sample unilateral Wilcoxon tests, the null hypothesis was rejected for five of the seven tests performed. It was, thus, rejected the hipothesis of the credibility given to recommendations from YouTubers and other consumers on YouTube videos being equal or higher than the credibility given to recommendations from family and friends (sig.=0.000), the distribution of the credibility given to recommendations in articles from magazines and newspappers (sig.=0.002), the

distribution of the credibility given to recommendations on brands' video advertising (sig.=0.000), the distribution of the credibility given to recommendations on brand's advertising (sig.=0.000) and, finaly, the distribution of the credibility given to recommendations from public figures (sig.=0.000).

On the other hand, the null hypothesis of the distribution of the credibility attributed to recommendations from YouTubers and other consumers on YouTube videos being equal or higher than the credibility given to recommendations on blogs, was not rejected (sig.=0.054). The same happened when the testing the null hypothesis of the distribution of the credibility attributed to recommendations from YouTubers, and other consumers, on YouTube videos, being equal, or higher, than the credibility given to recommendations on brands' official website (sig.=0.054).

Equivalentely, the median of the differences between the distribution of credibility given to recommendations from YouTubers and other consumers on YouTube videos and, respectively, the distribution of the credibility given to recommendations from the two referred sources is equal or higher than zero.

HO9 was, therefore, **partially and limitedly validated**, i.e. the hipotheses of the credibility given to recommendations from YouTubers and other consumers on YouTube videos being equal or higher than the credibility given to other recommendation sources was excluded for 5 of the 7 tested recommendation sources.

5.4. Hypotheses validation summary

To conclude the chapter data analysis and results, the following table lists the hypotheses and illustrates their situation in terms of validation or rejection in accordance to the investigation results presented on the previous points.

Figure 2.13. – Hypotheses overview

Study hypothesis	Situation
H1: YouTube is well known among the studied universe and it is used as a source of information and recommendation	**Validated**
H2: YouTube recommendation is an important or very important recommendation source for the studied universe, when searching for information about products and services, evaluating product and service alternatives, and making purchase-decisions	**Validated**
H3: The studied universe gives equal importance to YouTube recommendations when, searching for information about products and services, evaluating product and service alternatives, making purchase-decisions	**Partially validated** – Equal importance only for experience goods. For search goods statistic tests indicate differences between the three considered stages.
H4: The importance that the studied universe gives to YouTube recommendation is higher for experience goods, than for search goods, when, searching for information about the product or service, evaluating the alternatives, and making the purchase decision.	**Partially validated** – there is unconformity in what concerns information search. Statistic evidences show higher importance for search goods than for experience goods in the stage of information search.
H5: Individuals from the studied universe experience problem recognition triggered by YouTube recommendation	**Validated**
H6: The individuals from the studied universe are loyal towards their favorite channels, watching the majority of their videos	**Validated**

Study hypothesis	Situation
H7: The studied universe trusts the opinions of the YouTubers they subscribe	**Validated**
H8: The trust of the studied universe on YouTube recommendations is not negatively affected by partnerships with brands, and recommendation of products sent by brands	**Validated**
H9: On average, the level of credibility given to recommendations from YouTubers, and other consumers on YouTube videos, is equal or higher than the level of credibility given to each one of the other recommendation sources	**Partially and Limitedly validated –** this hypothesis was excluded for 5 of the 7 tested recommendation sources. Only true for recommendations on blogs and on brands'official website

6. Conclusions

This chapter presents the main conclusions, as well as a discussion about the obtained results. It also presents an evaluation of the research in terms of limitations and implications for marketing and management. Finally, contributions and potential clues for future research are also discussed.

6.1. Main conclusions

The individuals from the sample present strong habits of Internet usage with more than 99% of the respondents stating to use the Internet every day, and 45.57% stating to spend more than 4 hours on the Internet per day. These aspects meet the previous expectations of high Internet usage among the represented age segment.

On average, the respondents use 2.37 social networks, being Facebook the most used social network.

Considering websites, Facebook, YouTube and Gmail were on the top three both for most visited websites and websites where the respondents stated to spend more time. 34.57% of the respondents watch YouTube videos every day and 36.65% almost every day.

In what concerns the use of YouTube as a source of information and recommendation, 85.2% of the respondents stated to have already watched YouTube videos that included product or service recommendations, 76.5% stated to have used YouTube, at least once, to actively search for information about a product, service or brand, and 66.7% said to have watched unboxing videos on YouTube. YouTube is, therefore, known and used as a source of information among the studied segment.

60.9% of the respondents that affirmed having watched YouTube videos with product or service recommendations stated to have, at least once, felt tempted to buy a product or service recommended by a YouTuber and 35.3% stated to have, in fact, bought the recommended product, or service. Further investigation showed also that there is a phenomenon of problem recognition triggered by YouTube recommendations.

These aspects emphasize the impact of YouTube recommendation in consumer's behavior, particularly on consumer's decision making process.

The evaluation of the importance of YouTube recommendation in consumer's decision making process revealed that YouTube recommendations are considered an important or very important recommendation source during information search, evaluation of the alternatives and purchase decision. This level of importance was also revealed to be equal for the three referred stages in what concerns experience goods but higher for the purchase decision in what concerns search goods.

The assessment of further differences between the level of importance attributed to YouTube recommendations when looking for search goods and experience goods showed that the level of importance is higher for experience goods than for search goods during the evaluation of alternatives and purchase decision, but its lower or equal for the stage of information search.

Loyalty towards YouTube channels and trust on YouTubers opinion were also strongly marked among the sample. 43.81% of the respondents stated to watch between 80% and 100% of all the YouTube videos posted on their favorite channel and 82.28% of the respondents to the question: *"Do you trust the opinions given by the YouTubers you subscribe?"* stated to trust these opinions. Trust on YouTubers' opinion seems to not even be negatively affected by partnerships with brands and recommendation of products sent for review consideration, with the majority of the respondents stating that their level of trust keeps the same in these situations.

The previous aspect accentuates the role of YouTube personalities as new opinion leaders, specially for younger publics, and highlights how important it is for brands to adapt and to take advantage of YouTube recommendations.

The evaluation of the credibility of YouTube recommendation in comparison to other recommendation sources revealed that the credibility given to YouTube recommendations is still lower than the credibility attributed to the majority of the other recommendation sources. This credibility was revealed to be equal or higher only for recommendations on blogs and on brands'official website.

6.2. Implications for marketing and management

There are some implications for marketing and management, namely on the way brands communicate with consumers.

Firstly brands need to consider the changes in consumers. "*New consumers*" have now more power and more information than ever before. They can express their opinion in a more effective way, spread it easily across the Internet and see other consumer's opinion.

Consumers nowadays have also higher expectations and are more demanding not only in terms of product or service quality, but also in terms of the relationship with brands.

Brands need, therefore, to acknowledge this aspect and invest in a consistent and long term relationship with the consumer, developing not only tools to promote the brand, but also to allow interaction, discussion and to monitor consumer's opinions.

Brands need to understand what is being said, who is talking about it, and in which platforms.

Promoting engagement by replying to consumers on social media and showing that their opinion is important and used towards improvement is also extremely important.

This new consumer manifests also an increasing disbelief and discredit towards advertising, as well as reduced credibility in brand messages. Brands need therefore, to rethink and adapt their marketing campaigns, finding other, more effective, ways to impact consumers.

Furthermore, new opinion leaders should be considered in consumer's purchasing decision process. YouTubers are becoming strong opinion leaders specially among the younger public, being in some cases more relatable that traditional endorsers.

For this reasons brands might need to rethink their endorsement strategy and reshape it to better adapt to the present context.

Moreover, consumers, specially younger consumers, seem more tolerant towards advertising when this is part or is related to YouTube content and partnerships with

brands. Moreover the review of products sent by brands seems to not negatively affect the level of trust in these personalities.

Companies can, therefore, take advantage of the association with YouTube personalities, as well as invest in campaigns that promote interaction and social activities between consumers.

Brands can also explore the advantage of recommendations and product placement in other online platforms such as Instagram and Snapchat.

In terms of broader implications for marketing as a discipline, new ways to look at the purchasing decision process and at the role of consumer as a much more participant intervenient, must be considered.

All the referred changes altered also the way consumer makes decisions, as well as the steps followed when acquiring a product or service, therefore the traditional steps of consumer's decision process must revised taking into consideration these new insights.

6.3. Limitations

This research had some a priori limitations, namely due to research options, that were assumed in the methodology.

The main limitations of this study are:

- This research didn't comprehend a qualitative analysis, such as a focus group, that allows understanding the crucial variables and instruments to use in the quantitative part. Instead it was chosen variables and instruments previously used in other referenced researches.

- Considering the large dimension of the considered Universe, and the limited time and resources to perform this study, it was used information from a sample obtained with non-casual sampling method, drawn by convenience and proliferation (snowball). The major limitation of this method is that the resulting sample is non-representative and, for that reason, the results and findings of this study cannot be extrapolated to the Universe, being only considered for the reality of the studied sample.

- In what concerns data collection, the choice for open questions to assess some aspects, as well as the type of scales used, might have skewed some conclusions and results.

- This research didn't comprehend an analysis of the influence of YouTube recommendation on the last step of consumers' purchasing decision process, the step of postpurchase evaluation.

6.4. Clues for Future Research

The research performed illustrates new points about the influence of YouTube recommendation on consumer's purchasing decision.

The researchers potentially interested in developing and deepen the research about this topic may:

- Apply similar studies to a probabilistic and representative sample;

- Extend the study to other age groups;

- Apply similar studies focusing on specific sector or product categories;

- Explore the influence of YouTube recommendation on impulse buying;

- Explore the influence of YouTube recommendation by calculating its impacts on sales, brand awareness, brand loyalty;

- Follow the same research approach to understand the impact of recommendations and product placement in other social networks, such as Instagram and Snapchat, on consumer's behavior;

- Explore the influence of recommendations on YouTube to postpurchase evaluation.

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Annex List

Annex 1 – Questionnaire

Questionário Tese de Mestrado

Olá! Bem vindo/Bem vinda!

Sou aluna do ISCTE-IUL e estou a realizar a minha Tese de Mestrado. A Tese é sobre a influência das recomendações no YouTube no Processo de Decisão de Compra dos jovens portugueses entre os 15 e os 29 anos.

Venho pedir a tua ajuda para a conseguir terminar.

Para me ajudares basta responderes a algumas perguntas, o que não deve demorar mais de 10 minutos.
As tuas respostas vão ser sempre anónimas e apenas utilizadas neste estudo.

Se tiveres alguma dúvida relativamente ao questionário ou ao estudo, ou se quiseres ser informado dos resultados do mesmo, podes enviar-me um e-mail para isibm@iscte.pt

Muito obrigada!

*Obrigatório

1. **Idade:** *

---

2. **Género** *
Marcar apenas uma oval.

- ◯ Feminino
- ◯ Masculino

3. **Qual o nível mais elevado de escolaridade que concluíste?** *
Marcar apenas uma oval.

- ◯ Ensino Primário
- ◯ Ensino Básico (9º ano)
- ◯ Ensino Secundário (12º ano)
- ◯ Licenciatura
- ◯ Mestrado
- ◯ Doutoramento

4. **Em que país vives?** *

5. **O teu local de residência manteve-se o mesmo nos últimos 12 meses?** *
Marcar apenas uma oval.

- ◯ Sim *Passe para a pergunta 7.*
- ◯ Não

Passe para a pergunta 7.

6. **Tens a intenção de continuar a viver na tua actual residência durante pelo menos 1 ano?** *
Marcar apenas uma oval.

- ◯ Sim
- ◯ Não *Passe para "FIM! Muito obrigado pela tua ajuda e pelo tempo que dispensaste!."*

7. **Acedeste à Internet nos últimos trinta dias?** *
   Marcar apenas uma oval.

   ◯ Sim
   ◯ Não *Passe para "FIM! Muito obrigado pela tua ajuda e pelo tempo que dispensaste!."*

8. **Utilizas a Internet todos os dias?** *
   Marcar apenas uma oval.

   ◯ Sim
   ◯ Não *Passe para a pergunta 10.*

Passe para a pergunta 10.

9. **Quanto tempo passas, em média, na Internet por dia?** *
   Marcar apenas uma oval.

   ◯ Menos de 30 minutos
   ◯ Entre 30 minutos e 1 hora
   ◯ Entre 1 e 2 horas
   ◯ Entre 2 e 3 horas
   ◯ Entre 3 e 4 horas
   ◯ Mais de 4 horas
   ◯ Não sei (NS) / Não respondo (NR)

10. **Utilizas alguma rede social? Qual ou quais?** *

11. **Quais são os 3 sites que consultas com mais frequência?**

    _____

12. **Quais são os 3 sites em que passas mais tempo?**

13. **Conheces o YouTube?** *
    Marcar apenas uma oval.

    ◯ Sim
    ◯ Não *Passe para "FIM! Muito obrigado pela tua ajuda e pelo tempo que dispensaste!."*

14. **Viste algum vídeo do YouTube nos últimos 6 meses?** *
    Marcar apenas uma oval.

    ◯ Sim
    ◯ Não *Passe para "FIM! Muito obrigado pela tua ajuda e pelo tempo que dispensaste!."*

15. **Com que frequência assistes a vídeos do YouTube?** *
Marcar apenas uma oval.

- ◯ Todos os dias
- ◯ Quase todos os dias
- ◯ 2 a 3 vezes por semana
- ◯ 1 vez por semana
- ◯ Menos de 1 vez por semana *Após a última pergunta desta secção, passe para a pergunta 17.*

16. **Em média, quanto tempo passas, por semana, a ver vídeos no YouTube?** *
Marcar apenas uma oval.

- ◯ Menos de 30 minutos
- ◯ Entre 30 minutos e 1 hora
- ◯ Entre 1 e 2 horas
- ◯ Entre 2 e 3 horas
- ◯ Entre 3 e 4 horas
- ◯ Mais de 4 horas
- ◯ NS/NR

17. **Já alguma vez procuraste informação sobre um produto/serviço, ou marca no YouTube?** *
Marcar apenas uma oval.

- ◯ Sim
- ◯ Não *Passe para a pergunta 20.*

18. **Se sim, para que categorias? (selecciona a alternativa, ou alternativas)**
Marcar tudo o que for aplicável.

- ☐ Alimentação e Restauração
- ☐ Desporto e Exercício físico
- ☐ Serviços Bancários e Seguradoras
- ☐ Eletrónica e Informática (gadgets, computadores, smartphones, camaras fotográficas…)
- ☐ Livros e Revistas
- ☐ Mobiliário e Decoração
- ☐ Música, Espetáculos, Cinema, TV e Festas
- ☐ Produtos de beleza e Vestuário
- ☐ Viagens e Turismo
- ☐ Outra: .....

19. **Já alguma vez consultaste o YouTube para ver o desempenho ou a performance de um produto?** *
Marcar apenas uma oval.

- ◯ Sim
- ◯ Não

20. **Já assististe a algum vídeo de unboxing (desembalar/tirar da embalagem) de um produto?** *
Marcar apenas uma oval.

- ◯ Sim
- ◯ Não

21. **Já assististe a algum vídeo que incluísse a recomendação de um produto ou serviço?** *
Marcar apenas uma oval.

- ◯ Sim
- ◯ Não *Passe para a pergunta 25.*

Considera o conceito de YouTuber como uma pessoa que produz ou aparece em vídeos no YouTube

22. **Já te sentiste tentado a adquirir um produto ou um serviço recomendado por um YouTuber?** *
Marcar apenas uma oval.

- ◯ Sim
- ◯ Não

23. **Já adquiriste algum produto ou serviço recomendado por um YouTuber? Qual ou quais?** *

.....

Considera o conceito de YouTuber como uma pessoa que produz ou aparece em vídeos no YouTube

24. **A recomendação de um YouTuber já te ajudou a decidir na escolha por um produto ou serviço? qual?** *

.....

25. **Já tiveste conhecimento de um novo produto ou serviço através do YouTube? Se sim, para que produto ou serviço?** *

Passe para a pergunta 26.

26. **Subscreves algum canal no YouTube?** *
Marcar apenas uma oval.

- ◯ Sim
- ◯ Não *Passe para a pergunta 32.*

27. **Indica um dos canais que subscreves**

.....

28. **Considera o teu canal de YouTube favorito, a que percentagem dos vídeos nele postados assiste?** *
Marcar apenas uma oval.

- ◯ 80 a 100%
- ◯ 60 a 80%
- ◯ 40 a 60%
- ◯ 20 a 40%
- ◯ Menos de 20%
- ◯ NS/NR

29. **Confias nas opiniões dadas pelos YouTubers dos canais que subscreves?** *
Marcar apenas uma oval.

- ◯ Sim
- ◯ Não *Passe para a pergunta 32.*
- ◯ NS/NR *Passe para a pergunta 32.*

30. **Quando os YouTubers assumem parcerias com marcas a tua confiança no que recomendam:** *
Marcar apenas uma oval.

- ◯ Mantém-se
- ◯ Aumenta
- ◯ Diminui
- ◯ NS/NR

31. **Quando os YouTubers recomendam produtos que lhes são enviados por marcas, a tua confiança no que recomendam:** *
Marcar apenas uma oval.

- ◯ Mantém-se
- ◯ Aumenta
- ◯ Diminui
- ◯ NS/NR

32. **Classifica as seguintes fontes de informação tendo em conta a credibilidade que conferes à recomendação de cada uma delas** *
Marcar apenas uma oval por linha.

	Muito Credível	Credível	Medianamente Credível	Pouco Credível	Muito pouco Credível	NS/NR
Família e Amigos	◯	◯	◯	◯	◯	◯
Artigos de recomendação em Revistas e Jornais	◯	◯	◯	◯	◯	◯
Vídeos no YouTube (produzidos por YouTubers/Consumidores)	◯	◯	◯	◯	◯	◯
Blogs	◯	◯	◯	◯	◯	◯
Sites oficiais das marcas	◯	◯	◯	◯	◯	◯
Vídeos publicitários produzidos pelas marcas	◯	◯	◯	◯	◯	◯
Anúncios TV/Rádio/Imprensa escrita	◯	◯	◯	◯	◯	◯
Figuras Públicas	◯	◯	◯	◯	◯	◯

Processo de Decisão de Compra

Normalmente, quando se compra um produto passa-se, entre outras, por três fases:

1. Procura de informação – Fase em que procuras descobrir informação sobre as opções e as alternativas disponíveis para o produto ou serviço;

2. Avaliação das alternativas – Fase em que avalias as alternativas disponíveis e seleccionas as que são mais indicadas para ti;

3. Tomada de decisão – Fase em que escolhes uma das alternativas e procedes à compra.

Produto Electrónico

Supõe agora que pretendes comprar um novo produto electrónico (gadget, computador, smartphone, câmara fotográfica…)

1ªFase - Procura de Informação

33. **Se quiseres obter mais informação acerca do produto e das alternativas existentes no mercado qual é a importância da informação das seguintes fontes** *
Marcar apenas uma oval por linha.

	Muito Importante	Importante	Medianamente Importante	Pouco Importante	Muito pouco Importante	NS/NR
Família e Amigos						
Artigos de recomendação em Revistas e Jornais						
Vídeos no YouTube (produzidos por YouTubers/Consumidores)						
Blogs						
Sites oficiais das marcas						
Vídeos publicitários produzidos pelas marcas						
Anúncios TV/Rádio/Imprensa escrita						
Recomendação de peritos que trabalham em pontos de venda de produtos eletrónicos						

2ª Fase – Avaliação das Alternativas

34. **Supõe agora que já tens uma ideia das alternativas disponíveis e pretendes selecionar 2 ou 3 alternativas para depois te ser mais fácil decidir. Nesta situação qual é a importância da informação das seguintes fontes para te ajudar a selecionar as alternativas** *
Marcar apenas uma oval por linha.

	Muito Importante	Importante	Medianamente Importante	Pouco Importante	Muito pouco Importante	NS/NR
Família e Amigos						
Artigos de recomendação em Revistas e Jornais						
Vídeos no YouTube (produzidos por YouTubers/Consumidores)						
Blogs						
Sites oficiais das marcas						
Vídeos publicitários produzidos pelas marcas						
Anúncios TV/Rádio/Imprensa escrita						
Recomendação de peritos que trabalham em pontos de venda de produtos eletrónicos						

3ªFase – Tomada de decisão

35. **Supõe agora que é o momento de escolher uma das alternativas. Neste caso qual é a importância da informação das seguintes fontes para te ajudar a decidir por uma das alternativas** *

Marcar apenas uma oval por linha.

	Muito Importante	Importante	Medianamente Importante	Pouco Importante	Muito pouco Importante	NS/NR
Família e Amigos						
Artigos de recomendação em Revistas e Jornais						
Vídeos no YouTube (produzidos por YouTubers/Consumidores)						
Blogs						
Sites oficiais das marcas						
Vídeos publicitários produzidos pelas marcas						
Anúncios TV/Rádio/Imprensa escrita						
Recomendação de peritos que trabalham em pontos de venda de produtos eletrónicos						

Destino Turístico

Imagina agora que pretendes escolher um destino turístico para as tuas próximas férias

1ªFase - Procura de Informação

36. **Se quiseres obter mais informação acerca das alternativas existentes no mercado qual é a importância da informação das seguintes fontes** *

Marcar apenas uma oval por linha.

	Muito Importante	Importante	Medianamente Importante	Pouco Importante	Muito pouco Importante	NS/NR
Família e Amigos						
Artigos de recomendação em Revistas e Jornais						
Vídeos no YouTube (produzidos por YouTubers/Consumidores)						
Blogs						
Sites oficiais das marcas						
Vídeos publicitários produzidos pelas marcas						
Anúncios TV/Rádio/Imprensa escrita						
Recomendação de peritos que trabalham em pontos de venda (exemplo agências de viagens)						

2ª Fase – Avaliação das Alternativas

37. **Supõe agora que já tens uma ideia das alternativas disponíveis e pretendes selecionar 2 ou 3 alternativas para depois te ser mais fácil decidir. Nesta situação qual é a importância da informação das seguintes fontes para te ajudar a selecionar as alternativas** *

Marcar apenas uma oval por linha.

	Muito Importante	Importante	Medianamente Importante	Pouco Importante	Muito pouco Importante	NS/NR
Família e Amigos						
Artigos de recomendação em Revistas e Jornais						
Vídeos no YouTube (produzidos por YouTubers/Consumidores)						
Blogs						
Sites oficiais das marcas						
Vídeos publicitários produzidos pelas marcas						
Anúncios TV/Rádio/Imprensa escrita						
Recomendação de peritos que trabalham em pontos de venda (exemplo agências de viagens)						

3ªFase – Tomada de decisão

38. **Supõe agora que é o momento de escolher uma das alternativas. Neste caso qual é a importância da informação das seguintes fontes para te ajudar a decidir por uma das alternativas** *

Marcar apenas uma oval por linha.

	Muito Importante	Importante	Medianamente Importante	Pouco Importante	Muito pouco Importante	NS/NR
Família e Amigos						
Artigos de recomendação em Revistas e Jornais						
Vídeos no YouTube (produzidos por YouTubers/Consumidores)						
Blogs						
Sites oficiais das marcas						
Vídeos publicitários produzidos pelas marcas						
Anúncios TV/Rádio/Imprensa escrita						
Recomendação de peritos que trabalham em pontos de venda (exemplo agências de viagens)						

FIM! Muito obrigado pela tua ajuda e pelo tempo que dispensaste!

Annex 2 – Binomial tests

Binomial Tests

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
Do you use the Internet every day?		Yes	161	.99	.50	.000
		No	1	.01		
	Total		162	1.00		
Have you ever watched a video that included the recommendation of a product or service?		Yes	138	.85	.50	.000
		No	24	.15		
	Total		162	1.00		
Have you ever searched for information about a product/service, or brand, on YouTube?		Yes	124	.77	.50	.000
		No	38	.23		
	Total		162	1.00		
Have you ever watched an unboxing video?		Yes	108	.67	.50	.000
		No	54	.33		
	Total		162	1.00		
Have you ever searched for the performance of a product, on YouTube?		Yes	110	.89	.50	.000
		No	14	.11		
	Total		124	1.00		

Annex 3 - Independent samples t-tests – Gender comparisons

Group Statistics

		N	Mean	Std. Deviation	Std. Errors Mean
On average, how much time do you spend on the Internet per day?	Female	84	3.62	1.086	0.118
	Male	78	4.26	0.946	0.107
How often do you watch YouTube videos?	Female	84	3.62	1.086	0.118
	Male	78	4.26	0.946	0.107
On average, how much time, per week, do you spend watching YouTube videos?	Female	82	2.57	1.449	.160
	Male	76	3.55	1.865	.214

Independent Samples t-test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
On average, how much time do you spend on the Internet per day?	.750	.388	-1.141	156	.255	-.226	.198	-.616	.165
How often do you watch YouTube videos?	.621	.432	-3.971	160	.000	-.637	.160	-.954	-.320
On average, how much time, per week, do you spend watching YouTube videos?	11.559	.001	-3.667	141.422	.000	-.979	.267	1.508	-.451

Note: The values presented for sig (2-tailed) are in accordance with Levene's test, assuming or not the equality of the variances.

If the value of sig. in Levene's test is inferior to 0.05 the values presented correspond to not assuming the equality of the variances.

Annex 4 – Age segment comparisons

Ranks

	Age Group	N	Mean Rank
On average, how much time do you spend on the Internet, per day?	Between 15 and 19 years old	37	68.91
	Between 20 and 24 years old	99	84.49
	Between 25 and 29 years old	22	74.84
	Total	158	
How often do you watch YouTube videos?	Between 15 and 19 years old	38	87.34
	Between 20 and 24 years old	101	82.40
	Between 25 and 29 years old	23	67.89
	Total	162	
On average, how much time, per week, do you spend watching YouTube videos?	Between 15 and 19 years old	36	83.47
	Between 20 and 24 years old	99	81.08
	Between 25 and 29 years old	23	66.48
	Total	158	

Kruskal Wallis Test

	On average, how much time do you spend on the Internet, per day?	How often do you watch YouTube videos?	On average, how much time, per week, do you spend watching YouTube videos?
Chi-Square	3.815	2.849	2.339
df	2	2	2
Asymp. Sig.	.148	.241	.310

Annex 5 – Testing HO1 – One-sample t-test

Test statistics

	N	Mean	Std. Deviation	Std. Error Mean
Have you ever searched for information about a product/service, or brand, on YouTube?	162	.77	.425	.033

One-sample test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Have you ever searched for information about a product/service, or brand, on YouTube?	22.921	161	.000	.765	.70	.83

Annex 6 – Testing HO2 –Parametric unilateral t-test

Test statistics

Importance of recommendation on YouTube videos	N	Mean	Std. Deviation	Std. Error Mean
Electronic Product				
Information search	162	3.58	.951	.075
Evaluation of the alternatives	161	3.50	1.032	.081
Decision-making	161	3.37	1.111	.088
Touristic Destination				
Information search	161	3.35	1.056	.083
Evaluation of the alternatives	159	3.39	.999	.079
Decision-making	159	3.35	1.055	.084

One-sample test

Importance of recommendation on YouTube videos	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Electronic Product						
Information search	7.770	161	.000	.580	.43	.73
Evaluation of the alternatives	6.189	160	.000	.503	.34	.66
Decision-making	4.186	160	.000	.366	.19	.54
Touristic Destination						
Information search	4.178	160	.000	.348	.18	.51
Evaluation of the alternatives	4.920	158	.000	.390	.23	.55
Decision-making	4.133	158	.000	.346	.18	.51

Annex 7 – Testing H3 – Friedman & Wilcoxon signed ranks test

Friedman tests

Importance of recommendation on YouTube videos	
Electronic Product	Mean Rank
Information search	2.09
Evaluation of the alternatives	2.03
Decision-making	1.89

Test Statistics
Friedman test

N	161
Chi-Square	9.347
df	2
Asymp. Sig.	.009

Importance of recommendation on YouTube videos	
Touristic Destination	Mean Rank
Information search	1.98
Evaluation of the alternatives	2.03
Decision-making	1.99

Test Statistics
Friedman test

N	158
Chi-Square	.667
df	2
Asymp. Sig.	0.717

Post Hoc tests – Wilcoxon signed ranks test

Null Hypothesis	Test	Sig.	Decision
The median of differences between importance of recommendations on YouTube videos on **information search (Electronic Product)** and importance of recommendations on YouTube videos on the **evaluation of the alternatives** (Electronic Product) equals 0	Related-samples Wilcoxon Signed Rank Test	0.208	**Retain the null hypothesis**
The median of differences between importance of recommendations on YouTube videos on **information search (Electronic Product)** and importance of recommendations on YouTube videos on **decision-making** (Electronic Product) equals 0	Related-samples Wilcoxon Signed Rank Test	0.003	**Reject the null hypothesis**
The median of differences between importance of recommendations on YouTube videos on **decision-making (Electronic Product)** and importance of recommendations on YouTube videos on **the evaluation of the alternatives (**Electronic Product) equals 0	Related-samples Wilcoxon Signed Rank Test	0.005	**Reject the null hypothesis**

Left unilateral Wilcoxon test

Ranks

		N	Mean Rank	Sum of Ranks
Importance of recommendations on YouTube videos on **information search (Electronic product)** - Importance of recommendations on YouTube videos on **decision-making (Electronic product)**	Negative Ranks	20[a]	27.85	557.00
	Positive Ranks	41[b]	32.54	1334.00
	Ties	100[c]		
	Total	161		

Note: a. Importance of recommendations on YouTube videos on information search (Electronic product) < Importance of recommendations on YouTube videos on decision-making (Electronic product)

b. Importance of recommendations on YouTube videos on information search (Electronic product) > Importance of recommendations on YouTube videos on decision-making (Electronic product)

c. Importance of recommendations on YouTube videos on information search (Electronic product) = Importance of recommendations on YouTube videos on decision-making (Electronic product)

Test Statistics[a]

	Importance of recommendations on YouTube videos on **information search (Electronic product)** - Importance of recommendations on YouTube videos on **decision-making (Electronic product)**
Z	-2.952[b]
Asymp. Sig. (2-tailed)	.003
Exact Sig. (2-tailed)	.003
Exact Sig. (1-tailed)	.001
Point Probability	.000

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Annex 8 – Testing HO4 – Unilateral Wilcoxon tests

Ranks

HO4a		N	Mean Rank	Sum of Ranks
Importance of recommendations on YouTube videos on **information search (Touristic destination)** - Importance of recommendations on YouTube videos on **information search (Electronic product)**	Negative Ranks	53[a]	47.11	2497.00
	Positive Ranks	35[b]	40.54	1419.00
	Ties	75[c]		
	Total	161		

Note: a. Importance of recommendations on YouTube videos on information search (Touristic destination) < Importance of recommendations on YouTube videos on information search (Electronic product)

b. Importance of recommendations on YouTube videos on information search (Touristic destination) > Importance of recommendations on YouTube videos on information search (Electronic product)

c. Importance of recommendations on YouTube videos on information search (Touristic destination) = Importance of recommendations on YouTube videos on information search (Electronic product)

Test Statistics[a]

HO4a	Importance of recommendations on YouTube videos on **information search (Touristic destination)** - Importance of recommendations on YouTube videos on **information search (Electronic product)**
Z	-2.336[b]
Asymp. Sig. (2-tailed)	.019
Exact Sig. (2-tailed)	.019
Exact Sig. (1-tailed)	.010
Point Probability	.000

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Ranks

HO4b		N	Mean Rank	Sum of Ranks
Importance of recommendations on YouTube videos on the **evaluation of the alternatives (Touristic destination)** - Importance of recommendations on YouTube videos on the **evaluation of the alternatives (Electronic product)**	Negative Ranks	44[a]	38.97	1714.50
	Positive Ranks	32[b]	37.85	1211.50
	Ties	83[c]		
	Total	159		

Note: a. Importance of recommendations on YouTube videos on the evaluation of the alternatives (Touristic destination) < Importance of recommendations on YouTube videos on the evaluation of the alternatives (Electronic product)

b. Importance of recommendations on YouTube videos on the evaluation of the alternatives (Touristic destination) > Importance of recommendations on YouTube videos on the evaluation of the alternatives (Electronic product)

c. Importance of recommendations on YouTube videos on the evaluation of the alternatives (Touristic destination) = Importance of recommendations on YouTube videos on the evaluation of the alternatives (Electronic product)

Test Statistics[a]

HO4b	Importance of recommendations on YouTube videos on the **evaluation of the alternatives (Touristic destination)** - Importance of recommendations on YouTube videos on the **evaluation of the alternatives (Electronic product)**
Z	-1.365[b]
Asymp. Sig. (2-tailed)	.172
Exact Sig. (2-tailed)	.175
Exact Sig. (1-tailed)	.087
Point Probability	.002

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Ranks

HO4c		N	Mean Rank	Sum of Ranks
Importance of recommendations on YouTube videos on **decision-making (Touristic destination)** - Importance of recommendations on YouTube videos on **decision-making (Electronic product)**	Negative Ranks	36[a]	36.92	1329.00
	Positive Ranks	35[b]	35.06	1227.00
	Ties	88[c]		
	Total	159		

Note: a. Importance of recommendations on YouTube videos on decision-making (Touristic destination) < Importance of recommendations on YouTube videos on decision-making (Electronic product)

b. Importance of recommendations on YouTube videos on decision-making (Touristic destination) > Importance of recommendations on YouTube videos on decision-making (Electronic product)

c. Importance of recommendations on YouTube videos on decision-making (Touristic destination) = Importance of recommendations on YouTube videos on decision-making (Electronic product)

Test Statistics[a]

HO4c	Importance of recommendations on YouTube videos on the **evaluation of the alternatives (Touristic destination)** - Importance of recommendations on YouTube videos on the **evaluation of the alternatives (Electronic product)**
Z	-.304[b]
Asymp. Sig. (2-tailed)	.761
Exact Sig. (2-tailed)	.772
Exact Sig. (1-tailed)	.386
Point Probability	.009

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Annex 9 – Testing HO5 – One-sample t-test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Have you ever felt tempted to purchase a product/service recommended by a YouTuber?	138	.61	.490	.042

One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Have you ever felt tempted to purchase a product/service recommended by a YouTuber?	14.598	137	.000	.609	.53	.69

Annex 10 – Testing HO6 – Parametric unilateral t-student test

Test Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Do you trust the opinion of the Youtubers you subscribe?	79	.82	.384	.043

Parametric unilateral t-student test

	Test Value = 0					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Do you trust the opinion of the Youtubers you subscribe?	19.030	78	.000	.823	.74	.91

Annex 11 – Testing HO7 – One-sample t-test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Have you ever felt tempted to purchase a product/service recommended by a YouTuber?	138	.61	.490	.042

One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Have you ever felt tempted to purchase a product/service recommended by a YouTuber?	14.598	137	.000	.609	.53	.69

Annex 12 – Testing HO8 – Parametric unilateral t-tests

Test Statistics

HO8a	N	Mean	Std. Deviation	Std. Error Mean
What happens to your trust on YouTubers' recommendation when they announce partnerships with brands?	60	.02	.596	.077

Parametric unilateral t-student test

HO8a	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
What happens to your trust on YouTubers' recommendation when they announce partnerships with brands?	.216	59	.829	.017	-.14	.17

Test Statistics

HO8b	N	Mean	Std. Deviation	Std. Error Mean
What happens to your trust on YouTubers' recommendation when they recommend products sent by brands?	62	-.03	.542	.069

Parametric unilateral t-student test

HO8b	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
What happens to your trust on YouTubers' recommendation when they recommend products sent by brands?	-.468	61	.641	-.032	-.17	.11

Annex 13 – Paired sample unilateral Wilcoxon tests

Ranks

		N	Mean Rank	Sum of Ranks
Credibility given to recommendations from YouTubers and other consumers on **YouTube videos - Credibility** given to recommendations from **family and friends**	Negative Ranks	117[a]	63.35	411.50
	Positive Ranks	8[b]	57.94	463.50
	Ties	36[c]		
	Total	161		

Note: Credibility given to recommendations from YouTubers and other consumers on YouTube videos < Credibility given to recommendations from family and friends

b. Credibility given to recommendations from YouTubers and other consumers on YouTube videos > Credibility given to recommendations from family and friends

c. Credibility given to recommendations from YouTubers and other consumers on YouTube videos = Credibility given to recommendations from family and friends

Test Statistics[a]

	Credibility given to recommendations from YouTubers and other consumers on **YouTube videos - Credibility** given to recommendations from **family and friends**
Z	-8.817[b]
Asymp. Sig. (2-tailed)	.000
Exact Sig. (2-tailed)	.000
Exact Sig. (1-tailed)	.000
Point Probability	.000

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Ranks

		N	Mean Rank	Sum of Ranks
Credibility given to recommendations from YouTubers and other consumers on **YouTube videos - Credibility** given to recommendations in articles from **magazines and newspapers**	Negative Ranks	58[a]	51.49	2986.50
	Positive Ranks	37[b]	42.53	1573.50
	Ties	65[c]		
	Total	160		

Note: Credibility given to recommendations from YouTubers and other consumers on YouTube videos < Credibility given to recommendations in articles from magazines and newspapers

b. Credibility given to recommendations from YouTubers and other consumers on YouTube videos > Credibility given to recommendations in articles from magazines and newspapers

c. Credibility given to recommendations from YouTubers and other consumers on YouTube videos = Credibility given to recommendations in articles from magazines and newspapers

Test Statistics[a]

	Credibility given to recommendations from YouTubers and other consumers on **YouTube videos - Credibility** given to recommendations in articles from **magazines and newspapers**
Z	-2.793[b]
Asymp. Sig. (2-tailed)	.005
Exact Sig. (2-tailed)	.005
Exact Sig. (1-tailed)	.002
Point Probability	.000

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Ranks

		N	Mean Rank	Sum of Ranks
Credibility given to recommendations from YouTubers and other consumers on **YouTube videos - Credibility** given to recommendations on **blogs**	Negative Ranks	22[a]	31.02	682.50
	Positive Ranks	37[b]	29.39	1087.50
	Ties	99[c]		
	Total	158		

Note: Credibility given to recommendations from YouTubers and other consumers on YouTube videos < Credibility given to recommendations on blogs

b. Credibility given to recommendations from YouTubers and other consumers on YouTube videos > Credibility given to recommendations on blogs

c. Credibility given to recommendations from YouTubers and other consumers on YouTube videos = Credibility given to recommendations on blogs

Test Statistics[a]

	Credibility given to recommendations from YouTubers and other consumers on **YouTube videos - Credibility** given to recommendations on **blogs**
Z	-1.685[b]
Asymp. Sig. (2-tailed)	.092
Exact Sig. (2-tailed)	.108
Exact Sig. (1-tailed)	.054
Point Probability	.004

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Ranks

		N	Mean Rank	Sum of Ranks
Credibility given to recommendations from YouTubers and other consumers on **YouTube videos - Credibility** given to recommendations on **brand's official website**	Negative Ranks	22[a]	64.46	3674.00
	Positive Ranks	37[b]	58.91	3829.00
	Ties	99[c]		
	Total	161		

Note: Credibility given to recommendations from YouTubers and other consumers on YouTube videos < Credibility given to recommendations on brand's official website

b. Credibility given to recommendations from YouTubers and other consumers on YouTube videos > Credibility given to recommendations on brand's official website

c. Credibility given to recommendations from YouTubers and other consumers on YouTube videos = Credibility given to recommendations on brand's official website

Test Statistics[a]

	Credibility given to recommendations from YouTubers and other consumers on **YouTube videos - Credibility** given to recommendations on **brand's official website**
Z	-.206[b]
Asymp. Sig. (2-tailed)	.836
Exact Sig. (2-tailed)	.838
Exact Sig. (1-tailed)	.419
Point Probability	.001

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Ranks

		N	Mean Rank	Sum of Ranks
Credibility given to recommendations from YouTubers and other consumers on **YouTube videos** - **Credibility** given to recommendations on **brand's advertising** (TV, Radio, Press)	Negative Ranks	28[a]	48.75	1365.00
	Positive Ranks	82[b]	57.80	4740.00
	Ties	50[c]		
	Total	160		

Note: Credibility given to recommendations from YouTubers and other consumers on YouTube videos < Credibility given to recommendations on brand's advertising (TV, Radio, Press)

b. Credibility given to recommendations from YouTubers and other consumers on YouTube videos > Credibility given to recommendations on brand's advertising (TV, Radio, Press)

c. Credibility given to recommendations from YouTubers and other consumers on YouTube videos = Credibility given to recommendations on brand's advertising (TV, Radio, Press)

Test Statistics[a]

	Credibility given to recommendations from YouTubers and other consumers on **YouTube videos** - **Credibility** given to recommendations on **brand's advertising** (TV, Radio, Press)
Z	-5.180[b]
Asymp. Sig. (2-tailed)	.000
Exact Sig. (2-tailed)	.000
Exact Sig. (1-tailed)	.000
Point Probability	.000

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Ranks

		N	Mean Rank	Sum of Ranks
Credibility given to recommendations from YouTubers and other consumers on **YouTube videos - Credibility** given to recommendations on **brand's video advertising**	Negative Ranks	32[a]	55.30	1769.50
	Positive Ranks	85[b]	60.39	5133.50
	Ties	43[c]		
	Total	160		

Note: Credibility given to recommendations from YouTubers and other consumers on YouTube videos < Credibility given to recommendations on brand's video advertising

b. Credibility given to recommendations from YouTubers and other consumers on YouTube videos > Credibility given to recommendations brand's video advertising

c. Credibility given to recommendations from YouTubers and other consumers on YouTube videos = Credibility given to recommendations on brand's video advertising

Test Statistics[a]

	Credibility given to recommendations from YouTubers and other consumers on **YouTube videos - Credibility** given to recommendations on **brand's video advertising**
Z	-4.714[b]
Asymp. Sig. (2-tailed)	.000
Exact Sig. (2-tailed)	.000
Exact Sig. (1-tailed)	.000
Point Probability	.000

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Ranks

		N	Mean Rank	Sum of Ranks
Credibility given to recommendations from YouTubers and other consumers on **YouTube videos - Credibility** given to recommendations from **public figures**	Negative Ranks	11[a]	33.27	366.00
	Positive Ranks	106[b]	61.67	6537.00
	Ties	42[c]		
	Total	159		

Note: Credibility given to recommendations from YouTubers and other consumers on YouTube videos < Credibility given to recommendations from public figures

b. Credibility given to recommendations from YouTubers and other consumers on YouTube videos > Credibility given to recommendations from public figures

c. Credibility given to recommendations from YouTubers and other consumers on YouTube videos = Credibility given to recommendations from public figures

Test Statistics[a]

	Credibility given to recommendations from YouTubers and other consumers on **YouTube videos - Credibility** given to recommendations from **public figures**
Z	-8.589[b]
Asymp. Sig. (2-tailed)	.000
Exact Sig. (2-tailed)	.000
Exact Sig. (1-tailed)	.000
Point Probability	.000

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.