Impulsive Buying Behavior: The Influence of Watching Short Videos Online and the Perception of Products Displayed in Them

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Dissertation written under the supervision of professor Daniel Fernandes

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Abstract

This is a time where most of the online content is focused on being direct, short and fast, existing a tremendous rise of short videos online as a form of communication, being present in most social media platforms such as TikTok, and via Instagram Reels and YouTube Shorts. Even though a lot of research has been made about impulsive buying behavior, the knowledge about the relationship between this type of behavior and the visioning of short videos online is reduced, as well as concerning the perception of products displayed in videos in the influence of this type of behavior. Therefore, a quantitative method of data collection was utilized through the formulation and distribution of a survey online, to study the existing relationship between this purchasing behavior and the consumption of short videos online. The results confirmed that an increase in time spent watching short videos lead to an increase in impulsive buying behavior. This rise is also verified when the products are perceived as reliable. Additionally, the level of interaction between the average time watching short videos online, the age and the household income, separately, was more noticeable in younger individuals and in the ones with higher values of household income.

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Sumário

Esta é uma altura em que a maioria do conteúdo online é focado em ser direto, curto e rápido, existindo um enorme crescimento de vídeos curtos como forma de comunicação, estando presentes na maioria das plataformas de redes sociais como o *TikTok,* e via *Instagram Reels* e *YouTube Shorts*. Ainda que muita pesquisa tenha sido feita acerca do comportamento de compra impulsiva, o conhecimento sobre a relação entre este tipo de comportamento e a observação de vídeos curtos online é reduzido, assim como sobre a perceção dos produtos mostrados nos vídeos na influência deste tipo de comportamento. Como tal, foi utilizado um método quantitativo de recolha de dados através da formulação e distribuição de um questionário online, para estudar a relação existente entre este tipo de compra e o consumo de vídeos curtos online. Os resultados confirmam que um aumento do tempo passado a visualizar vídeos curtos leva a um aumento da compra impulsiva. Este aumento também se verifica quando os produtos são percecionados como confiáveis. Adicionalmente, o nível de interação entre o tempo médio a observar vídeos curtos, a idade e o rendimento familiar, separadamente, foi mais notório em indivíduos mais novos e nos que tinham valores de rendimento familiar mais alto.

Título: Comportamento de Compra Impulsiva: A Influência de Ver Vídeos Curtos Online e a Perceção dos Produtos Exibidos nos Mesmos

Autora: Marta Santos

Palavras-Chave: Comportamento de compra impulsiva, Vídeos curtos online, Redes sociais

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List of Abbreviations

BIS	Buying Impulsiveness Scale (Rook & Fisher, 1995)
H1	Hypothesis 1(2-9, respectively)
IBB	Impulsive Buying Behavior
IVS	Impulsiveness Verification Scale
SVO	Short Videos Online

1. Introduction

With the continuous development of social media, the rapid growth of short videos online (SVO) has transformed consumer's habits and routines online (Zhao, 2023). Social media networks were able to adapt to the ongoing tendencies and create features to insert this type of videos in their platforms (Streaming Valley, 2023). These can easily entertain, while making the user stay on the platform for a longer period of time, without requiring a high level of attention from it (Chen et al., 2023). When aligned with a marketing strategy and brand investment in advertising videos, short videos create a possibility for the brand to make a tremendous impact on sales (Dong et al., 2023; Xiao et al., 2019).

However, it is important to take into consideration the possible impact that this video phenomenon may have in the consumer, specifically, on its impulsive buying behavior (IBB) (Rook, 1987). This is a fast, unanticipated and guided by emotions buying behavior, that has been widely studied throughout the years. But, by being combined with SVO, and the platform's algorithms that direct content considering the preferences of the individuals (Narayanan, 2023), new stimulus for impulsive purchases can be created.

Furthermore, it is necessary to comprehend this relationship in terms of a consumer behavior and a marketing perspective, with the purpose of contributing to a higher understanding of this dynamic, as well as the definition of marketing strategies that could enhance it.

Therefore, this dissertation aims to answer the following research questions:

1. Does watching SVO, in a controlled and uncontrolled manner, and the perception of the products displayed in them enhance the IBB of the consumers?
2. Is IBB distinct for individuals with different educational levels and household income values?
3. Do individuals that show impulsive buying traits have the perception that watching SVO enhances this type of behavior?
4. Does a continuous viewing of SVO aligned with an increase in IBB, differ for individuals with different household income values and ages?

2. Literature Review

2.1 Social Media Use

Social media is constantly growing throughout the years. These are digital platforms that allow users to communicate publicly or semi-publicly, through their profiles (Anderson & Wood, 2021). Research shows that 62.3% of the population worldwide uses social media, for about 2 hours and 23 minutes, on average, daily (Kemp, 2024). This leads to a tremendous impact on social networking revenues, that reached US$153.40bn by segment, in 2024 (Statista Market Insights, 2024). The most popular social network in April of 2024 was Facebook, with more than 3 million active users monthly, followed by YouTube with approximately 2,5 million active users (Dixon, 2024).

Research shows that what stands between social media platforms that are successful or not, is the frequency of usage (Anderson & Wood, 2021). Therefore, the repetition of using the platform creates a habit in the user's life, through cues and automatic responses, such as receiving a notification and opening the social network to check it (Wood & Rünger, 2016). Habit is considered as an automated response mechanism formed by reoccurrence in usage, implying benefits and costs. Also, the social approval and the feeling of being acknowledged is a crucial factor to motivate users to start, and to keep using the platforms (Anderson & Wood, 2021). The easiness to use is also an essential driver of creating the habit to utilize social media, since users create a positive perception of the platforms leading to a higher frequency of usage (Anderson & Wood, 2021). Additionally, the wish to avoid boredom, the sense of being part of a community, the social interactions, and the possibility of being modelled by others are a big motivation for the repeated use of these social networks (Phua et al., 2017), as well as the need for information research and inspiration (Brailovskaia et al., 2020).

In addition, social media is valued for the positive retributions that provides to users such as followers and likes (Anderson & Wood, 2021). There is a dopamine release, associating repetition in usage to reward receiving, consolidating habit formation (Wood & Rünger, 2016). These gains create reciprocity norms between users, meaning that there is a benefit given from both parts and motivation of usage (Lewis, 2015). The fact that the retributions are instantaneous it's also a very important part in the association between social networks and recompense likes (Anderson & Wood, 2021).

It is also relevant to mention that the algorithms of the social platforms can explain the continuous use and customization to each user. Social media algorithms are behind the

processing and spreading of content, being responsible for recommending it to users and generating personalized feeds. Since the social media is adapted to each user and displaying content of interest to it, there is a higher frequency of utilization and a higher engagement (Narayanan, 2023).

2.2.1 The Negative Side of Using Social Media

With the formation of such strong usage habits, there might be negative consequences, such as behavioral addiction to social media (Anderson & Wood, 2021), implying withdrawal symptoms (Wise & Robble, 2020), sudden desires and lack of self-restrain when not using the platforms (Baumer et al., 2015). Research shows that addiction to social media can be developed due to a need of relaxation and escape from their life problems, and to the feeling of belonging that the social network creates in the user (Brailovskaia et al., 2018). Algorithms can also be responsible for addiction since users are exposed to content they are truly interest in (Zhao, 2020).

Additionally, the lack of social life is considered to be one of the highest factors in the increase of social media addiction, since the need to combat loneliness and to get help from others keeps the users online for a longer period. Individuals who are considered less resilient also have a higher risk of developing addiction to social media, since they lack problem solving skills (Chegeni et al., 2021).

This type of addiction might lead the users to develop mental disorders such as anxiety, depression, reduced attention capacity and concentration, as well as incapacity of making projections and plans for their future (Chegeni et al., 2021), and it contributes to a lack of sleep schedules (Andreassen et al., 2012) and the capacity to create real connections with others (Rose-Stockwell & Haidt, 2019).

Furthermore, a strong use of social media, even if not considered a behavioral addiction, can be linked with mental health concerns including self-harm and suicide tendencies, especially among girls in multiple countries (Twenge et al., 2020).

Social media content is vast and easily sharable. Consequently, it also enables contact with hate speech. Even though the platforms have resources to detect the hateful comments, it keeps being a downside of the continuous use of social media (Djuric et al., 2015).

Also, cyberbullying is continuously a reality of social media use, being defined as “an aggressive, intentional act carried out by a group or individual, using electronic forms of contact,

repeatedly and over time against a victim who cannot easily defend him or herself' (Smith et al., 2008, p.376). This form of attack is different from other forms of aggression due to the repetition of the act, since the content can be easily shared, it enhances the possibility of being repeated by others. If there is no repetition, it is considered to be cyber-aggression. Also, it is different due to the power imbalance, related not only to strength and number of aggressors, but also technical skills with technologies and anonymity (Slonje et al., 2013).

Forms of harassment online, which is an abusive type of behavior attacking a specific user or group of users (Blackwell et al., 2017) have different characteristics than offline, since they can be conducted anonymously, but are usually related with abuse, harm and hate (Pater et al., 2016). Vogels (2021) considered victims of online harassment individuals who have suffered offensive name-calling, purposeful embarrassment, stalking, physical threats, harassment over a sustained period of time and sexual harassment. In 2023, Facebook deleted 30.8 million contents that were related to cyberbullying and harassment online (Dixon, 2024).

2.1 Short Form Videos Online

Because of the growth of social networks, new ways of consumption are being created like SVO (Zhao, 2023) that can last from seconds to a few minutes. These types of videos were first launched in a platform called Vine in 2013 and are even more popular nowadays because of TikTok. This social network had the highest values in usage per user in 2023, each spending 34 hours per month on the platform, and 61.7% opened the platform every day, on average (Kemp, 2024). Other platforms also created forms to insert short video content through Instagram Reels, Snapchat Stories and YouTube Shorts, being able to adapt to the new tendencies and enhancing the popularity of SVO (Streaming Valley, 2023).

SVO have transformed the social media experience to the user. They are full of customized and very interactive content, being able to easily capture anything, without demanding prolonged attention from the consumer. Due to their informative, quick, and diverse nature, it makes it easier for users to watch and share the videos with others (Chen et al., 2023). Therefore, SVO have entered the routines of users, considered to be a form of enjoyment and relaxation (Peng et al., 2022).

Research has been made with the purpose of studying the effectiveness of short videos in online learning, with outstanding results showing that short videos had positive impact in the learning performance of students, since they are considered to be more entertaining and pleasurable to watch (Manasrah et al., 2021).

Also, short videos have different characteristics that make them go more viral in the platforms, than other types of content. The number of followers of the creator, how the video is shot, how recent it is and the existence of text are elements than can explain the high virality of SVO (Ling et al., 2022), since they can create a high level of stimulation that will initiate the sharing between individuals (Berger & Milkman, 2012).

However, the fact that short videos are so enjoyable, can lead users to use the social media platforms for a longer period (Chen et al., 2023) and in a significant release of dopamine (Wise & Robble, 2020). This might lead to an addiction to the format (Chen et al., 2023), resulting in a decrease in their educational performance, social relationships, achievements, health and happiness (Peng et al., 2022), as well as in a decrease in attention and concentration capacity while watching short videos (Chen et al., 2023) and lower sleep quality, since addicted individuals tend to watch this type of videos during the night (Dai et al., 2021).

2.2.1 Short Video Marketing Online

The growth of social media created a transformation in marketing strategies, and short video marketing is nowadays one of the preferred methods of communication between brands and its consumers. It is expected to be spent on advertisement via short videos $99.4bn in 2024 (Statista Market Insights, 2023). Short video marketing is related to all marketing strategies present in quick video networks online (Xiao et al., 2019), being crucial in the decision-making process of the consumer (Dong et al., 2023).

As mentioned above, short videos are quick and easy to watch and share (Chen et al. 2023). Therefore, they can be more appealing for users, creating a stronger comprehension between the brand and its consumer (Xiao et al., 2019).

Using short videos as a marketing strategy allows marketing to be more precise because brands can easily share their content with potential consumers (Xiao et al., 2019). This is possible due to the social media algorithms that control which videos are shown to the users, only displaying the ones that the consumers would more likely be interested in (Narayanan, 2023). Therefore, as the amount of time spent watching SVO increases, the amount of time spent watching advertisements also increases.

However, the consumers can easily dismiss the advertising videos. In a survey conducted by Statista Research Department (2023), advertising videos were skipped by 65.9% of individuals but 19.7% did not miss the advertisements if they considered them relevant. With the purpose of generating a higher level of engagement, it is crucial that the advertising content is displayed

at the right time (Zhang et al., 2016), this can be in between user-generated videos and in the moment the mobile application is opened, a strategy used by TikTok, or in between Instagram Stories, for example.

Also, the use of short video content in marketing reduces the financial investment made by the brands, since they involve low production expenses and time (Xiao et al., 2019). Additionally, they are able to create a strong level of stimulation in the users, enhancing their intentions of sharing the short videos with others (Berger & Milkman, 2012), creating online engagement and leading the products to be easily advertised to more consumers. This can also be explained by the fact that SVO are mainly watched vertically, enhancing the consumer's interest and effectiveness of the marketing strategy (Mulier et al., 2021).

2.2.3 The Effect of Watching SVO on Consumer's Purchase Intentions

As mentioned above, the impact of social media marketing through short form videos, may generate purchasing intentions in the consumers. When brands align their online marketing strategy with content produced by social media celebrities, this purchase intention can be even higher. In doing so, the influencers can share their knowledge and the actual functionality of the product or service, since it is not possible for the consumer to physically experiment the item. This will lead to a higher credibility of the product's details that are being exposed (Xiao et al., 2019), causing a superior impact in the consumer's perception and, consequently, enhancing the sales (Zhao, 2023).

Zhao (2023) considers that the social networks' availability, which is their virtual engagement, is crucial to influence consumer's purchasing behavior, since, in comparison to the offline stores, is innovative and distinct, and reduces the psychological gap between the consumer and the marketing strategy. Therefore, a reduced psychological gap indicates an acceptance and contentment to the short video marketing, increasing the purchase intentions of the consumer.

When brands choose to advertise their products through short content videos, it is crucial that they ensure an entertaining and appealing experience for the consumer, considering that the reason that they are watching short videos in the first place is not for buying purposes, but leisure. Therefore, if the content is not considered to be interactive, it will not be well received by the consumer and the marketing impact will be substantially lower (Xiao et al., 2019).

The short video marketing influence can be higher when brands are able to meet the separate requisites for different consumers along the process, through customized and varied content. Also, the impact can be enhanced by carefully elaborating and determining the target consumer

group, communicating straight to it, enhancing the attention of the consumer to the short video, leading to an increase in sales. Also, the purchase intentions can be higher when discounts and subsidies are available, and the brands create a stronger relationship of trust with the costumer (Zhao, 2023).

2.3 Impulsive Buying Behavior

The IBB has been studied for several years. Initially, the researchers questioned if the products were impulsive, but understood that all items could be bought due to an impulsive stimulus (Vohs & Faber, 2007). In the next decade, this type of buying behavior was considered to be descriptive of purchases that weren't planned (Applebaum, 1951; Kollat & Willet, 1967), however, this definition was perceived as too simplistic (Stern, 1962). This can be explained by the fact that unplanned purchases aren't necessary related with emotions but can be related with needs that weren't considered in advance (Amos et al., 2014).

After further research, the IBB started to be described as an urgent and persistent necessity to purchase something immediately, that differs from instinct and habits. It is fast, unexpected and ruled by emotions over rationality, which results in less concern for the consequences (Rook, 1987), being impacted by different factors such as culture, economy and personality of the individuals (Stern, 1962). Usually, this type of purchase is joined with a complex hedonic experience. It can be followed by feelings of happiness, satisfaction and pleasure as well as restlessness and helplessness (Rook, 1987).

Impulse products are inexpensive, highly purchased, and require minimal cognitive effort for the consumer when making their decision, however, nearly every product can be bought in an impulsive form (Rook & Hoch, 1985).

The individuals that are impulsive buyers tend to feel the inducement of buying in a natural and frequent way, being more open to unexpected ideas of purchases and are likely to react right away to their impulses, due to the necessity of immediate gratification, which can be considered as a childish and egocentric behavior (Rook & Fisher, 1995). However, to feel an impulse, does not necessarily mean that there is always a purchase, because if the individuals experience negative normative evaluations in a critical level, they will decide not to make the purchase (Rook & Fisher, 1995).

The consumer can be under a state of psychological disequilibrium after feeling the urge to buy the product immediately. The capacity of denying the immediate gratification to itself is related to will power (Rook and Hoch, 1985). According to Hoch and Loewenstein (1991), will power

and desire are both related to self-control. If the consumer's urge to buy the product overcomes its will power to refuse the purchase, an impulsive acquisition will occur. The fact that the individual gives in to its buying impulses, may result in negative economic, physic and phycological consequences (Rook and Hoch, 1985).

Different types of IBB were defined. There was considered to be the pure impulsive buying that consists of the strongest impulse to purchase something. Also, the reminder impulsive buying, which relates to the fact that the individual is reminded of a prior desire to buy that product. The suggestion impulsive buying where there's no past experience or knowledge with the product that motivates the purchase, and finally, the planned impulsive buying when the individual intends to buy products that are influenced by price reductions and special offers, additional to the planned items that it had previously in mind (Stern, 1962).

There are also specific elements that could affect the IBB such as cost of the item, the time of dislocating from one store to another, related to the physical effort of the dislocation, and the mental effort implied when the plan of going to the place of purchase is made and the monetary resources to complete the purchase are spared (Stern, 1962). Also, the self-control is a crucial factor that influences the impulsive buying since the consumers that experience momentary lapses of self-control, are more likely to make this type of purchases (Vohs & Faber, 2007).

Furthermore, there are elements that are considered to motivate impulsive buying such as low price, the individual's need for an item, the number of stores where the good is accessible, the self-service, the advertising presence, the store display, the life duration of the product, the weight of the item and the ease of storage (Stern, 1962). Additionally, the physical proximity, the ability to touch and taste the products, the scents and the possibility to test them before buying, can enhance the desire to buy the goods (Faber & Vohs, 2004).

Rook & Fisher (1995) state that consumers impulsive buying can be influenced by their normative considerations. When in contact with places that stimulate spontaneous purchases, the individuals are influenced to act on their impulsive susceptibility, which is an indicator of their buying behavior. However, consumers are more likely to purchase products based on impulsivity in places they usually frequent like the supermarket, and a lot of stores increase the urge to buy products immediately and eliminate barriers to facilitate the process.

However, it is possible to consider that consumers may not have the perception that they are buying an item impulsively, or what can influence this type of purchase, since they can be experiencing an illusion of comprehending the shopping situation, where they think they are

understanding the circumstances with a higher clarity and extent, than they actually do (Rozenblit & Keil, 2002).

2.3.1 Influence of Gender, Age, Education Level and Household Income in Impulsive Buying Behavior

Tulungen (2013) and Coley & Burgess (2003) found that gender influences this type of behavior since, when comparing women and men, the first showed a higher level of impulsive buying tendency. This can be explained by the fact that women are more relaxed and satisfied in a shopping situation than men, being more susceptible to make impulsive purchases. Also, female individuals tend to make a higher number of purchases, which can lead to a higher probability of buying items in an unplanned manner (Coley & Burgess, 2003; Kollat & Willet, 1967). Furthermore, women tend to buy products associated with social identity impulsively when men tend to purchase items associated with personal identity on an impulsive.

Wood (1998) states that older individuals make less impulsive purchases, when compared to younger individuals and in terms of education, more educated individuals make less purchases based on impulse, when compared to lower educated individuals. Additionally, consumers that experience rise in household income, are less likely to buy goods in an impulsive way (Jeffrey & Hodge, 2007).

2.3.2 Online Impulsive Buying Behavior

The impulsive purchases can happen in an online or an offline environment. With the expansion of e-commerce, leading to the elimination of physical barriers, the online impulsive buying tendency has been growing among consumers (Chan et al., 2017).

According to Jeffrey and Hodge (2007), the higher the amount of time spent on a website, the higher the probability of making impulsive purchases, which is also enhanced due to the items that appear via a popup advertisement that increase the spontaneous need. Additionally, when there's the possibility of buying an item and donate part of the money to charitable organizations, there's a higher chance of the consumer buying that item on impulse.

Sun and Wu (2011) conducted a study to find the indicators of the online impulsive buying and discovered that the necessity for material products and arousal are positively affecting this type of purchase behavior. Additionally, other motivators are the usefulness of a product and perceiving its emotional value (Liu et al., 2023). Also, emotions play a key role since they are an intermediary between online store beliefs and impulsive buying, since favorable emotions

induce the immediate need for reward obtained by purchasing the item (Verhagen & Van Dolen, 2011).

Online stores can be a tool that will drastically increase the sales of items that usually aren't appealing in the offline stores, enhancing the products that could create an impulsive purchase (Jeffrey & Hodge, 2007).

However, influencing this type of behavior can be harder in online stores, since the web-based environment does not allow the consumer to receive immediate reward from the purchase, due to the delivery process. The stores should focus on the feelings of anticipation that the waiting times can create on the consumer and use that to influence the impulsive purchase (Jeffrey & Hodge, 2007).

Furthermore, it is important to mention the role of the online influencers in IBB. An influencer is a type of celebrity (Jin et al., 2019), who has a high number of followers and considered to be a reliable product advertiser online (De Veirman et al., 2017). Therefore, their online popularity is used by brands to enhance their sales. The influencer marketing market value in 2023 was $21.1bn, being expected to reach $24bn in 2024 (Dencheva, 2023). Online consumers consider social influencers to be more likeable than traditional celebrities due to their apparent sociability (Jin et al., 2019). Due to their influencing abilities, they have an impact on impulsive buying decisions. When online influencers recommend a product, there is a new necessity created and the followers can easily access the online shop and make the purchase, consequently they buy a good that they weren't initially planning on buying. Therefore, the recommendation leads to an IBB (Gunawan & Iskandar, 2020).

3. Methodology

3.1 Research Focus

This research has the main purpose of understanding if there is a relationship between the viewing of SVO and IBB in the consumer as well as if the individuals that show IBB tendencies, are aware that this type of videos has an impact on their purchasing approach. Furthermore, it intends to understand how the products are perceived in these videos online and how that perception can influence the impulsive purchase, as well as the impact of the sociodemographic variables in this type of behavior.

Therefore, this paper is written with the purpose of answering the following Research Questions:

1. Does watching SVO, in a controlled and uncontrolled manner, and the perception of the products displayed in them enhance the IBB of the consumers?
2. Is IBB distinct for individuals with different educational levels and household income values?
3. Do individuals that show impulsive buying traits have the perception that watching SVO enhances this type of behavior?
4. Does a continuous viewing of SVO aligned with an increase in IBB, differ for individuals with different household income values and ages?

3.2 Hypothesis

In line with the research questions and the literature review, 8 hypotheses were formulated for this study, considering the primary data collected via an online questionnaire:

H1: Watching SVO has a positive impact in IBB.

H2: Individuals that watch SVO without being able to stop, show higher levels of IBB.

H3: Products perceived as appealing in SVO have a positive impact in IBB.

H4: Products perceived as reliable in SVO have a positive impact in IBB.

H5: Individuals with IBB traits have the perception that watching SVO does enhance this type of behavior.

H6: Individuals who watch SVO with a higher education level show lower values of IBB, when compared to individuals with a lower educational level.

H7: Individuals with higher values of household income show inferior values of IBB, when compared to individuals with lower household income.

H8: As the individuals spend more time watching SVO their IBB increases, and it is more noticeable between younger individuals.

H9: As the individuals spend more time watching SVO their IBB increases, and it is more noticeable between individuals with higher household income values.

3.3 Type of Methodology

With the purpose of answering the research questions, primary and secondary data was collected. The literature review permitted to gather secondary data in order to understand social

media use and its consequences, the short videos characteristics, how they are used in a marketing context and the components of IBB in an offline and online environment. Furthermore, primary data was collected via a non-probabilistic sampling method, through the development of a survey in the platform Qualtrics, and the data was gathered between the 24th of March and 25th of April, of 2024. The distribution of the survey was via social media networks (Instagram and WhatsApp) and direct messages to my personal network. The criteria for participating included being 18 years old or older, fluent in English and a user of social media networks. The survey was initiated only after the individuals read and agreed to the informed consent.

3.4 Survey Development

The questionnaire was constructed with the purpose of understanding the perception that the individuals had of SVO as well as the products displayed in them, the frequency of visioning as well as how this consumption as made, and their IBB. Therefore, the elaboration of the survey was established on these objectives developing specific questions according to the literature review of this research.

It was initiated by asking questions concerning the individuals use of social media networks, including their frequency of usage and their most used social media. The second set of questions regarded the short videos viewing habits, such as the average time spent watching these videos online, how addicting they considered them to be and if they created impulsivity in the individual or not. In this set of questions, a scale of 4 items was created with the purpose of evaluating the uncontrolled watching of short videos online. Furthermore, to measure the IBB of the participants, a nine-item scale created by Rook & Fisher (1995) was chosen, in which participants were asked to evaluate on a 5 level Likert Scale (1932) (1- “Strongly Disagree”; 2- “Disagree”; 3- “Neither Agree nor Disagree”, 4- “Agree”; 5- “Strongly Agree”) their purchasing behavior. Additionally, the scale items were followed by 3 questions that meant to serve as a verification of the impulsiveness of the individual, creating a third scale for the statistical analysis. The survey questions were measured on a 5 level Likert Scale (1932) or yes or no answers, with the exception of the frequency of usage, the most used social media and the demographic questions.

To ensure the understandability of the survey, it was first presented to a small group of individuals that validated the easiness of comprehension, before making it available online.

3.5 Data Analysis

The questionnaire gathered a total of 255 participants, however, after verifying that 47 had not completed all the questions, or had not validated the attention question, they were eliminated, resulting in considering 208 participants for the statistical analysis.

In order to measure the internal consistency of the items of the survey, a test of reliability was performed, measuring Cronbach's Alpha level, proving a value of 0.826. According to Gliem & Gliem (2003), reliability is considered above 0.7 level, therefore, it ensures the consistency of the survey. Additionally, a Keiser-Meyer-Olkin test was performed to verify how the data was fitted for the analysis, presenting a value of 0.862 confirming the suitableness of the data.

Furthermore, to verify the reliability of the scales before merging the items into one variable, a Cronbach's Alpha test was performed. For the buying impulsiveness scale (BIS) (Rook & Fisher, 1995), the test ensured a credibility of 0.889%. For both scales created specifically for this research, which are the impulsiveness verification scale (IVS) and the not being able to stop watching short videos online scale, they verified a credibility of 0.707 and 0.729, respectively.

To acquire a deeper understanding of the sample, descriptive statistics were conducted, to interpret the demographic variables as well as the average time watching SVO and the scales used in this research. To verify the individuals with a higher susceptibility for making impulsive purchases and its characteristics, a K-Means Cluster analysis was performed, where all the values were standardized. Furthermore, to answer the first 3 research questions, a Multiple Linear Regression analysis was computed and to answer the last research question a General Linear Model was produced. Both tests were only computed after verifying the linearity between independents and dependent variable, the independency of observations, the homoscedasticity and distribution of residuals and the multicollinearity level. For this last Model, the age and the household income were divided into Dummy variables (0 = values below the median; 1 = values above the median), having the average time watching SVO variable as a covariate, proceeding to the verification of the interaction between the last and the fixed factors, separately. For all the tests, a confidence interval of 95% was implemented and the null hypotheses were not rejected when the p-value was higher than 0.05.

4. Results

4.1 Descriptive Analysis

4.1.1 Gender

When analyzing the demographic variables in this research, it was possible to verify that from the 208 participants, the majority answers were provided from female individuals (65.9%) being only 34.1% from male respondents, concluding that the survey is not balanced.

4.1.2 Age

In terms of age analysis, the most of respondents had ages between 18 years old and 24 years old (67.8%), followed by participants with ages between 25 years old and 34 years old. This can be explained by the fact that the survey was distributed mainly through my personal network, where the connections are mainly younger individuals. There were 1.4% of participants with ages between 45 years old and 54 years old, 2.9% with ages between 45 years old and 54 years old, 3.8% with ages between 55 years old and 64 years old and only 1.4% had 65 years or were older. This variable has a mean of 2.50 and a standard deviation of 1.159.

4.1.3 Occupation

Regarding occupation, from the 208 participants, 54.8% were students and 38% employed, being only a few participants retired (2.4%) or unemployed (3.8%) and 1% selected the “other” occupation option.

4.1.4 Educational Level

Additionally, for 51.4% of the respondents’ the education level was bachelor’s degree or equivalent, for 30.8% high school or equivalent and for 14.4% master’s degree or equivalent. Only 1% of the participants obtained a doctoral degree and 2.4% had other specialization degrees.

4.1.5 Household Income

By analyzing the household income variable, it was possible to conclude that, for 37.5% of the individuals, it is less than 20,000€ as well as for other 37.5%, between 20,000€ and 39,999€. Also, 13% of the participants had household incomes between 40,000€ and 59,999€, 7.2% had values between 60,000€ and 79,999€, 2.9% between 80,000€ and 99,999€ and only 1% of the respondents had a value between 100,000€ and 119,999€ and other 1% of participants 120,000€ or above.

4.1.6 Nationality

In terms of nationality, most participants are Portuguese (92.8%). The remaining participants were Argentine (1%), Canadian (1%), German (1%), Polish (1%) and American (1%), Austrian (0.5%), Cape Verdean (0.5%), Panamanian (0.5%), Moldovan (0.5%) and Singaporean (0.5%).

4.1.7 Average time watching short videos per day

In terms of the average time that the individuals spent watching short videos per day, 36.1% stated that they spent less than 1 hour, 33.2% between 1 and 2 hours, 17.3% between 2 and 3 hours, 7.7% from 3 to 4 hours and only 5.8% spent over 4 hours watching short videos per day.

4.1.8 Buying Impulsiveness Scale (Rook & Fisher, 1995)

When evaluating the participants' level of IBB, the Rook and Fisher (1995) scale demonstrated that the highest value obtained was 18 by 8.7% of participants followed by 22 including 8.2% of participants. Therefore, it is possible to evaluate that the sample shows a median level of impulsiveness generally.

4.1.9 Uncontrolled Watching of Short Videos Online

In terms of the individuals form of watching short videos online, the highest level of the scale is 17 (12.5%), aggregating a total of 26 participants, followed by 15 (12%) a value answered by 25 participants. Also, it is possible to conclude by the Bar chart, that most values rely after the mean value, which is approximately 15, concluding that the part that there is a high level of uncontrol when watching short videos online.

4.1.10 Impulsiveness Verification Scale

When analyzing the IVS, the majority of answers rely on the value 6 (54.3%), followed by the value 5 (17.8%). Therefore, it is possible to conclude that the participants state mostly that they do not have IBB.

4.2 K-Means Cluster Analysis

By conducting a K-Means Cluster analysis, it was possible to verify that age, household income, educational level, average time watching short videos and the BIS differ significantly across clusters, all with a p-value <0.001.

Cluster 1 (56 cases) represented younger participants with moderated household income, a higher educational level and a lower time spent watching short videos as well as purchasing impulsiveness. Cluster 2 (98 cases) aggregated younger and less educated individuals, with less values of household income, with less time spent watching SVO and low impulsivity. Cluster 3 (35 cases) includes younger individuals with a moderate values of household income and

below average educational level, however, spent more time watching short videos and are impulsive buyers. Finally, Cluster 4 (19 cases) grouped older individuals, with moderate household income and education level, that spent less time watching short videos and are moderately impulsive buyers.

Additionally, Clusters 3 and 4 had the largest difference between all, being Cluster 2 the one that has the highest number of cases, followed by Cluster 1, being Cluster 4 the smallest one. Therefore, Cluster 2 is the most representative of the population, even though some of the values are below the mean, however, not extremely.

4.3 Hypothesis Testing

H1: Watching SVO has a positive impact in IBB.

H0: Watching SVO does not have a positive impact in IBB.

H1: Watching SVO has a positive impact in IBB.

After computing a Multiple Linear Regression analysis, where p-value for the model was <0.01, the p-value for watching SVO was 0.008. Therefore, the null hypothesis is rejected, and it is possible to conclude that watching SVO has a positive impact in IBB.

H2: Individuals that watch SVO without being able to stop, show higher levels of IBB.

H0: Watching SVO without being able to stop affects IBB.

H1: Watching SVO without being able to stop does not affect IBB.

The conduction of the Multiple Linear Regression analysis, where p-value for the model was <0.01, the p-value for watching short videos without being able to stop was 0.771. Therefore, the null hypothesis is not rejected, and it is possible to conclude that watching SVO without being able to stop does not affect IBB.

H3: Products perceived as appealing in SVO have a positive impact in IBB.

H0: Products being perceived as appealing in SVO does not have a positive impact in IBB.

H1: Products being perceived as appealing in SVO has a positive impact in IBB.

After computing a Multiple Linear Regression analysis, where p-value for the model was <0.01, the p-value for the appealing features of products was 0.908. Thus, the null hypothesis is not rejected, concluding that there is not a significant difference in products being perceived as appealing in SVO and IBB.

H4: Products perceived as reliable in SVO have a positive impact in IBB.

H0: Products being perceived as reliable in SVO does not have a positive impact in IBB.

H1: Products being perceived as reliable in SVO has a positive impact in IBB.

After computing a Multiple Linear Regression analysis, where p-value for the model was <0.01, the p-value for both variables in analysis was also <0.01. Therefore, the null hypothesis is rejected, making it possible to state that products being perceived as reliable in SVO has a positive impact in IBB.

H5: Individuals with IBB traits have the perception that watching SVO does enhance this type of behavior.

H0: Individuals with IBB traits do not have the perception that watching SVO does enhance it.

H1: Individuals with IBB traits have the perception that watching SVO does enhance it.

After computing a Multiple Linear Regression analysis, where p-value for the model was <0.01, the p-value for both variables in analysis was also <0.01. Therefore, the null hypothesis is rejected, making it possible to state that individuals with impulsive behavior traits have the perception that watching SVO does enhance this behavior and, as they are more aware of this, they get less impulsive (IVS Beta = -3.011).

H6: Individuals who watch SVO with a higher education level show lower values of IBB, when compared to individuals with a lower educational level.

H0: Education level does not affect the IBB.

H1: Education level does affect IBB.

The performed Multiple Linear Regression analysis where p-value for the model was <0.01, the p-value educational level was 0.616. Therefore, the null hypothesis is not rejected, defining that educational level does not affect the IBB.

H7: Individuals with higher values of household income show inferior values of IBB, when compared to individuals with lower household income.

H0: Household income does not affect IBB.

H1: Household income does affect IBB.

The conduction of a Multiple Linear Regression analysis where p-value for the model was <0.01, the p-value for household income 0.175. Therefore, the null hypothesis is not rejected, hence, household income does not affect IBB.

H8: As the individuals spend more time watching SVO their IBB increases, and it is more noticeable between younger individuals.

H0: Spending more time watching SVO aligned with an increase in IBB is not more noticeable between younger individuals.

H1: Spending more time watching SVO aligned with an increase in IBB is more noticeable between younger individuals.

After the computation of a Univariate General Linear Model Test, it was possible to verify an interaction between age and average time watching short videos, with a p-value <0.001. It was possible to state that this interaction was more significant for younger individuals due to the difference between Beta values for the younger (1.936) and the older (1.773) participants. Therefore, the null hypothesis can be rejected, confirming that spending more time watching short videos, aligned with an increase in IBB is more noticeable between younger individuals.

H9: As the individuals spend more time watching SVO their IBB increases, and it is more noticeable between individuals with higher household income values.

H0: Spending more time watching SVO aligned with an increase in IBB is not more noticeable between individuals with higher household income values.

H1: Spending more time watching SVO aligned with an increase in IBB is more noticeable between individuals with higher household income values.

After the computation of a Univariate General Linear Model Test, it was possible to verify an interaction between household income and average time watching short videos, with a p-value <0.001. Also, it was possible to prove that this interaction was more significant between individuals with a higher value of household income due to the difference between Beta values for the higher household values (2.563) and the lower household values (1.874). Therefore, the null hypothesis can be rejected, concluding that spending more time watching SVO aligned with an increase in IBB is more noticeable between individuals with higher household income values.

5. Discussion

The Multiple Linear Regression, where the BIS was the dependent variable, was chosen to test the first and the second sets of hypotheses, in which H1, H4 and H5 were accepted. The acceptance of the first hypothesis, implies that there's a positive relationship between watching SVO and IBB, which is aligned with previous studies. Zhao (2023) considered that the short videos engagement was essential to motivate the purchasing intention, since it reduces the psychological gap between the brand and the advertising strategy, which would lead to a higher purchase intention. The acceptance of H4 also lines up with previous studies where the perception of a product being reliable or recommended by a reliable figure (De Veirman et al., 2017; Gunawan & Iskandar, 2020), was considered to enhance its credibility and cause a positive impact in the consumer's mind, while also reinforcing a relationship of trust between the brand and the purchaser (Zhao, 2023). Additionally, the approval of H5 rejects that individuals may be experiencing an illusion of comprehending the shopping situation (Rozenblit & Keil, 2002) since, while they demonstrate impulsive buying characteristics, they believe that watching SVO is influencing a rise in this behavior, leading them to make less impulsive purchases, having a greater will power to deny immediate gratification (Hoch & Loewenstein, 1991).

However, the rejection of H2 and H3 contradicts previous studies. The visioning of SVO without being able to stop would, according to Jeffrey and Hodge (2007), lead to a higher number of impulsive purchases, since spending more time on a website means a higher probability of making impulsive buying decisions. Additionally, this behavior is related to self-control and when they are watching SVO in an uncontrolled manner, IBB would be more likely to happen (Vohs & Faber, 2007). Although, it could also result in a decrease in concentration capacity when watching these videos (Chen et al., 2023). Therefore, the individuals could spend more time visioning this content but not be aware and able to recall what they watched, which would have no impact in their purchasing decisions. Additionally, perceiving a product as appealing was expected to have an impact in IBB since it would lead to an increase in marketing impact, while creating a stronger bond between brand and consumer (Xiao et al., 2019). It is interesting that individuals are more likely to buy a product impulsively if they find it reliable, however finding it appealing is not as compelling.

When analyzing the second set of hypotheses and maintaining the BIS as the dependent variable in the same Multiple Linear Regression analysis, where the demographic variables were tested, both H6 and H7 were not accepted. Firstly, H6 compared the impact of education levels and the

dependent variable, and it does not corroborate Wood's (1998) conclusions, where it mentioned that less educated individuals make more impulsive purchases, when compared to more educated individuals. Furthermore, H7 compared effect of household income values in IBB, where the results are not in line with previous findings, where, according to Jeffrey & Hodge (2007), there is a difference in where individuals with superior values of household income, are less probable to be impulsive buyers.

In terms of the third set of hypotheses, both H8 and H9 were accepted. To conduct the statistically analysis, 2 General Linear Models were performed, where the IBS was the dependent variable and the Average Time Watching short videos the covariate for both analyses, having for H8 age a fixed factor, and for H9 household income as a fixed factor. When testing the interaction between age and the covariate in H8, in the model the significance level made it possible to accept the hypothesis, which corroborates anterior findings from Wood (1998), that older individuals make less impulsive purchases, when compared to younger individuals, as well as the information from H1, previously mentioned, since the hypothesis also implies a correlation from both variables present in the first hypothesis. Furthermore, when testing the interaction between household income values and the covariate in the model, H9 was accepted being aligned with the information mentioned in H1, however, not corroborating the findings from Jeffrey & Hodge, (2007), which state that a rise in household income values was negatively correlated with impulsive purchases.

Additionally, the K-Means Cluster analysis made a verification possible that, even though Cluster 2 is the most representative of the population in this research, the individuals that present higher levels of impulsiveness are younger and less educated individuals, with median values of household income, but spend a higher amount of time watching SVO (Cluster 3).

It is curious that an uncontrolled watching of SVO does not lead to an IBB. This would not be expected since they do not demonstrate a capacity of self-control, that is related to will power, which is responsible for denying immediate gratification linked with IBB (Jeffrey & Hodge, 2007; Rook & Fisher, 1995).

Furthermore, in both General Linear Models computed, there was a significant correlation (p-value <0.001) for younger and older individuals, as well as individuals who had a higher and a lower value of household income. What differentiated them, was the Beta values for each group, concluding that the interaction was higher for the group with a higher Beta value. However, this

analysis is interesting since a continuous visioning of SVO will impact impulsive behavior, anyhow.

5.1 Limitations and Future Research

The IBB is a broad studied topic, however there is lack of literature that relates it with watching short videos online, since the visioning of the last it is a recent phenomenon, created a difficulty in ensuring the sufficient amount of literature review to sustain the hypothesis.

When it comes to the distribution of the survey, some limitations can be mentioned. The fact that it was distributed via personal social networks and direct messaging, lead to most of the sample being Portuguese citizens, when it was not directed specifically for that population. The same reasoning goes for the participant's age, which is mostly between 18 and 24 years old. Additionally, the sample was not balanced, since most individuals were female, and to guarantee a higher level of accuracy, the sample should be larger; however, the time limit did not permit to gather more answers.

The questions of the questionnaire were elaborated by me, with the exception of the BIS, thus, if there was already a valid set of questions that measured the habits and behavior of the individuals while watching SVO it would have been more favorable. Furthermore, it is important to take into account that the survey asked questions that could lead the participants into some sort of embarrassment, such as the time spent watching SVO and their impulsive behavior characteristics. These could be topics in which the individuals would want to give more socially desirable responses than to be truthful, in order to prevent being judged (Tourangeau & Yan, 2007; Van de Mortel, 2008). Therefore, considering further research on the topic, it would be beneficial if these variables were measured with a higher level of accuracy.

Additionally, the Rook and Fisher (1995) scale guaranteed a high reliability level, however, the 3 scales created for this study obtained valid values, but closer to the minimum acceptable value (0.7). Therefore, it is possible to conclude that for the scales to ensure excellent levels of reliability, more questions should have been added to the survey. The low explained variance of the Multi Linear Regression model is also relevant since, with the purpose of increasing the explanation of the dependent variable, more relevant predictors should be added to the model.

When evaluating through descriptive statistics the level of impulsiveness of the participants, it was possible to conclude that the sample did not demonstrate a high level of IBB. Thus, for

future research it might be more beneficial to evaluate individuals who show higher of this behavior.

Finally, in future research it would be beneficial to study if there is a differentiation between the different social media networks that have the feature of short videos being displayed, and IBB.

6. Conclusions

With the continuous adoption of short video content online by social networks and its creators, it is certain that brands will continue to invest in this developing industry, what will result in a continued rise in the IBB both offline and online.

While this investment is made, algorithms are also more developed to direct specific messages to each user leading them to be exposed to more content of their interest than before (Narayanan, 2023). Thus, it is an advantage to develop more specific marketing strategies to the target group and enhance brand sales (Zhao, 2023). Furthermore, it is important that the messages are directed to younger individuals as well as the ones with higher values of household income since it was possible to verify that those are the ones that show traits of being more impulsive buyers, when watching SVO for a longer period of time.

Even though there is a clear correlation between SVO and IBB, it is essential that consumers perception the products displayed in the videos as reliable to generate a higher number of sales, however finding them appealing is not as crucial. Moreover, combining reliable traits of the product while ensuring an interactive experience for the user will develop more acceptance from the consumer and result in a higher marketing impact (Xiao et al., 2019).

Additionally, it is important to notice that individuals are aware of their shopping habits, that watching SVO is causing a higher IBB, which results in them having a greater will power (Hoch & Loewenstein, 1991) and making less impulsive purchases.

Finally, it is essential that research on this subject continues to be developed since SVO are a continuously increasing tendency, being necessary to understand what other type of implications this phenomenon might have on those who watch them.

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Appendixes

Appendix 1: Survey

Marta Santos

Start of Block: Default Question Block

Q40 Dear participant,
Thank you for taking your time in answering this survey.

I, Marta Santos, am conducting this research as part of my Master Thesis at Católica Lisbon School of Business and Economics, under the supervision of Professor Daniel Fernandes.

This survey consists of answering questions about your use of social media and your buying behaviour with the purpose of researching if the viewing of short videos online is related to impulsive buying behaviour.

Please answer the questions as honestly as possible, keeping in mind that there are no right or wrong answers. This survey will take you approximately 5 minutes to complete. All answers are confidential and anonymous. I kindly ask you to take the survey without interruptions and if you change your mind, you can drop out at any moment by closing the web page. This survey is directed to individuals of 18 years old or older, that are fluent in English and use social media networks. If this criteria does not apply to you please do not proceed with the survey.

If you have any comments or questions about the study, please contact Marta Santos (s-msssantos@ucp.pt). By continuing, you agree to participate.

Thank you!

Page Break

Q1 Do you use social media?

- ○ Yes (1)
- ○ No (2)

Skip To: End of Survey If Do you use social media? = No

Q2 How often did you use social media in the past week (7 days)?

- ○ Never (1)
- ○ 1-2 times per week (2)
- ○ 3-4 times per week (3)
- ○ 5-6 times per week (4)
- ○ Once daily (5)
- ○ 2-5 times daily (6)
- ○ 6-9 times daily (7)
- ○ 10-13 times daily (8)

Q3 Which social media app do you use the most?

- ○ Facebook (1)
- ○ Instagram (2)
- ○ Tiktok (3)
- ○ Twitter (4)
- ○ YouTube (5)
- ○ Other, please specify: (6)

Q4 Average time watching short videos per day:

- ○ <1 hour (1)
- ○ 1-2 hours (2)
- ○ 2-3 hours (3)
- ○ 3-4 hours (4)
- ○ >4 hours (5)

Page Break

Q5 Please indicate your level of agreement with the following statements:

Q7 I enjoy watching short videos more than long videos online.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Agree (4)
- ○ Strongly agree (5)

Q8 I think short videos online are more entertaining than long videos online.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Agree (4)
- ○ Strongly agree (5)

Q9 I find myself watching short videos and losing the sense of time passing by.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Agree (4)
- ○ Strongly agree (5)

Q10 I think short videos are more addictive than long videos online.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Agree (4)
- ○ Strongly agree (5)

Q11 Short videos make me act more impulsively.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Agree (4)
- ○ Strongly agree (5)

Q14 It's hard for me to decide to close the app while watching short videos online.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Agree (4)
- ○ Strongly agree (5)

Q15 My use of social media affects my social relationships with others.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Agree (4)
- ○ Strongly agree (5)

Q17 Products that appear in short videos online are appealing.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Agree (4)
- ○ Strongly agree (5)

Q13 This is an attention question. Please answer “Agree”.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Agree (4)
- ○ Strongly agree (5)

Q18 Products that appear in short videos online are reliable.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Agree (4)
- ○ Strongly agree (5)

Page Break

Q19 Please answer the following statements expressing your level of agreement regarding your shopping habits:

Q20 I often buy things spontaneously.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Agree (4)
- ○ Strongly agree (5)

Q22 “Just do it” describes the way I buy things.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Agree (4)
- ○ Strongly agree (5)

Q23 I often buy things without thinking.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Agree (4)
- ○ Strongly agree (5)

Q24 “I see it. I buy it” defines me.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Agree (4)
- ○ Strongly agree (5)

Q25 “Buy now. think about it later” describes me.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Agree (4)
- ○ Strongly agree (5)

Q26 Sometimes I feel like buying things on the spur-of the moment.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Agree (4)
- ○ Strongly agree (5)

Q41 I buy things according to how I feel at the moment.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Agree (4)
- ○ Strongly agree (5)

Q27 I carefully plan most of my purchases.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Agree (4)
- ○ Strongly agree (5)

Q28 Sometimes I am a bit reckless about what I buy.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Agree (4)
- ○ Strongly agree (5)

Page Break

Q29 Please answer the following questions with yes or no:

Q42 Did you ever purchase products immediately after viewing them on a short video online?

- ○ Yes (1)
- ○ No (2)

Q30 Did watching short videos online enhance the frequency of your purchases?

- ○ Yes (1)
- ○ No (2)

Q31 Did you purchased something you hadn't planned on because you saw it in a short video online?

- ○ Yes (1)
- ○ No (2)

Page Break

Q32 What is your gender?

- ○ Male (1)
- ○ Female (2)
- ○ Non-binary (3)
- ○ Prefer not to say (4)

Q33 How old are you?

- ○ <18 years old (1)
- ○ 18-24 years old (2)
- ○ 25-34 years old (3)
- ○ 35-44 years old (4)
- ○ 45-54 years old (5)
- ○ 55-64 years old (6)
- ○ 65 years old or older (7)

Q36 What is your occupation:

- ○ Unemployed (1)
- ○ Employed (2)
- ○ Retired (3)
- ○ Student (4)
- ○ Other (5)

Q37 What is your education level?

- ○ High School or equivalent (1)
- ○ Bachelor's degree or equivalent (2)
- ○ Master's degree or equivalent (3)
- ○ Doctoral degree (4)
- ○ Other (5)

Q38 What is your household income on average per year?

- ○ Less than 20.000€ (1)
- ○ 20.000€ - 39.999€ (2)
- ○ 40.000€ - 59.999€ (3)
- ○ 60.000€ - 79.999€ (4)
- ○ 80.000€ - 99.999€ (5)
- ○ 100.000€ - 119.999€ (6)
- ○ 120.000€ or more (7)

End of Block: Default Question Block

Start of Block: Country

Q1 What is your country of birth?

▼ Afghanistan (1) ... Zimbabwe (1357)

Appendix 2: Sample Demographics

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	71	34,1	34,1	34,1
	Female	137	65,9	65,9	100,0
	Total	208	100,0	100,0	

Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unemployed	8	3,8	3,8	3,8
	Employed	79	38,0	38,0	41,8
	Retired	5	2,4	2,4	44,2
	Student	114	54,8	54,8	99,0
	Other	2	1,0	1,0	100,0
	Total	208	100,0	100,0	

Education Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High School or equivalent	64	30,8	30,8	30,8
	Bachelor's degree or equivalent	107	51,4	51,4	82,2
	Master's degree or equivalent	30	14,4	14,4	96,6
	Doctoral degree	2	1,0	1,0	97,6
	Other	5	2,4	2,4	100,0
	Total	208	100,0	100,0	

Household Income per year

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 20.000€	78	37,5	37,5	37,5
	20.000€ - 39.999€	78	37,5	37,5	75,0
	40.000€ - 59.999€	27	13,0	13,0	88,0
	60.000€ - 79.999€	15	7,2	7,2	95,2
	80.000€ - 99.999€	6	2,9	2,9	98,1
	100.000€ - 119.999€	2	1,0	1,0	99,0
	120.000€ or more	2	1,0	1,0	100,0
	Total	208	100,0	100,0	

Nationality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Argentina	2	1,0	1,0	1,0
	Austria	1	,5	,5	1,4
	Canada	2	1,0	1,0	2,4
	Cape Verde	1	,5	,5	2,9
	Germany	2	1,0	1,0	3,8
	Panama	1	,5	,5	4,3
	Poland	2	1,0	1,0	5,3
	Portugal	193	92,8	92,8	98,1
	Republic of Moldova	1	,5	,5	98,6
	Singapore	1	,5	,5	99,0
	United States of America	2	1,0	1,0	100,0
	Total	208	100,0	100,0	

Age

	N	Minimum	Maximum	Mean	Std. Deviation
Age	208	1	7	2,50	1,159
Valid N (listwise)	208				

Average time watching short videos per day

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<1 hour	75	36,1	36,1	36,1
	1-2 hours	69	33,2	33,2	69,2
	2-3 hours	36	17,3	17,3	86,5
	3-4 hours	16	7,7	7,7	94,2
	>4 hours	12	5,8	5,8	100,0
	Total	208	100,0	100,0	

Buying Impulsiveness Scale

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	9	3	1,4	1,4	1,4
	10	4	1,9	1,9	3,4
	11	7	3,4	3,4	6,7
	12	6	2,9	2,9	9,6
	13	7	3,4	3,4	13,0
	14	9	4,3	4,3	17,3
	15	4	1,9	1,9	19,2
	16	10	4,8	4,8	24,0
	17	10	4,8	4,8	28,8
	18	18	8,7	8,7	37,5
	19	14	6,7	6,7	44,2
	20	14	6,7	6,7	51,0
	21	11	5,3	5,3	56,3
	22	17	8,2	8,2	64,4
	23	7	3,4	3,4	67,8
	24	13	6,3	6,3	74,0
	25	5	2,4	2,4	76,4
	26	7	3,4	3,4	79,8
	27	4	1,9	1,9	81,7
	28	2	1,0	1,0	82,7
	29	12	5,8	5,8	88,5
	30	5	2,4	2,4	90,9
	31	2	1,0	1,0	91,8
	33	6	2,9	2,9	94,7
	34	1	,5	,5	95,2
	36	2	1,0	1,0	96,2
	37	1	,5	,5	96,6
	38	2	1,0	1,0	97,6
	41	5	2,4	2,4	100,0
	Total	208	100,0	100,0	

Not being able to stop watching SVO scale

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	1	,5	,5	,5
	7	2	1,0	1,0	1,4
	8	4	1,9	1,9	3,4
	9	6	2,9	2,9	6,3
	10	10	4,8	4,8	11,1
	11	7	3,4	3,4	14,4
	12	15	7,2	7,2	21,6
	13	21	10,1	10,1	31,7
	14	23	11,1	11,1	42,8
	15	25	12,0	12,0	54,8
	16	23	11,1	11,1	65,9
	17	26	12,5	12,5	78,4
	18	18	8,7	8,7	87,0
	19	14	6,7	6,7	93,8
	20	13	6,3	6,3	100,0
	Total	208	100,0	100,0	

Impulsiveness verification scale

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	21	10,1	10,1	10,1
	4	36	17,3	17,4	27,5
	5	37	17,8	17,9	45,4
	6	113	54,3	54,6	100,0
	Total	207	99,5	100,0	
Missing	System	1	,5		
Total		208	100,0		

Appendix 3: Reliability Statistics

Appendix 3.1: Internal Consistency of the Items

Reliability Statistics

Cronbach's Alpha	N of Items
,826	24

Appendix 3.2: Keiser-Meyer-Olkin and Bartlett's Test of Sphericity

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,862
Bartlett's Test of Sphericity	Approx. Chi-Square	2081,696
	df	276
	Sig.	<,001

Appendix 3.3: Cronbach's Alpha BIS (Rook & Fisher, 1995)

Reliability Statistics

Cronbach's Alpha	N of Items
,889	9

Appendix 3.4: Cronbach´s Alpha Not being Able to Stop Scale

Reliability Statistics

Cronbach's Alpha	N of Items
,729	4

Appendix 3.5: Cronbach´s Alpha IVS

Reliability Statistics

Cronbach's Alpha	N of Items
,707	3

Appendix 4: K-Means Cluster

Initial Cluster Centers

	Cluster			
	1	2	3	4
Age	-1,29436	-,43145	-,43145	3,88307
Education Level	3,65905	-1,10516	-1,10516	1,27694
Household Income per year	,77086	-,89069	4,09397	2,43241
Average time watching short videos per day	-,98153	2,46417	2,46417	-,98153
Buying Impulsiveness Scale	,10456	-,46777	2,39390	-,46777

Iteration History[a]

Iteration	Change in Cluster Centers			
	1	2	3	4
1	2,715	2,502	2,220	2,559
2	,303	,115	,911	,434
3	,166	,151	,710	,257
4	,107	,116	,451	,000
5	,083	,097	,354	,000
6	,051	,032	,141	,000
7	,000	,017	,047	,000
8	,000	,000	,000	,000

[a.] Convergence achieved due to no or small change in cluster centers. The maximum absolute coordinate change for any center is ,000. The current iteration is 8. The minimum distance between initial centers is 5,748.

Final Cluster Centers

	Cluster			
	1	2	3	4
Age	-,10786	-,34340	-,33283	2,70225
Education Level	,80903	-,41240	-,22038	,14858
Household Income per year	,59284	-,51769	,24866	,46479
Average time watching short videos per day	-,58158	,08207	1,15973	-,84551
Buying Impulsiveness Scale	-,30169	-,33491	1,43319	-,02346

Distances between Final Cluster Centers

Cluster	1	2	3	4
1		1,795	2,696	2,915
2	1,795		2,216	3,393
3	2,696	2,216		3,942
4	2,915	3,393	3,942	

ANOVA

	Cluster		Error			
	Mean Square	df	Mean Square	df	F	Sig.
Age	51,609	3	,256	204	201,793	<,001
Education Level	18,480	3	,743	204	24,874	<,001
Household Income per year	17,405	3	,759	204	22,939	<,001
Average time watching short videos per day	26,753	3	,621	204	43,060	<,001
Buying Impulsiveness Scale	29,330	3	,583	204	50,277	<,001

The F tests should be used only for descriptive purposes because the clusters have been chosen to maximize the differences among cases in different clusters. The observed significance levels are not corrected for this and thus cannot be interpreted as tests of the hypothesis that the cluster means are equal.

Number of Cases in each

Cluster

Cluster	1	56,000
	2	98,000
	3	35,000
	4	19,000
Valid		208,000
Missing		,000

Appendix 5: Multiple Linear Regression

Model Summary[b]

					Change Statistics					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	,632[a]	,400	,378	5,523	,400	18,921	7	199	<,001	1,993

[a.] Predictors: (Constant), Education Level, Not being able to stop watching of short videos online scale, Household Income per year, Reliable trait of products displayed in short videos online, Impulsiveness verification scale , Average time watching short videos per day, Appealing trait of products displayed in short videos online

[b.] Dependent Variable: Buying Impulsiveness Scale (Rook & Fisher, 1995)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4039,718	7	577,103	18,921	<,001[b]
	Residual	6069,586	199	30,500		
	Total	10109,304	206			

[a.] Dependent Variable: Buying Impulsiveness Scale (Rook & Fisher, 1995)

[b.] Predictors: (Constant), Education Level, Not being able to stop watching of short videos online scale, Household Income per year, Reliable trait of products displayed in short videos online, Impulsiveness verification scale , Average time watching short videos per day, Appealing trait of products displayed in short videos online

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	27,835	4,009		6,943	<,001		
	Household Income per year	,446	,328	,077	1,361	,175	,951	1,052
	Average time watching short videos per day	,978	,368	,162	2,658	,008	,809	1,236
	Not being able to stop watching of short videos online scale	,040	,136	,018	,292	,771	,808	1,238
	Impulsiveness verification scale	-3,011	,417	-,451	-7,213	<,001	,771	1,298
	Reliable trait of products displayed in short videos online	1,721	,472	,219	3,648	<,001	,835	1,198
	Appealing trait of products displayed in short videos online	,006	,430	,001	,013	,990	,748	1,337
	Education Level	,232	,462	,028	,503	,616	,978	1,022

[a] Dependent Variable: Buying Impulsiveness Scale (Rook & Fisher, 1995)

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	13,87	34,58	21,28	4,428	207
Residual	-11,625	18,243	,000	5,428	207
Std. Predicted Value	-1,672	3,005	,000	1,000	207
Std. Residual	-2,105	3,303	,000	,983	207

[a] Dependent Variable: Buying Impulsiveness Scale (Rook & Fisher, 1995)

Appendix 6: General Linear Models

Appendix 6.1: General Linear Model interaction between age and average time watching short videos online

Descriptive Statistics

Dependent Variable: Buying Impulsiveness Scale

Age_Group	Mean	Std. Deviation	N
,00	21,42	7,392	141
1,00	20,96	6,094	67
Total	21,27	6,989	208

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Buying Impulsiveness Scale

F	df1	df2	Sig.
,314	1	206	,576

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Age_Group * Time_Watching_Short_Videos

F Test for Heteroskedasticity[a,b,c]

F	df1	df2	Sig.
12,384	1	206	<,001

a. Dependent variable: Buying Impulsiveness Scale

b. Tests the null hypothesis that the variance of the errors does not depend on the values of the independent variables.

c. Predicted values from design: Intercept + Age_Group * Time_Watching_Short_Videos

Tests of Between-Subjects Effects

Dependent Variable: Buying Impulsiveness Scale

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1054,415[a]	2	527,208	11,934	<,001	,104
Intercept	12783,364	1	12783,364	289,360	<,001	,585
Age_Group * Time_Watching_Short_Videos	1054,415	2	527,208	11,934	<,001	,104
Error	9056,508	205	44,178			
Total	104206,000	208				
Corrected Total	10110,923	207				

a. R Squared = ,104 (Adjusted R Squared = ,096)

Parameter Estimates

Dependent Variable: Buying Impulsiveness Scale

Parameter	B	Std. Error	t	Sig.	95% Confidence Interval		Partial Eta Squared
					Lower Bound	Upper Bound	
Intercept	17,212	1,012	17,011	<,001	15,217	19,207	,585
[Age_Group=,00] * Time_Watching_Short_Videos	1,936	,398	4,862	<,001	1,151	2,721	,103
[Age_Group=1,00] * Time_Watching_Short_Videos	1,773	,660	2,687	,008	,472	3,073	,034

Appendix 6.2: General Linear Model interaction between household income and average time watching SVO

Descriptive Statistics

Dependent Variable: Buying Impulsiveness Scale

Household_Income_Group	Mean	Std. Deviation	N
,00	21,08	6,953	156
1,00	21,85	7,133	52
Total	21,27	6,989	208

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Buying Impulsiveness Scale

F	df1	df2	Sig.
,012	1	206	,912

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Household_Income_Group * Time_Watching_Short_Videos

F Test for Heteroskedasticity[a,b,c]

F	df1	df2	Sig.
13,025	1	206	<,001

a. Dependent variable: Buying Impulsiveness Scale

b. Tests the null hypothesis that the variance of the errors does not depend on the values of the independent variables.

c. Predicted values from design: Intercept + Household_Income_Group * Time_Watching_Short_Videos

Tests of Between-Subjects Effects

Dependent Variable: Buying Impulsiveness Scale

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1137,769[a]	2	568,885	12,997	<,001	,113
Intercept	13303,708	1	13303,708	303,936	<,001	,597
Household_Income_Group * Time_Watching_Short_Videos	1137,769	2	568,885	12,997	<,001	,113
Error	8973,154	205	43,771			
Total	104206,000	208				
Corrected Total	10110,923	207				

a. R Squared = ,113 (Adjusted R Squared = ,104)

Parameter Estimates

Dependent Variable: Buying Impulsiveness Scale

Parameter	B	Std. Error	t	Sig.	95% Confidence Interval		Partial Eta Squared
					Lower Bound	Upper Bound	
Intercept	16,941	,972	17,434	<,001	15,025	18,857	,597
[Household_Income_Group=,00] * Time_Watching_Short_Videos	1,874	,399	4,700	<,001	1,088	2,661	,097
[Household_Income_Group=1,00] * Time_Watching_Short_Videos	2,563	,592	4,330	<,001	1,396	3,730	,084