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Master Thesis

Advertising on Freemium Platforms: Between Opportunity and Intrusiveness

An Empirical Study Exploring the Impact of Disruptive Advertising on Consumer Behavior

Deposed by

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ABSTRACT

Companies operate in a complex and constantly evolving environment. Intensifying competition amplifies strategic challenges, making the ability to satisfy customers essential to avoid losing market share and to ensure long-term, sustainable growth. In this competitive landscape, technological innovation provides increasingly advanced tools for communicating and maintaining ongoing relationships with consumers. Among the most significant trends is the widespread use of freemium platforms, which has opened up new opportunities in e-advertising, enabling brands to promote their offerings to a broad audience. This study aims to analyze the effectiveness of advertising conveyed through freemium platforms, with a particular focus on their impact on users' emotions and purchase intention. While such platforms offer broad visibility, they often incorporate promotional content in a disruptive way, targeting users who benefit from the "free" offer of the platform in an attempt to increase conversion rates to the premium subscription. Within this dynamic, it becomes relevant to assess the true effectiveness of this advertising channel.

The findings of this study demonstrate that video advertisement interrupting the viewing of other content elicits negative emotions, which in turn have a detrimental effect on consumers' purchase intention toward the brand featured in the ad. Two moderating variables are also taken into consideration. First, the segment (free vs. premium) to which the participants belong does not moderate the relationship between the disruptive factor and emotions. Second, brand perception moderates the impact of negative emotions on purchase intention, indeed individuals with a positive brand perception had a more negative effect on purchase intention.

Based on these results, it is possible to formulate recommendations for managers, who are required to make decisions that can significantly impact company performance. The main suggestion is to avoid using this type of promotional tool, as its disruptive nature places it within an outdated approach to communicating with customers, which may lead to long-term negative effects on brand performance. Instead, companies should focus on finding ways to engage consumers in a non-intrusive and more effective manner, fostering a more positive and lasting relationship with their audience.

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I INTRODUCTION

Digitization has been identified as a major trend shaping the current environment in which economic actors operate, leading to significant changes in both society and businesses. This phenomenon concerns the integration of digital technologies into organizational and operational activities, creating a new landscape of threats and opportunities to which companies must continuously adapt (Parviainen et al., 2017). In this evolving context, digital platforms have become prevalent in multiple areas of daily life (Hasselwander, 2024), such as transportation and hospitality (Asadullah et al. 2018).

One of the key elements of a platform's success is its ability to reach a critical mass to benefit from the network effect (Hasselwander, 2024). This means that, the more people start using it, the more the value for each user raises, each additional subscriber contributing to enhance the overall experience. This mechanism creates a ripple effect, as the growing number of users makes the platform increasingly attractive to others (Hasselwander, 2024). For instance, the higher the demand on Uber platform, the greater the supply will be. Drivers will have an incentive to enter the system because there is a high probability of working due to high demand. Vice versa, by increasing supply, more people will be incentivized to join the platform, as the chances of finding an available nearby driver for the requested route increase (Tucker, 2018).

The importance of network effect for digital platform influences companies' strategies, as they are encouraged to adopt business models that promote the creation of the chain reaction (Tucker, 2018). This is one of the key factors that has contributed to the rise of platforms adopting the "freemium" framework over the past few decades; where the underlying mechanism is to attract a large number of users with a free offer, then, in a second step, attempts to convert them to the paid version of the platform (Wagner et al., 2014). To increase the conversion rate, limitations in terms of use or quality are introduced into the free version, to disrupt or not fully satisfy consumers in this segment. One important usage limitation is the inclusion of promotions by third-party companies on the free version of the platform (Wagner et al., 2013).

Therefore, one of the distinctive features of this model is how the company captures value, because part of the platform's revenue is generated by users who pay for access to the company's premium offers, while another part of the revenue is generated by third parties

who pay to place their promotional content (Wagner et al., 2013). While these advertisements serve as a significant and direct source of revenue stream, they can also have an indirect effect on income, by frustrating users who rely on the free version. Thereby encouraging non-paying segments to switch to the premium version, which is ad-free and thus offers a smoother user experience (Wagner et al., 2013). In addition to generating revenue, this mechanism fosters continuous growth through the network effect by attracting a large user base with a free offer (Wagner et al., 2013).

While the role of advertising from the perspective of freemium platforms has been explained, it is also essential to consider the other side of the equation, that of the advertising companies. Indeed, companies are increasingly investing to create digital promotional content and to make it accessible to the public. As evidence of this, recent reports indicate a growing trend in the budget allocated to digital marketing, reaching approximately 740.3 billion dollars in 2024 (Appendix 1) (Statista Market Insights, 2024a), with almost 120 billion dollars allocated to promotional video content worldwide (Appendix 2) (Statista Market Insights, 2024b), often used in freemium platforms. As shown, there is a shift from traditional advertising methods to digital-centric ones, which are more efficient in achieving strategic objectives (Aslam & Karjaluoto, 2017). Such efficiency is largely explained by the emergence of new opportunities in communication technologies and information usage, which have allowed companies to stand out in a competitive environment by establishing a two-way relationship with consumers and striving to better meet their needs (Durmaz & Efendioglu, 2016). Marketing investments, both in terms of money and effort, must be carefully planned in order to ensure a return on investment and the long-term sustainability of the company (Furrer, 2022). This suggests that when a company chooses a communication strategy, such as placing ads on freemium platforms, it should aim to achieve clear objectives. The marketing goals can be related to sales, brand recall and positioning, or attracting new customers (Mittal & Kumar, 2022).

This study is situated at the intersection of freemium platform usage for distributing promotional content, often perceived as intrusive, and the growing investment by companies in this form of digital advertising. It aims to analyze and better understand how such promotions affect users on freemium platforms, with particular focus on their emotional responses and purchase intentions. The goal is to evaluate whether this content sharing channel is truly effective for advertising companies. The relevance, therefore, lies in determining whether the significant investments made by companies in digital advertising

content truly led to a positive return in terms of sales, or whether the inclusion of such content within a disruptive mechanism had a negative impact on brands.

The research question that this Master's thesis will attempt to answer is:

How do video ads on freemium platforms influence users' emotions and purchasing behavior toward the brand, and what roles do brand perception and customer segment play in this relationship?

The practical contribution is to determine whether it is really in the interest of the companies to invest more and more money in digital advertising and, specifically, in promotions integrated into this mechanism of the freemium platforms. Indeed, as seen before, while on the one hand these platforms are becoming more widespread and widely used, offering promotions a broad potential for visibility; on the other hand, they can be part of a disruption strategy, created by the freemium platform, to encourage users to upgrade towards the paid version. This could generate a negative perception of the advertiser as it becomes an upsetting factor. The second objective, link to the first one, is to present useful conclusions to marketers and managers, so they can consciously choose how to allocate budgets in digital marketing's context. The relevance of this second objective concerns the high cost associated with the implementation of marketing strategies, it is important to make predictions about the chances of success and returns on investment (Furrer, 2022), in order to understand how to implement an effective communications strategy.

To achieve these objectives and answer the research question, the first step will be to carry out a literature review to determine what is already known about this topic and what are the current gaps, not yet analyzed by existing studies. The analysis of research conducted to date on this field will allow to formulate hypotheses to be tested in the empirical part of the work. Indeed, a questionnaire has then been developed to collect data, that were analyzed using SPSS software, in order to answer the research question. In this way, it was possible to present conclusions with practical implications for businesses and, more specifically, to understand whether companies can truly benefit from using freemium platforms as a channel to distribute their advertising content, or whether it is more effective to turn to alternative promotional tools.

II LITERATURE REVIEW

The following section will explore the academic literature on digital advertising and freemium platforms. This involves reviewing sources that have already addressed relevant questions for this Master's thesis, allowing for a deep understanding of existing studies, perspectives, and research gaps. By comparing different authors and their work, it is possible to identify areas that remain unexplored and to formulate hypotheses to be tested in the empirical part of the study.

2.1 The Freemium Business Model

Massa et al. (2017) synthesize various definitions of a business model, labeling it as the overall structure of an organization. This includes different elements, such as the assessment of key activities, who performs them, how they are carried out, and the necessary resources; all aimed at creating, capturing, and delivering value (Massa et al., 2017). In today's numerical context, one of the increasingly widespread business models, especially in the field of digital products, is the freemium framework (Lee et al., 2019). The concept of "freemium" results from the combination of two terms: "free" and "premium." Indeed, it refers to a hybrid model in which the company offers a basic free offer ("free") that can be enhanced with the payment of a subscription ("premium") (Wagner et al., 2014). The basic idea is to reach a broad customer base with the free offer and then convert them to the paid version (Lee et al., 2019). The adoption of this framework has been exponential in recent years, and concern several fields, such as social networks, video games or music apps, we can mention Spotify, Yahoo or Dropbox as well-known examples (Wagner et al., 2014). Its presence is particularly strong among start-ups, with approximately 80% of highly profitable iOS applications adopting this business strategy (Lee et al., 2019).

2.1.1 How the Freemium Model Works

One of the main underlying mechanisms that makes this type of model so successful nowadays is that it leverages the free offering to attract a large customer base, enabling the company to exploit the network effect by reaching a critical mass (Wagner et al., 2014). This means that there is a positive correlation between the value of the offer and the user-base of the platform. In other words, the network effect is produced when the larger the customer base, the more everyone benefits from the product (Gallaugher & Wang, 2002). Another key

factor in the spread of this model in the digital era is the cost structure of digital products. Unlike physical goods, digital ones have almost zero marginal costs. Indeed, while producing an additional unit of a physical product requires expenses such as materials, labor, and storage, digital products can be replicated at almost no cost. These extremely low marginal costs make the freemium model highly profitable, as it allows companies to reach a large audience quickly and cost-effectively. This, in turn, enables a revenue model where not all consumers directly contribute to generating profits (Seufert, 2014). Beyond these more technical aspects, the effectiveness of this value creation strategy also depends on a deep understanding of consumer expectations. Today, users increasingly expect free access to digital services and are therefore less willing to pay for these intangible offers (Wagner et al., 2013).

Despite these factors that support this type of structure for creating, capturing, and delivering value, not all companies that adopt the hybrid model succeed. It is essential to follow specific guidelines to avoid failure. According to Kumar (2014), when a company decides to implement the freemium model, it must pay attention to several key elements. First, it is crucial to determine what to offer for free and what to charge for. In fact, the free offering must be attractive enough to draw a large customer base while also encouraging users to upgrade to the paid version. A second point raised by Kumar (2014) concerns the importance of clear communication regarding the benefits of the paid version. If the added value of paying for access to the premium version is not clear, companies risk losing potential customers who could be willing to convert. Another important aspect is the conversion rate. Here too, balance is critical: on the one hand, companies need to focus on increasing the conversion rate to grow their paying customer base, which represents a direct source of revenue. On the other hand, if the conversion rate is too high, it could indicate that the free offer is not attractive enough, which could be problematic in terms of generating traffic to the platform and reaching the critical mass (Kumar, 2014).

2.1.2 Successful Companies Using the Freemium Model

In today's economic landscape, several highly successful platforms operate on this hybrid model; thus, putting into practice the previously outlined requirements and benefiting from the advantages resulting from this strategic and operational approach.

In this regard, YouTube is one of the most famous platforms with estimated revenue of 18 billion dollars in 2023 and a sustained upward trend (Ceci, 2024). It was launched in 2005 with the aim of enabling users to upload, share and consume video content. Emerging within an era that valued self-expression and participatory culture, its importance increased in a very short time. In 2006, Google recognized its potential and acquired it for a multimillion-dollar sum (De-Aguilera-Moyano et al., 2019). At the time, YouTube's business model was based on the AVOD (Ad-Supported Video on Demand) framework, which Prado (2017) defines as a system where users can freely access a wide range of videos, while the platform generates revenue through advertisements (Prado, 2017). Later, a portion of these ad-generated earnings began to be shared with content creators, who were part of the YouTube Partner Program (Postigo, 2016). This program was introduced in 2011 (De-Aguilera-Moyano et al., 2019) and creators who want to join it must comply with the platform's channel monetization policies and meet eligibility criteria, such as reaching a specific number of subscribers (YouTube, Through this initiative, YouTube has significantly 2025). contributed to professionalization of content creator figure (De-Aguilera-Moyano et al., 2019). In recent years, YouTube has introduced a premium version, transitioning into a hybrid business model. In fact, while previously it only offered the "free" version without giving users the option to upgrade, now, thanks to YouTube Premium, users can pay a monthly subscription fee, at a variable rate depending on the customer segment (Figure 1), in exchange for an enhanced version of the basic service. The benefits include an ad-free viewing experience, the ability to download videos for offline access, and the option to play videos in the background while using other apps or when the screen is off (YouTube, n.d.).

Figure 1: Premium packages offered by YouTube

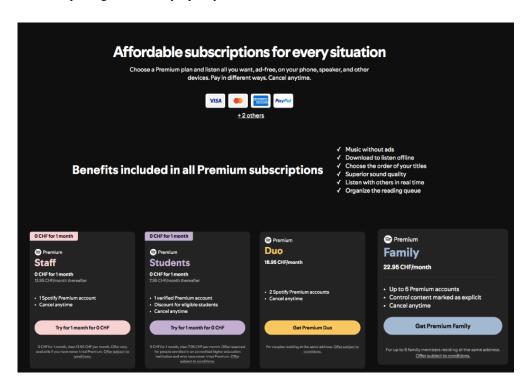
Pick a membership that fits you



Source: YouTube, n.d.

Another example of a company that achieved significant success using the freemium model is Spotify. Founded in 2006 in Stockholm, Spotify now has over 232 million monthly active users, with a market value of 21 billion dollars in 2019 and strong long-term growth prospects (Nusca et al., 2019). The company aims to make music accessible, offering an alternative to the illegal downloading of content (Richardson, 2014). Its value proposition reflects the characteristics of a freemium platform as it provides free service, allowing users to stream music with advertisements between songs. At the same time, it also offers a premium service that provides access to a broader selection of music without advertising interruptions, permits users to download songs, enjoy higher audio quality, and choose the order of tracks (Figure 2). Thus, allowing users to pay, based on the group they belong to (Figure 2), for access to an improved version of the offer. Thanks to this model, the company has been able to attract a large number of users, many of whom have converted to the paid version (Richardson, 2014). Unlike other companies using this business model, its marginal costs are relatively high due to the royalties it must pay to obtain licenses for the content it hosts. For this reason, converting free users to paid subscriptions is even more crucial. In fact, Spotify has a total of 108 million premium users, a remarkably high figure compared to industry norms (Nusca et al., 2019).

Figure 2: Premium packages offered by Spotify



Source: Spotify, 2025

2.1.3 The Revenue Model of Freemium Platform: Role of Advertising

The majority of the customer base reached by freemium platforms is made up of users who fall into the "free" segment. In fact, approximately 95% are free users and therefore do not contribute to the company's direct revenue sources (Lee et al., 2019). Companies that base their business model on this hybrid form are required to make a trade-off between offering enough features to make the basic version attractive, but at the same time limiting its functionality to incentivize customers to upgrade to the premium version (Kumar, 2014). In fact, free consumers are not willing to pay to have a service they can consume for free in the basic version of the platform. This implies that the company must be able to create added value for which users are willing to pay and therefore switch to the premium version (Wagner et al., 2013). This concept has been defined as "premium fit," referring to the value discrepancy between the free and premium offerings, and the extent to which the free version differs from the paid one. This discrepancy directly impacts the consumer conversion rate (Koch & Benlian, 2017).

In this regard, several authors have defined different strategies related to the freemium model to encourage free users to start paying for a subscription. Niculescu and Wu (2014) have identified two possible approaches: "feature-limited freemiums" and "time-limited freemiums." In the first model, users have unlimited access to basic features but must pay to unlock premium upgrades. In the second model, users can access all platform features, but only for a limited period (Niculescu & Wu, 2014).

When companies adopt the "time-limited freemiums" strategy, they have two main options they can implement, each having a different impact on the conversion rate. The first is the "freefirst" approach, where users start with the free version and are later offered a time-limited trial of the premium form. At the end of the trial, they decide whether to switch to the paid version or stay with the free one. The second strategy is "premiumfirst," where users begin with time-limited access to the premium features, then switch to the free version and decide whether to subscribe or not (Koch & Benlian, 2017). According to the study conducted by Koch and Benlian (2017), the second strategy has a greater impact on users' conversion propensity due to the activation of a loss aversion mechanism. In other words, in the "premiumfirst" strategy, the reference point for deciding whether to subscribe to the paid version is the premium offer. Therefore, if the user chooses not to subscribe, they perceive a loss. According to loss aversion theory, people tend to weigh losses more heavily than gains

(Kahneman & Tversky, 1984). In this context, the perceived loss of switching from premium to free is greater than the perceived gain of moving from free to premium. For this reason, the "premiumfirst" strategy has a greater impact on conversion rates compared to the "freefirst" strategy, in which the reference point is the basic version, and therefore, moving to the premium version would be perceived as a gain, making it less relevant compared to the perception of loss evoked by the "premiumfirst" strategy (Koch & Benlian, 2017).

As far as the other approach is concerned, namely "feature-limited freemiums," the strategies to increase the conversion rate can be categorized into two main types of differentiation: quality-based and quantity-based (Kato & Dumrongsiri, 2022). The first one refers to offering a paid version with superior features in terms of performance or characteristics, and the second one involves increasing the number of features in the paid version, without necessarily improving their quality. According to a study conducted by Li et al. (2019), it appears that these two types of limitations must be managed interdependently. Quality, which refers to elements such as resolution, color, and formatting, should depend on the level of cannibalization between the free and paid offers. If the level of cannibalization is low, meaning users cannot easily substitute the free sample with the full product, then a higher quality can be offered with the free service. This gives a signal of high value that encourages users to want to purchase the improved version. On the other hand, if the level of cannibalization is high, meaning the free sample could serve as a substitute for the full product, as often happens in freemium platforms, it is necessary to moderate the quality of the free service to prevent disinterest in the paid version (Li et al., 2019). The results of their research show that increasing the quality of the free version boosts premium digital product sales, and limited access to functionalities decreases the perceived value of the free offer. Therefore, quality and functionality must be coordinated in a balanced way. On the one hand, it is important to limit the free version's functionalities to reduce its perceived value, while on the other hand, increasing the free version's quality can encourage users to pay for the upgrade, however this relationship must be carefully managed to avoid cannibalization (Li et al., 2019).

Within the context of strategies aimed at impacting the user conversion rate, and more specifically the strategy of "quantity-based differentiation," advertising plays a dual role in the revenue model of digital platforms. From one perspective, it represents a direct source of income, as advertisers pay the platform to display their ads. Indeed, according to the study conducted by Niculescu & Wu (2014) advertising represents a monetization source that helps

finance the free version of the platform (Niculescu & Wu, 2014). From another perspective, it negatively impacts the user experience by reducing usability, for example, making it harder for users to find information, and leading to frustration and irritation (Brajnik & Gabrielli, 2010). This, in turn, can affect the conversion rate by creating a limitation dynamic, encouraging users to upgrade to the premium segment, as they may choose to pay for access to a version without restrictions. In connection with this point, a study conducted by Davranova (2019) is particularly relevant, as it aimed to measure the impact of advertising on users of various social networks, some of which operate under a freemium business model. The collected data indicates a growing perception that the number of online advertisements has increased over the years, along with their associated negative effects. In fact, these promotional contents are often perceived as disruptive and intrusive. This research highlights how advertisements can become a nuisance for users (Davranova, 2019). Indeed, ads can be perturbing factors that impact the user's browsing process and the flow experience of the visitor (Brajnik & Gabrielli, 2010). The "flow" refers to a psychological state in which the user is fully focused and immersed in an activity and it can be exploited in marketing, as it offers several advantages. In particular, the flow state positively impacts purchase intention and it generates a positive users experience (Sicilia & Ruiz, 2007). In this context, advertisements that interrupt the visitor's experience act as distractions, breaking the flow state or preventing it from forming in the first place (Brajnik & Gabrielli, 2010). These findings justify the previously mentioned strategy of limiting offers, which leverages freemium platforms to boost conversion rates

2.2 The Concept of e-Advertising

After examining the role of e-advertising from the perspective of digital platforms, attention now shifts to its use within corporate digital marketing strategies. The concept of digital marketing began to take shape in the 1990s, following widespread Internet adoption. e-Advertising, in this context, denotes the implementation of promotional activities through a network of digitally-oriented tools (Aslam & Karjaluoto, 2017).

2.2.1 The Advantages of Digital Advertising

Some companies grasped the potential and advantages of digital advertising, particularly in facilitating interaction between themselves and users, and in personalizing advertising messages. They have therefore begun to transform their strategies by integrating digital

channels, such as email, website, mobile application, social media, etc. (Bîrzu, 2023). The Internet's effectiveness in advertising stems from several factors highlighted by various authors (e.g., Aslam & Karjaluoto, 2017; Bîrzu, 2023; Hooda & Aggarwal, 2012; Kramer et al., 2007). One key advantage is its capacity to connect vast amounts of data, enabling efficient customer relationship management, fostering increased interactivity (Bîrzu, 2023), and allowing companies to monitor their strategies in real-time and at a lower cost (Aslam & Karjaluoto, 2017). Additionally, the digital tools available today allow companies to collect and analyze extensive data, facilitating the creation of personalized offerings and tailored interactions that better align with individual consumers' preferences, thereby enhancing customer satisfaction (Kramer et al., 2007). Furthermore, Internet supports the creation of original messages, leveraging multimedia possibilities and the use of different languages, which allows creating catchy content (Hooda & Aggarwal, 2012).

The combination of advantages and opportunities generated by digital advertising has led to the growing importance of digital content in the marketing promotion's context. This is supported by the steady increase in the budget allocated to this new approach for reaching consumers in recent years. Looking at the statistics, we see that in 2017, worldwide spending on digital advertising amounted to around 250 billion dollars. By 2024, estimates had risen to 740 billion dollars, more than double, and the trend points to further growth in the future (Appendix 1) (Statista Market Insights, 2024a). A closer look at the data regarding global spending on online video advertising between 2020 and 2024 highlights a significant growth trend. Over this four-year period, the budget allocated to online video advertising nearly doubled, increasing from an initial 70 billion dollars in 2020 to an impressive 120 billion dollars by 2024. This remarkable rise underscores the growing importance and investment in video content as a key driver of digital advertising strategies (Appendix 2) (Statista Market Insights, 2024b). These figures highlight a clear upward development in the significance of digital promotions. They not only underscore the growing reliance on these tools for building and maintaining customer relationships but also reflect their increasing share of marketing budgets.

2.2.2 Strategic Transmission of Promotional Messages

Once the promotional content is developed, companies can choose among various delivery methods, typically aimed at capturing consumer attention. Depending on the channel selected, this may involve either imposing the message or attracting the consumer voluntarily. Mittal &

Kumar (2022) define a non-intrusive advertising strategy as "form of marketing, where the marketer is simply promoting the products or the brand without causing any inconvenience to the customers" (Mittal & Kumar, 2022, p. 193). While this strategy also applies to traditional promotional channels, such as newspapers, it has evolved in today's digital landscape, namely through e-advertising on mobile devices. Indeed, the widespread adoption and intensive use of this channel have provided companies with significant marketing opportunities in terms of communication strategies. However, this has also led to several risks, particularly the oversaturation of consumers with advertising content that is often perceived as annoying and intrusive, triggering negative reactions (Davranova, 2019; Mittal & Kumar, 2022). As a result, consumers have developed defense mechanisms, such as ad-blocking tools, which further reduce the effectiveness of such content. In this context, non-intrusive marketing focuses on attracting consumers' voluntary and spontaneous attention, rather than forcing it, in order to enhance the profitability of marketing actions (Mittal & Kumar, 2022).

The following table summarizes the main differences between these two types of marketing approaches.

Table 1: Comparing Intrusive vs. Non-Intrusive Marketing

S. no.	Intrusive marketing	Non-intrusive marketing
1	Marketing is generally unwelcomed and may result in annoying the customer.	Meant for a well-targeted audience shown at the right time and at the right place, hence do not annoy the customers.
2	Due to the unwanted random advertisements, many of the customers install ad blockers. This way the intrusive advertisements are blocked to a certain extent.	Users trust these ads a lot more as they are targeted to them personally. Ad blockers allow these to pass through and are displayed on the web page.
3	The out of sync content on these advertisements is having no direct relation with the app or web content. Hence such random advertisements generally are not successful in generating user interest.	The marketers develop the advertisement content after thorough research and intelligently place it in the apps or website to attract the customer attention. They are designed to convey the brand message clearly to the users.
4	Since the advertisements are generally broadcasted, without due identification of the target. Hence, the return on investments is not very high.	The advertisement content and the target customers are carefully analysed and served, resulting into better response and return on investment.
5	Generalised advertisements are pushed to all the user available on the mobile application or the website.	Advertisers follow the interest of users by retargeting, hence selected customers are served with specific content.
6	Focus is serving advertisement impressions rather than reaching to the target audience with customised advertisements.	Due to the user trust on such advertisements, the engagement and click through rates are higher.
7	Random banners or interstitials on mobile apps and websites are generally used intrusive marketing and they are often ignored by the users.	Social media platforms like Facebook and search engine advertisements like Google are the major channels serving non-intrusive ads. They track the customer demography, likings and interest areas and then serve them with the most relevant advertisements.

Source: Mittal & Kumar, 2022, p. 194

2.3 The e-Advertising in Freemium Platforms and Its Effect on Consumers

Digital advertising has transformed how businesses engage with customers and promote their products or brands; in particular, these new communication approaches make it possible to influence potential customers' choices (Kah Boon Lim et al., 2024). This research work aims to analyze and gain a deeper understanding of advertising's impact on freemium platforms and its influence on consumer behavior, measured through purchase intention. To achieve this, two key relationships will be investigated. The first examines the influence of advertising on the emotions of potential consumers, while also considering the moderating effect of their pre-existing attitude toward advertising. The second relationship explores the link between the emotions elicited by advertising and actual purchase intention. Also in this case, a moderating variable is taken into account, which is the user's attitude toward the brand featured in the advertisement.

2.3.1 The Impact of E-advertising on Customers' Emotions

Concerning the first relationship examined in this study, companies can develop strategies to create attractive advertising that can impact emotions of potential consumers. Emotions are mental states that typically arise in response to an external stimulus (Bagozzi et al., 1999). They are often confused with the term "mood" which, being a very similar concept, lasts longer than emotions and is characterized by lower intensity. In marketing, emotions play a crucial role by influencing consumer behavior and their responses to various stimuli (Bagozzi et al., 1999). To create advertisements capable of impacting the emotions of those exposed to them, companies can leverage the features of digital promotional tools, which provide a wide array of dynamic visual elements (Shojaee et al., 2014). Indeed, there are studies showing that companies can positively influence consumers' emotional state by using cognitive elements such as positive or negative statements, or non-cognitive elements such as music or graphics components (Gardner, 1985).

However, in recent years, a contrasting phenomenon has occurred. The increase in the amount of promotional content, that consumers are exposed to, has limited the effectiveness of advertising in positively influencing their affective states. In fact, the increasing volume of online advertising content has had a negative impact on users' perception of it (Davranova, 2019). According to the Ad Blocking Report, 91% of people believe that advertising is

increasingly intrusive (Davranova, 2019). More specifically, one of the most disliked forms of advertising is video content, namely promotional material that appears either before or during the consumption of a digital media, such as watching videos, listening to music, or playing video games. This type of advertising is called a "disruptive ad" and it can be particularly annoying for users, as it interrupts the browsing flow and requires additional time and effort to close or ignore (Davranova, 2019). While the advantage of interrupting consumers with ads is to capture their attention in a highly competitive environment, as users are exposed to more information than they can process, so interruption helps ensure they see the message and may be influenced to buy; it also comes with potential downsides, because this strategy can also trigger negative reactions. Indeed, it may cause irritation, foster a negative attitude, and lead to avoidant behaviors toward advertising content (Acquisti & Spiekermann, 2011). Brajnik and Gabrielli (2010) also argue that the negative emotion is triggered by the frustration of being disturbed and having to spend time and take specific actions to close the ads (Brajnik & Gabrielli, 2010).

The irritation generated in this context tends to be amplified when the advertisement has little informational value to users or when they have no control over the interruption (Acquisti & Spiekermann, 2011). In recent years, the concept of control ownership has emerged, which can explain the deeper psychological mechanisms triggering this negative reaction toward disruptive advertising (Pavlou & Stewart, 2000). In fact, over the past decades, technological advancements have significantly reshaped the power dynamics in advertising context. Traditionally, advertising was a one-way communication form, from companies to consumers, the latter had a passive role within this relationship. However, new technologies have transformed this dynamic into a more interactive process, granting consumers greater control. Indeed, they can now engage with advertisements on their own terms, for instance, by providing feedback or choosing when and where they are exposed to ads (Pavlou & Stewart, 2000). In this context of change, "disruptive advertising" still operates within an outdated framework, forcing users to be exposed to ads without acknowledging their active role in this process. The lack of control creates a sense of lost freedom and reduces the persuasive effect of the promotional content (Acquisti & Spiekermann, 2011).

In summary, promotional messages can have a negative impact on consumer's mental state, not so much because of the content itself, but rather because of the way it is conveyed, which is often disruptive, annoying or irritating (Moore et al., 2015). As part of this work, it will therefore be interesting to assess, using empirical regression analysis, whether video

advertising displayed on freemium platforms represents a disruptive factor and therefore negatively impacts users' emotions.

H1: Promotional video content on freemium platforms represents a disruptive factor that negatively affects the emotions of those exposed to it.

2.3.2 The Role of Attitude Toward Advertising

Regarding the relationship outlined in the first Hypothesis, a study conducted by Li et al. (2024) adopts the term "nuisance cost" to describe the negative effects of advertising interruptions on content consumption, which can annoy users. It assumes that consumers' utility decreases in proportion to the intensity of advertising they are exposed to, because of the higher "nuisance cost" (Li et al., 2024). Furthermore, this paper highlights an important phenomenon: while some consumers find nuisance costs highly disruptive, others are more tolerant and less affected by them. In other words, it is crucial to explore whether consumers' heterogeneous attitudes toward advertising, as an antecedent, play a role in modulating the intensity of advertising's impact on customers' emotions (Li et al., 2024). In their article, Li et al. (2024) differentiate between two distinct customer segments: "ad-intolerant" and "adtolerant." The former are those who perceive a higher level of nuisance cost, meaning they are more disturbed by advertisements. This is explained by a greater cost associated with viewing ads or by amplified concerns about privacy-related factors. The latter, in contrast, perceive a lower level of nuisance cost regarding advertisements. This can be explained by factors such as having more free time, being less bothered by ads, or being able to bypass them more easily (Li et al., 2024). Another factor that can impact perceptions of advertisements is gender, with women tending to have a more negative view of e-advertising. Additionally, the frequency of online browsing plays also a significant role, indeed, the more time a person spends online, the less they will be disturbed by such ads, developing a more positive attitude toward them (Cheng et al., 2009). In general, consumers who are less tolerant of advertising tend to have a higher willingness to pay for the premium version, as it eliminates this highly disruptive element (Li et al., 2024).

Based on this literature, it is possible to formulate a second hypothesis regarding a moderating variable that influences the intensity of the relationship between advertising and emotions. Specifically, it can suppose that consumers are heterogeneous and exhibit different sensitivities to advertising as a disruptive factor. Indeed, "premium" customers are more

likely to pay because they find ads more disruptive and as a result, they have a greater impact on their emotions. In contrast, "free" customers are less inclined to upgrade, as they are less bothered by the ads. With a more favorable attitude toward promotional content, the negative impact of disruptive ads on their emotions is less pronounced.

H2: The relationship between disruptive factors and emotions is likely to be stronger for "premium" customers compared to "free" customers.

2.3.3 The Impact of Emotions on Purchase Intention

The second relationship analyzed in this research work concerns the link between emotions and effective actions, which can be represented by the concept of purchase intention. This notion is a widely used indicator in marketing, as it predicts an individual's willingness to buy, thus measuring a propensity for concrete action (Oueslati & El Louadi, 2000).

2.3.3.1 Leveraging Emotional Marketing to Influence Consumer Behavior

Consumption decisions are the result of both, rational and emotional stimuli; based on this, Bagozzi et al. (1999) defined two types of promotional content. The first one is "thinking ads," which focus on more concrete information, such as technical details about the product; the second is "feeling ads," which are designed to evoke specific emotions (Bagozzi et al., 1999). Consequently, in addition to serving as a tool for delivering rational information, advertisements are often designed to develop a positive attitude, placing the user in an optimistic emotional state and encouraging specific actions (Hill, 1988). In fact, research in the field of psychology shows that a person's emotions have a major influence in impacting behavior (Gardner, 1985). It means that the state a person is in affects the decisions they make, and this mechanism can be leveraged in different ways within the context of communication. For example, by trying to encourage positive attitude toward brands or by leveraging memory to evoke moods associated with specific situations or contexts, this ensures that when such experiences occur, a particular advertisement comes to mind (Gardner, 1985). Emotional advertising, therefore, is a powerful instrument for influencing consumer behavior, promoting brand association with positive emotions and increasing the likelihood of purchase (Shojaee et al., 2014).

The need to develop a closer emotional connection between brands and consumers is the result of an evolution in the way products are consumed. Indeed, elements such as emotional

satisfaction and psychological identification are increasingly important in the process of buying, consequently also for the long-term business development and growth (Bin, 2023). This has led to the growing diffusion of emotional marketing, which differs from traditional marketing by aiming to create a bond between consumers and brands through storytelling, memorable experiences and emotions, while promoting values that align with those of the customer. Instead, traditional marketing primarily focuses on more concrete needs and interests, such as price and product features (Bin, 2023).

In his study, Bin (2023) analyzed the influence of four emotional marketing factors, namely product, price, communication and services on trust, attachment and purchase intention. The research model is represented in the illustration below (Bin, 2023).

Emotional prices

Trust

Emotional communication

Emotional services

Emotional services

Figure 3: The Impact of Emotional Marketing Factors on Purchase Intention

Source: Bin, 2023, p. 6

Following an empirical analysis, he found that the four marketing factors have a significant impact on trust, as they do on attachment. In other words, if the company invests in effective emotional marketing, it will have positive effect on consumers' trust and attachment to the brand or products. Moreover, these four elements were found to have a significant impact, both directly and indirectly, through trust and attachment, on purchase intention (Bin, 2023).

Based on the previous evidence, it can be affirmed that emotions have a significant impact on behavior. To analyze this relationship in more detail, the concept of valence can be introduced, which serves as a simplification for addressing such a complex topic, where emotions are categorized as either positive or negative (Rucker & Petty, 2004). In the context of persuasion, which involves influencing attitude change, research has shown that, in many cases, inducing positive emotions tends to have a more significant persuasive effect than

negative emotions. Therefore, a positive mood facilitates a greater persuasive impact on an individual (Rucker & Petty, 2004). Along the same lines of thinking, studies cited by Leone et al. (2005) have also shown an important role of emotional valence. Indeed, they demonstrated that, individuals not only use emotional information to make decisions, but also that these decisions are influenced by the valence of emotions. In particular, being in a positive emotional state leads to making more favorable evaluations of the brand and product, than being in a negative mood (Leone et al., 2005).

By connecting these elements emerging from the literature, regarding the relationship between emotions and behavior, with the current trend of increasing advertising messages to which platform users are exposed (Davranova, 2019), it is possible to formulate a third hypothesis. Indeed, it can be assumed and empirically tested whether the negative impact of advertising, as disruptive factor during the consumption of digital content on a freemium platform, negatively affects users' emotional state (Davranova, 2019), thereby reducing their purchase intention toward the advertised company, due to the less favorable assessment resulting from the adverse emotional condition (Rucker & Petty, 2004; Leone et al., 2005).

H3: The emotions generated by a company's video advertising in a freemium platform have a negative impact on the brand's purchase intention.

2.3.3.2 The Role of Unconscious Exposure to Ads in Consumer Decision-Making

In addition to the conscious effects of advertising-induced emotions on consumer behavior, it is also crucial to explore the role that unconscious exposure to advertising stimuli can play in decision making, especially in digital environments with a high volume of content. Indeed, within an increasingly competitive landscape, advertising as a stimulus is necessary not only to attract the attention and interest of those exposed to it, but also to reach the subconscious and activate memorization mechanisms in order to unconsciously influence consumer decisions (Korenkova et al., 2020). In fact, while the traditional approach focused on the need to attract the attention of those exposed to advertising to have a concrete effect, others argue that this is not essential (Grimes & Kitchen, 2007). According to them, attention is not necessary if the communication carries a strong emotional charge, thus indirectly influencing consumers' choices without their full awareness of having been exposed to a stimulus; this occurs because of the of mere exposure effect (Grimes & Kitchen, 2007). In this context, Grimes and Kitchen (2007) claim that "the brain constantly scans the sensory environment to

identify and evaluate the salience of all stimuli" (Grimes & Kitchen, 2007, p. 193), highlighting how our brain is sensitive to every signal present in the environment, which are detected without necessarily being consciously aware of them. Indeed, the mind tends to store information automatically, without awareness of the stimuli. This exposure subsequently influences decisions and behaviors through a sense of familiarity and perceived closeness (Grimes & Kitchen, 2007).

Building on this idea, it is important to consider how emotions, given their impact on purchase decisions at both conscious and unconscious levels, can represent a central element in the development of a communication strategy.

2.3.4 The Role of Brand Perception

In addition to emotions, which can influence consumers' purchase intentions, there are other factors that impact consumer behavior; one of the most significant is brand perception. It refers to the set of mental associations people form about a brand, which play a key role in shaping purchase decisions. Indeed, brand perception can be considered as a pre-existing cognitive state that influences consumers during the decision-making process (Sadeghi & Tabrizi, 2011). This marketing element is a multidimensional factor, as it is determined by several distinct components, which can be grouped into two categories: functional experience and emotional experience linked to the product or company. As far as the first is concerned, it includes more concrete and measurable elements such as speed, quality, reliability or ease of use of the product or service. The latter includes, for example, making the user feel better or making their life or work more rewarding or easier (Subramaniam et al., 2014). These characteristics have either a direct or indirect impact on consumers. Indeed, according to Jojare and Irabatti (2023), costumer's perception of a brand, including their overall impression, thought and opinions, significantly influences their behavior and purchasing decision (Jojare & Irabatti, 2023).

Brand perception can be positive, negative, or neutral, and while it is partly shaped by the company's strategies, it also arises from external factors beyond its control. In fact, key aspects influencing this important marketing element include the company's communication and advertising, but also customer interactions and word of mouth (Jojare & Irabatti, 2023).

2.3.4.1 The Strategic Role of Brand Perception in Shaping Purchase Intentions

Given that brand perception is influenced by both internal and external factors, companies should focus on the elements within their control to shape it effectively. Among these, advertising plays a particularly strategic role, as it can directly impact how consumers perceive and relate to the brand (Jojare & Irabatti, 2023). Nerlove and Arrow (1962) described advertising as an investment that impacts both the company's current and future financial performance by influencing sales. According to their study, the effect on demand is driven by promotional content, which, by influencing brand awareness and brand perception, generates long-term effects on consumer responses (Nerlove & Arrow, 1962). Therefore, promotion plays a crucial function as it can encourage consumers to make purchases from a specific brand. In this context the role of advertising is twofold, on the one hand, it enhances the company's visibility, positioning it within the set of options available to potential customers; on the other hand, it influences the quality rating, meaning the degree of differentiation that makes one brand more preferable over another (Clark et al., 2009). In this regard, it is not enough to improve the awareness score, which measures how familiar people are with a brand, and it does not constitute a sufficient reason to purchase a product. Instead, it is crucial to focus on the perception consumers have of the brand (Sadeghi & Tabrizi, 2011). Indeed, companies invest in advertising to encourage potential consumers to choose their brand within a highly competitive landscape (Clark et al., 2009).

The underlying processes that can explain the relationship between brand perception and purchase intention are multiple. Firstly, the brand helps to reduce the perceived risk associated with a purchase. As demonstrated, it can serve as a quality anchor, as it enhances confidence in the product or service's quality, reassuring consumers about their purchasing decision (Sadeghi & Tabrizi, 2011). Another important element to consider is the issue of differentiation. Today, with growing competitiveness, the market offers more and more products that are very similar to each other and differ only in small features. In this context, the brand plays a key role in the decision-making process, which is mainly related to the image the consumer associates with each brand, rather than with the product itself (Tekin et al., 2016). Linked to this, it is possible to refer to the theory of the "Image Congruence Hypothesis," which also plays a role in explaining the mechanism that connects brand perception to purchase intention. Indeed, according to this theory people tend to behave, also in terms of purchase decisions, in a way that respects their self-image. Based on this statement, consumers develop favorable attitudes towards brands that convey values

consistent with their own, and therefore tend to have a higher purchase intention towards them. Conversely, if a brand's evaluation is negative, they tend not to identify with it and have a lower intention to buy its products (Graeff, 1996). According to this model, which is based on individuals' self-perception, the characteristics that make up overall brand perception have an impact on purchase intention, because they determine whether the individual has a positive or negative attitude towards the brand.

On the basis of these elements, it is possible to formulate a hypothesis concerning the indirect effect of brand perception on purchase intention; it may, in fact, play a role in amplifying or attenuating the impact of emotions on concrete actions. In this context, brand perception acts as an antecedent. If it is positive, it can reduce the impact of negative emotions by partially balancing them through the person's favorable attitude toward the brand, which in turn reinforces purchase intention. On the other hand, if the brand is perceived negatively, it can amplify the negative impact of emotions on purchase intention. In this case, the two negative effects would accumulate, resulting in an even greater negative impact on purchase intention.

H4: If brand perception is positive, it will mitigate the impact of negative emotions on purchase intent; and oppositely, if brand perception is negative, it will accentuate the impact of a negative emotions on purchase intention.

2.3.4.2 Underlying Mechanisms of Shaping Brand Perception

To this point, brand perception has been considered an antecedent, and studies demonstrating its influence on consumer behavior have been reviewed (Clark et al., 2009; Nerlove & Arrow, 1962; Sadeghi & Tabrizi, 2011). However, this section explores the underlying mechanisms behind its development, focusing specifically on those that are most relevant to the present study.

Shaping Brand Perception Through Implicit Memory

In today's digital world, new technologies improve the strategies that enable companies to influence and enhance brand perception (Jojare & Irabatti, 2023). In fact, digital advertising tools are particularly effective, allowing companies to collect customer data and personalize communication. They also leverage interactive content, such as videos or contests, and make use of social media. These platforms represent an important channel because they allow companies to create brand fans and encourage people to share their positive experiences or

thoughts related to the brand. The user-generated content represents a form of spontaneous, independent and authentic communication, making it more credible and exerting a greater influence on brand perception (Jojare & Irabatti, 2023). At the same time, in the digital environment, users are exposed to a large number of promotional messages, which are generally processed with a low level of cognitive resources (Courbet et al., 2014). This dynamic raise important questions about how advertising stimuli are processed and how they affect consumer behavior. Similar to emotions, the way consumers perceive a brand, namely its positive or negative valence, can be shaped by unconscious cognitive processes (Grimes & Kitchen, 2007). As a result, unconscious exposure to advertising can significantly influence consumer decision-making.

Indeed, the study conducted by Grimes and Kitchen (2007) highlights how repeated exposure to a brand's logo can significantly influence brand perception (Grimes & Kitchen, 2007). This can be explained by the perceptual fluency/misattribution (PF/M) model, which suggests that when a person sees a signal repeatedly, it becomes easier to recognize the stimulus. This faster and smoother recognition process is called perceptual fluency. Often, the person is not aware that this fluency comes from previous exposure; consequently, they may misattribute it to a preference for the stimulus (Fang et al., 2007) and wrongly attach valuable characteristics to the brand (Courbet et al., 2014). In their article, Courbet et al. (2014) explain that it is possible to distinguish between perceptual and conceptual fluency. The former is rooted in sensory-related memory and involves elements such as the color of a logo, while the latter is associated with semantic memory, processed at a deeper level, and concerns the meaning or associations linked to the stimulus, such as the product category the logo refers to. When repetitive exposure to a stimulus is associated with semantic stimuli, as in the case of perceptual fluency, conceptual fluency is also strengthened. In other words, the network of semantic associations between brand representations and attributes is better encoded in memory (Courbet et al., 2014). To elicit this type of connection in advertisements, companies can use words or images, according to multiple studies the latter are more effective because they are more easily processed (Courbet et al., 2014).

The importance of these findings in the context of marketing, and particularly for brand perception, is that companies can create stimuli that influence implicit memory, thus helping to build more stable attitudes toward the brand. Indeed, according to Wilson et al. (2000), judgments based on implicit memory are more stable over time than those based on explicit

memory. In fact, people tend to modify explicit attitudes more easily, while implicit attitudes, once formed, are more difficult to change (Wilson et al., 2000).

How Disruptive Ads Shape Brand Preference

It is possible to link the influence of fluency in information processing to the context of disruptive advertisements and its effect on brand preferences. In fact, in their research, Bell and Buchner (2018) challenged the perspective that advertisements interrupting positive user activities inevitably lead to irritation and thus negatively affect brand perception. To investigate this, they conducted a series of experiments in which participants played a computer-based Tetris game that was interrupted by advertisements and later analyzed the impact on brand recognition and preference (Bell & Buchner, 2018). What they concluded was that pop-up disruptive advertising was evaluated negatively and that the interruption given by the advertisement had a detrimental impact on the perception of the activity the participants were experiencing, namely playing Tetris. The most interesting finding was that the brand shown in the pop-up was not only remembered but also preferred over the others during the evaluation phase (Bell & Buchner, 2018). This finding was supported by two elements. First, brand preference was positively influenced by the pop-up ads. Second, experiments were also conducted in which less or non-annoying forms of advertising were considered and compared with more disruptive ones, showing that less annoying ads were not more effective in increasing consumers' brand preference (Bell & Buchner, 2018). In connection with the topic of fluency in the information processing, the authors argue that "the positive effects of disruptive advertising on brand preferences can be explained by assuming that the previously encountered brands were processed more fluently, which is experienced as affectively positive" (Bell & Buchner, 2018, p. 12).

This study has a number of important limitations that are worth mentioning, including the use of only fictitious brands to make comparisons and determine preferences. This may have influenced participants' decisions, as familiarity with a single brand might have led them to choose it, despite it being a source of disturbance. Indeed, the authors themselves argue that "it therefore remains to be tested to what degree well-known brands can benefit from disruptive and annoying advertising" (Bell & Buchner, 2018, p. 12). Moreover, in analyzing the difference in brand preferences resulting from disruptive advertising (pop-ups) versus non-disruptive advertising (banners), the authors only considered one type of non-disruptive ad format. This format showed no impact on brand preferences, possibly because

"peripherally presented banner ads are not only less annoying because they are easy to ignore, they are also less well processed and thus have little, if any, effect on brand preferences" (Bell & Buchner, 2018, p. 9). Perhaps, if they had considered a stimulus that was non-disruptive but also with greater persuasive relevance, they might have obtained different results.

Another study that examined the impact of advertising interruptions on customers' perception is the one conducted by Wang and Calder (2009), dating a few years earlier than the one by Bell and Buchner (2018). In their study, they aimed to analyze whether the interruption timing influenced participants' perception. They discovered that people tend to respond more positively to ads that are compatible with the interrupted content when these ads are placed at less intrusive moments, such as during transitions between scenes. In contrast, when the same ad disrupts a pivotal scene, the viewers' reaction is negative (Wang and Calder, 2009). The authors justify this result with the concept of "narrative transportation," which refers to the feeling of immersion that users experience when they are fully engaged in the narrative of the content they are consuming. When an ad is placed at a moment that does not interrupt this state of engagement, the effect of transportation extends to the promotional content itself, improving its effectiveness. However, if the advertising disrupts the narrative transportation at an inopportune moment, especially during a crucial or intense scene, this feeling of immersion is ruined, leading to negative effects on the perception of the advertisement (Wang and Calder, 2009).

2.4 Conclusion

Within this analysis of the existing literature on freemium models and digital advertising, an important gap emerges, namely the lack of studies examining the impact of advertising on freemium platforms from the perspective of purchase intention towards advertising companies. Indeed, studies have been cited regarding the impact on emotions (Acquisti & Spiekermann, 2011; Brajnik & Gabrielli, 2010; Davranova, 2019; Pavlou & Stewart, 2000), on the platform itself (Brajnik & Gabrielli, 2010), or on the brand perception of the advertising company (Grimes & Kitchen, 2007). Although these elements may be indirectly related to purchase intention, to date, there are no specific studies on this variable. This research will therefore focus more directly on analyzing the variable of purchase intention.

Moreover, there are contradictions among the studies previously discussed regarding the impact and valence of advertising on freemium platforms. As highlighted in previous

sections, on the one hand, research has identified advertisements as disruptive factors in this hybrid business models, where usage limitations are strategically imposed to reduce seamlessness and, in turn, increase conversion rates (Wagner et al., 2013). Therefore, from a company's perspective, the focus is primarily on the negative effects of promotional content within the freemium platform (Li et al., 2024; Wagner et al., 2013, 2014), such as how advertisements can negatively impact the user experience, leading to frustration and potentially fostering a negative attitude towards the platform where the promotion appears (Brajnik & Gabrielli, 2010).

At the same time, it is imperative for companies to generate a return on investment when deciding to implement any strategy. In this context, several studies discussed in earlier chapters support the effectiveness of this disruptive promotional tool, highlighting positive outcomes associated with its use. In particular, Grimes and Kitchen (2007) examined the impact of emotionally charged communication on the subconscious of individuals exposed to it, showing that active focus on the advertising is not necessary to have an effect on memory and, consequently, on behavior. This is especially relevant considering that users often block or ignore disruptive ads by not paying attention to them, as it shows that individuals can still be influenced by advertising, even when they are not actively focusing on the content (Grimes & Kitchen, 2007). Another study building on this theory is the one conducted by Bell and Buchner (2018) in the context of disruptive promotions. Although this study presents some significant limitations, it showed a positive impact in terms of brand recognition and preference. According to the authors, the mere exposure to the stimulus triggered recognition and familiarity mechanisms, which led participants to develop a favorable reaction in terms of brand recognition and perception (Bell & Buchner, 2018, p. 12). Finally, the study by Wang and Calder (2009) introduces the concept of "narrative transportation" to explain how, if the interruption occurs at a moment that does not significantly disrupt the user experience, there can be a transfer of engagement from the original activity to the promotional content. In such cases, the advertisement benefits from the user's existing attentional and emotional involvement (Wang & Calder, 2009). This demonstrates how it is important not only to differentiate between disruptive and non-disruptive advertising, but also to make distinctions within the different degree of "disruptive" possibilities.

In this study, the purpose is to assess whether the investment made by companies in sharing promotional content through these channels is truly profitable. To achieve this, there will be an examination of how these advertisements influence consumers' purchase intentions. The

significance of this work lies in its intention to address a notable gap in the existing literature, while also providing clarity within a field that is currently shaped by conflicting perspectives.

III CONCEPTUAL MODEL

The following section presents the model on which the research is based. It is a framework that summarizes the association between the different variables studied and the hypotheses formulated in the previous section.

The first relationship considered is the impact of advertising on emotions. In fact, as highlighted by previous studies, it has been demonstrated that promotional content, as a "disruptive factor," can play a role in shaping the emotional state of those affected by it, causing feelings of irritation and frustration, thus predominantly with a negative valence. (Acquisti & Spiekermann, 2011; Brajnik & Gabrielli, 2010; Davranova, 2019; Moore et al., 2015). This reflection has contributed to the formulation of the first Hypothesis, stated as follows:

H1: Promotional video content on freemium platforms represents a disruptive factor that negatively affects the emotions of those exposed to it.

The second key aspect of the model involves the moderating role of the segment to which participants belong. This variable is considered as an antecedent, evaluated through the questionnaire based on consumers' willingness to pay in order to avoid advertising. The relevance of this relationship is supported by the study of Li et al. (2024), which demonstrates that individuals hold different attitudes toward advertising. Those who perceive it more negatively tend to be willing to pay to avoid being exposed to it and are thus expected to belong to the premium segment (Li et al., 2024). According to this idea, premium consumers, who generally have a more negative attitude toward advertising, are expected to be more sensitive to this disruptive stimulus. The hypothesis derived from this reasoning can be formulated as follows:

H2: The relationship between disruptive factors and emotions is likely to be stronger for premium customers compared to free customers.

The second main relationship examined in this research concerns the impact of emotions, previously triggered by disruptive advertising, on consumers' purchase intention. Indeed, several studies have shown that the valence of emotions, whether positive or negative, significantly influences consumers' willingness to engage in a particular action (Rucker & Petty, 2004; Leone et al., 2005). In this context, purchase intention will be considered, as it

represents an indicator that allows companies to measure the propensity of potential consumers to undertake a concrete purchasing action (Oueslati & El Louadi, 2000). The third Hypothesis, can be summarized as follows:

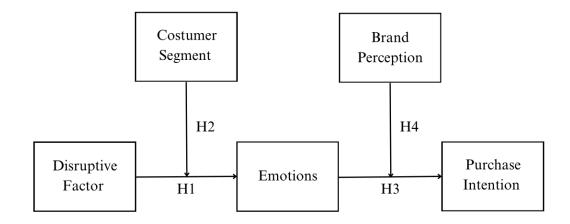
H3: The emotions generated by a company's video advertising in a freemium platform have a negative impact on the brand's purchase intention.

Finally, the last variable considered in this research is brand perception, which, according to existing literature, plays a central role in the consumer decision-making process when choosing which product to buy (Clark et al., 2009; Sadeghi & Tabrizi, 2011; Tekin et al., 2016; Graeff, 1996). Within the scope of this study, it will be considered as an antecedent that moderates the relationship between emotions and purchase intention, either amplifying or diminishing the impact of affective state on concrete action. Indeed, the final Hypothesis of this model is:

H4: If brand perception is positive, it will mitigate the impact of negative emotions on purchase intent; and oppositely, if brand perception is negative, it will accentuate the impact of a negative emotions on purchase intention.

Here is the schematic representation of what has been discussed so far (Figure 4).

Figure 4: Conceptual model



The overall model can be described by the presence of an independent variable, the disruptive factor, which influences the dependent variable, purchase intention. This relationship is mediated by emotions, which can be considered a mediating variable, as they help explain the relationship between the two previously mentioned variables. In contrast, the segment and the

brand perception act as moderating variables, as they are hypothesized to influence the intensity of the relationship they moderate.

IV RESEARCH METHODOLOGY

In the current section, the method used to collect and analyze the data is presented in a detailed manner. The goal of the overall analysis is to test the hypotheses formulated earlier and answer the research question: How do video ads on freemium platforms influence users' emotions and purchasing behavior toward the brand, and what roles do brand perception and customer segment play in this relationship?

To collect the data, a questionnaire was developed using SoSci Survey and pretested with five individuals to evaluate its clarity and overall effectiveness in conveying the intended message. In particular, the pretest ensured that, in the treatment group, the video was perceived as representative of a plausible scenario on a freemium platform. This process also led to revisions of several items, which were initially unclear to the pretest participants.

No specific demographic criteria were required to participate in the data collection; the only requirement was that respondents were familiar with the brand Coca-Cola, which was featured in the advertisement they were shown in the questionnaire. This ensured the ability to evaluate the antecedent of brand perception, which represent a pre-existing factor prior to completing the survey.

The study is based on quantitative research, analyzing data using regressions, ANOVA, and *t*-tests with the SPSS software. Regression analysis is the appropriate methodology, as the objective is to estimate the regression coefficients that define the effects of the independent variables on the dependent variable. ANOVA and *t*-tests were particularly relevant for assessing statistical differences between groups. Specifically, ANOVA was used to determine whether there were significant differences among three or more groups, while *t*-tests were employed to compare means between two groups.

4.1 Questionnaire Structure

In the first part of the questionnaire (Appendix 3), respondents answered questions to assess the moderating variables. Specifically, they were asked about their attitude toward advertising and their willingness to pay for a premium version. This helped determine whether they belonged to the "free" or "premium" consumer segment. Additionally, they were asked about their perception of the Coca-Cola brand, which later appeared in the questionnaire within a video advertisement. The questions regarding the moderating variable were asked before the

stimulus, as they are considered an antecedent in the research model; this helped to prevent potential contamination from the stimulus.

At a later stage, the participants had to watch a video. There were two possibilities: some respondents viewed a version in which a short film (Civippo, 2018) was interrupted at a certain point by a Coca-Cola advertisement (CocaCola, 2024), while others watched the Coca-Cola video advertisement directly, without it interrupting any other content. This allowed for the creation of a treatment group, in which the promotional content constituted "disruptive advertising," recognized as particularly disturbing for users (Davranova, 2019). The second version represented the control group, where the promotional content did not act as a factor of particular disturbance, as it did not interrupt the browsing experience.

In the third part of the questionnaire, respondents answered questions designed to assess the impact of the video, using a 5-point Likert scale. First, they evaluated whether the video was disruptive, then its emotional impact, and finally the extent to which the advertisement influenced their purchase intent toward the Coca-Cola brand.

The last part of the questionnaire was dedicated to sociodemographic questions, gathering general information about the respondents, specifically their gender, age, place of origin, and type of occupation.

4.2 Questionnaire Content

Within the following table (Table 2) are listed the items used to measure the variables of this research work with their respective sources. Some of these have been modified and slightly adapted to meet the specific needs of this research project. The full version of the questionnaire that was sent to participant is available in the appendix (Appendix 3).

 Table 2: Sources of Questionnaire Items

Variable	Dimensions	Items	Source		
		Advertising makes product information immediately accessible			
	Informativeness	Advertising is a convenient source of product information			
		Advertising supplies relevant product information			
		Ad usually makes has great amusement value	1		
Attitude Towards Ads	Entertainment	Ad helps me to know which products will reflect my unique personality	Cheng et al., 2009		
		Advertising is more interesting than other types of content			
		Advertising is irritating	-		
		Advertising is deceptive			
	Irritation	Advertising is annoying			
		I consider advertising an unwelcome interruption	1		
T.,4.,.4:4.		I am willing to pay for the premium version			
Intention to Pay to Avoid		I prefer use the free version	-		
Ads		I am very likely to pay for the premium version			
		I perceive the brand as unappealing/appealing			
Brand		I perceive the brand as negative/positive	Spears &		
Perception		I perceive the brand as unpleasant/pleasant	Singh, 2004		
		I perceive the brand as unlikable/likable	1		
		The advertisement shown in the video is a disruptive factor			
Disruptive		I perceived the advertisement as an interruption	(Cho &		
Factor		The advertisement in the video annoyed me	Cheon, 2004)		
		Advertising has been intrusive			
		I feel irritated			
	Negative Emotions	I feel frustrated	-		
P 4	Emotions	I feel angry	Harmon-Jones		
Emotions		I feel happy	et al., 2016		
	Positive Emotions	I feel relaxed			
	Emotions	I feel hopeful	1		
		My intention to buy their products has increased			
Purchase Intention		The purchase interest has decreased] -		
intention		It is less likely I will buy their products			

As previously mentioned, the first part of the survey includes questions about respondents' attitude toward the advertisement, as well as their willingness to pay to upgrade to the premium version of a freemium platform, and their perception of the brand Coca-Cola, that will appear later in the advertisement. To assess the attitude toward the brand and the willingness to pay for the premium version, participants were presented with a series of statements (Table 2) to be rated on a 5-point Likert scale, where 1 corresponds to "Completely disagree" and 5 to "Completely agree." An odd-numbered scale was chosen to provide respondents with the option of expressing no opinion, indeed, 3 corresponds to "No opinion." To evaluate their perception of the Coca-Cola brand, respondents will be asked to rate the items presented in the previous table (Table 2) using a 5-point semantic differential scale. Also in this case, the odd-numbered scale includes a neutral midpoint, allowing participants to express indifference or neutrality toward the characteristic being evaluated.

After evaluating the antecedent of brand perception, respondents watched a video. The choice of the Coca-Cola commercial for this part of the questionnaire is justified for several reasons. First, brand perception served as a moderating variable that existed prior to viewing the advertising video, making it important to choose a widely recognized brand to ensure broad respondent participation; related to this, it was also important to select a brand that targeted a broad market segment to ensure relevance and familiarity across diverse demographic groups. Additionally, it was important to choose a brand that elicited associations of differing valence. This allows for the observation of how responses varied based on individuals' positive or negative perceptions of the brand. In fact, Coca-Cola is associated with both positive attributes, such as being fun, refreshing, and original; and negative ones, for instance being unhealthy, overly commercial, and environmentally harmful. Moreover, it was also essential to select an advertisement that was not overly exciting or engaging to create a genuine disruptive factor for those watching the video. Indeed, the commercial spot shown to respondents features a Coca-Cola bottle being opened and poured into a glass. While it includes engaging elements such as satisfying sounds and the perception of a cold, fizzy beverage, it does not present a particularly persuasive narrative (CocaCola, 2024). As for the short film shown to the treatment group (Civippo, 2018), which was interrupted by the Coca-Cola commercial, this choice was also based on several criteria. First of all, it had to be short, approximately around one minute, to avoid boring respondents; in fact, the original version of the short film was slightly shortened by making a few cuts, so that the treatment group, exposed to both the short film and the Coca-Cola commercial, viewed content with a total

duration of one and a half minutes. Then, it needed to be engaging enough to capture viewers' attention and create involvement, so that the advertising would clearly be seen as a disruptive element. Indeed, the video features a short-animated story centered around themes of friendship, empathy, and inclusion. Finally, it had to be appropriate for all age groups.

After watching the stimulus, participants were asked to respond to questions related to their emotions and purchase intention regarding the brand featured in the video. To measure respondents' emotional state following the video, a self-assessment tool was employed. Specifically, the evaluation will focus on the components of the "Discrete Emotions Questionnaire (DEQ)," which include anger, disgust, fear, anxiety, sadness, happiness, relaxation, and desire (Harmon-Jones et al., 2016). These components have been slightly modified to better align with the objectives of this study. Indeed, emotions such as disgust, fear, and sadness did not fit with the potential feelings elicited by the advertisement in the video. Therefore, they were replaced with "irritation" and "frustration," emotions frequently mentioned in the literature to describe the state of users when exposed to advertising content (Acquisti & Spiekermann, 2011; Brajnik & Gabrielli, 2010; Moore et al., 2015; Wagner et al., 2013).

V RESULTS

This chapter presents the results obtained from the empirical analysis of the data collected through the questionnaire. These results are analyzed in this section according to the hypotheses that this research aims to test.

5.1 Sample Overview

A total of 180 responses were collected through the questionnaire, of which 168 were complete. Incomplete answers came from individuals who either abandoned the questionnaire before reaching the end or stated that they were not familiar with the Coca-Cola brand. These responses were excluded from the data analysis, as familiarity with the brand was a prerequisite for inclusion in the target sample.

At the end of the questionnaire, respondents were asked sociodemographic questions to establish and describe the sample. First, it can be observed that more women completed the questionnaire than men. In fact, out of 168 complete responses, 110 were from women, and 58 were from men. The average age of the respondents is 33 years, with the youngest being 15 years old and the oldest being 79 years old. Additionally, although the questionnaire was sent in Italian, to avoid translation issues and ensure comparability of the answers, respondents were asked which linguistic region of Switzerland they were from (Chart 1). According to the data collected, 152 people (more than 90%) are from the Italian-speaking part of Switzerland, 7 people (4.2%) are from the German-speaking part, 5 respondents (3%) are from the French-speaking part, and 4 individuals (2.4) are not Swiss.

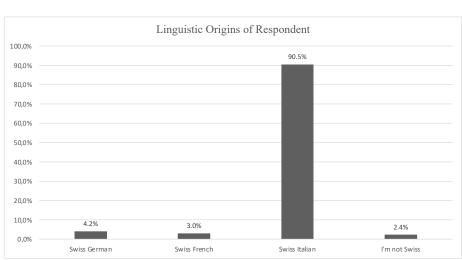


Chart 1: Linguistic Origins of the Sample

Finally, respondents were asked to choose from five options to describe their current occupation status (Chart 2). The majority of the sample (52.4%) consists of students, which aligns with the young average age of 33 years. Only a small portion of the sample (4.8%) is retired, while approximately 34% of respondents are engaged in work activities, either as employees (28%) or self-employed (6%).

Occupational Distribution of Survey Respondents 60.0% 52.4% 50,0% 40,0% 30,0% 28.0% 20,0% 8.9% 10,0% 6.0% 4.8% 0.0% Student Retired Other Em ploye e Self-employed

Chart 2: Occupational Distribution of the Sample

These sociodemographic data, which are summarized in Table 3, not only allow for a description of the sample, providing a general understanding of the type of people who responded to the survey; but they can also be useful in justifying possible results obtained from the analysis.

Table 3: Summary of Sociodemographic Data

Sociodemographic categories		Number of respondents	Percentage
	Male	58	35%
Gender	Female	110	65%
Cenaer	Other	0	0%
	I prefer not to answer	0	0%
	0-25	79	47%
Age	26-50	62	37%
	> 51	27	16%
	Swiss German	7	4%
Linguistic Origin	Swiss French	5	3%
Linguistic Origin	Swiss Italian	152	91%
	Not Swiss	4	2%
	Student	88	52%
Occupation	Worker	57	34%
Occupation	Retired	8	5%
	Other	15	9%

5.2 Impact of Promotional Videos on Emotions

To test the first hypothesis of this research, which is (H1): "Promotional video content on freemium platforms represents a disruptive factor that negatively affects the emotions of those exposed to it," the first step is to aggregate the items related to negative emotions and disruptive factors. This stage is carried out considering only the treatment group, which consists of individuals who viewed the version of the questionnaire in which the Coca-Cola advertisement interrupted a short film, thus representing a disturbance factor. In the context of evaluating the first hypothesis, which specifies that advertising acts as a disruptive factor, the regression analysis focuses solely on the version of the questionnaire where the advertisement interrupts other content.

To aggregate the two variables, the mean of the items measuring negative emotions (frustration, anger, and irritation) and the disturbance factor ("The advertisement shown in the video is a disruptive factor," "I perceived the advertisement as an interruption," "The advertisement in the video annoyed me," and "Advertisement has been intrusive") is calculated. All these items were analyzed using a 5-point Likert scale. Before using these aggregated variables, Cronbach's Alpha was calculated to ensure that they have adequate internal consistency and reliability.

First, the reliability coefficient is calculated for negative emotions.

 Table 4: Reliability and Item Statistics: Negative Emotions (Treatment Dataset)

Reliability Statistics – Negative Emotions Cronbach's Alpha N of Items .890 3

	Mean	N
I feel angry	2.76	87
I feel frustrated	3.00	87
I feel irritated	3.28	87

Item Statistics - Negative Emotions

The Cronbach's alpha is .890, which indicates good internal consistency. This means that all items measure the same concept. As evidence of this, the table on the right shows that the average values of the items are similar to each other. In fact, the mean value associated with the feeling of angly is M = 2.76, that of frustration is M = 3.00, and that of irritation is M = 3.28.

Second, the internal consistency of the disruptive factor variable is assessed.

 Table 5: Reliability and Item Statistics: Disruptive Factor (Treatment Dataset)

Reliability Statistics –	Disruptive Factor
Cronbach's Alpha	N of Items
.902	4

	Mean	N
The advertisement shown in the video is a disruptive factor	3.97	87
I perceived the advertisement as an interruption	4.14	87
The advertisement in the video annoyed me	3.61	87
Advertising has been intrusive	3.74	87

Item Statistics - Disruptive Factor

The Cronbach's Alpha value is very high (.902), indicating excellent internal reliability. The Item Statistics table on the right shows that, the lowest mean value is M = 3.61 ("The advertisement in the video annoyed me") and the highest is M = 4.14 ("I perceived the advertisement as an interruption").

After calculating and assessing the internal validity of the two variables, the regression analysis can be performed. In this analysis, "negative emotions" aggregate variable is used as the dependent variable, and the aggregated variable measuring the disruptive factor is used as the independent variable. The following tables show the SPSS output.

As the first element of the statistical interpretation, it is necessary to evaluate R^2 .

Table 6: Summary of Regression Model: Disruptive Factor and Negative Emotions

Model Summary

Model	R	R Square	Adjusted R Square
1	.679ª	.461	.455

a. Predictors: (Constant), Disruptive Factor

In this case, $R^2 = .461$, which indicates a good ability to predict, in fact, approximately 46.1% of the variance in the dependent variable (negative emotions) is explained by the independent variables (disruptive factor).

Next, it is necessary to assess the overall significance of the model, as individual effects can be meaningful only if the entire model is significant.

 Table 7: Analysis of Variance: Disruptive Factor and Negative Emotions

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	40.715	1	40.715	72.694	<.001b
	Residual	47.607	85	.560		
	Total	88.322	86			

a. Dependent Variable: Negative Emotions

The entire model is significant because F = 72.694 and p < .001. Since the *p*-value is lower than .05, the regression coefficients can be interpreted.

 Table 8: Regression Coefficients: Disruptive Factor and Negative Emotions

Coefficients^a

		Unstandardize	ed Coefficients	Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	.382	.319		1.199	.234
	Disruptive Factor	.681	.080	.679	8.526	<.001

a. Dependent Variable: Negative Emotions

b. Predictors: (Constant), Disruptive Factor

Table 8 shows that there is a significant positive effect of the disruptive factor on negative emotions: $b_1 = .681$ (t = 8.526, p < .001, which is lower than .05). This means that an increase in the disruptive factor is associated with a higher level of negative emotions. There is a significant positive relationship between the two variables, which verifies and confirms the first hypothesis of this research work, namely that promotional video content on freemium platforms represents a disruptive factor that negatively affects the emotions of those exposed to it.

Following this finding, a *t*-test analysis is performed to compare the treatment and control groups, assessing whether significant emotional differences emerged between them. Since the dataset used included both versions of the questionnaire, encompassing all responses, the first step is to analyze internal consistency to ensure the items could be aggregated. The variables of interest concern positive emotions, negative emotions, and disruption factors; all measured using a 5-point Likert scale. Internal reliability analyses are provided in the following section.

First, the three items measuring negative emotions are evaluated.

 Table 9: Reliability and Item Statistics: Negative Emotions

Item Statistics – Negative Emotions

			Mean	N
Reliability Statistic	2.45	168		
Cronbach's Alpha	N of Items	I feel frustrated	2.66	168
.914	3	I feel irritated	2.87	168
				<u>.</u>

The Cronbach's Alpha value is very high (.914), indicating excellent internal reliability. The average values of the variables are similar to each other; indeed, the mean value measured for anger is M = 2.45, for frustration is M = 2.66, and finally, for irritation is M = 2.87.

The same procedure was applied to positive emotions.

Table 10: Reliability and Item Statistics: Positive Emotions

Item Statistics – Positive Emotions

D 11 1 11 11 11 11 11 11 11 11 11 11 11			Mean	N
		I feel happy	2.36	168
Cronbach's Alpha	N of Items	I feel relaxed	2.54	168
.830	3	I feel hopeful	2.17	168

In this case, the Cronbach's alpha is slightly lower (.830), but it still indicates good internal consistency. Regarding the mean values of the three positive emotions, they are also very similar. The mean value associated with the feeling of happiness is M = 2.36, that of relaxation is M = 2.54, and that of hope is M = 2.17.

Finally, the last reliability test is conducted for the disturbance factors variable.

Table 11: Reliability and Item Statistics: Disruptive Factor

Mean N The adv shown in the video is a 3.38 168 disruptive factor I perceived the adv as an 3.60 168 interruption N of Items The adv in the video annoyed me 3.05 168 Adv has been intrusive 3.07 168

Item Statistics - Disruptive Factor

Reliability Statistics – Disruptive Factor Cronbach's Alpha .926

Regarding the items measuring this variable, they have the highest internal consistency (.926). The mean values are very similar, ranging from a minimum value of M = 3.05 ("The adv in the video annoyed me") to a maximum value of M = 3.60 ("I perceived the adv as an interruption").

After ensuring that the items of the different variables have sufficiently high internal reliability, they are aggregated for the subsequent analyses. A t-test analysis is conducted to compare the two groups: the treatment group and the control group. The objective of the t-test analysis is to determine whether the emotions (metric dependent variable), both positive and negative, evoked in the two version of the survey (nominal independent variable), differ or not. The following tables present the SPSS outputs of this analysis.

This first analysis allows to examine the homogeneity of variances and the equivalence of means in the two groups.

 Table 12: Independent Samples t-Test: Emotional Differences Between Groups

Independent Samples Test

		Levene's Test for Equality of Variances		t-test fo	r Equality o	f Means
		F	Sig.	t	df	p
Negative Emotions	Equal variances assumed	.015	.904	-4.726	166	<.001
	Equal variances not assumed			-4.732	165.767	<.001
Positive Emotions	Equal variances assumed	.121	.728	1.429	166	.077
	Equal variances not assumed			1.433	165.997	.077

Regarding negative emotions, the Levene's test shows an F-value = .015 with an associated error likelihood: p = .904, which is higher than the accepted error likelihood (.05). This means that the variances of negative emotions are equal in the two groups (treatment and control); therefore, the t-test results for equal variances will be interpreted. The same reasoning applies to positive emotions, where F = .121 and p = .728.

After analyzing the variances in the two groups for both emotions, it is possibile to proceed to the t-test analysis. Regarding negative emotions, the T-value calculated by SPSS is t = -4.726, with an associated error likelihood: p < .001, which is lower than the accepted error likelihood (.05). This means that negative emotions significantly differ between the treatment and control groups. The same does not apply to positive emotions, where t = 1.429, with an associated error likelihood: p = .077, which is slightly higher than the accepted error likelihood (.05). This means that, with an accepted error likelihood of 5%, positive emotions do not significantly differ between the treatment and control groups. However, considering an accepted error likelihood of 10%, the difference between the two groups is statistically significant.

After interpreting the significance of the difference between the means-value in the control and treatment groups regarding both positive and negative emotions, it is interesting to examine the descriptive information that provides a detailed explanation of this alteration. The following table shows the mean values associated with positive and negative emotions in the two groups: the control group (Group = 0), containing of 81 respondents, and the treatment group (Group = 1), with 87 respondents.

Table 13: Descriptive Statistics: Positive and Negative Emotions by Group

Group Statistics

	Group	N	Mean	Std. Deviation
Negative Emotions	0	81	2.284	.979
regative Emotions	1	87	3.012	1.013
Positive Emotions	0	81	2.457	.854
1 ositive Emotions	1	87	2.261	.921

Regarding negative emotions, the control group has a mean of M = 2.284, while the treatment group has a mean of M = 3.012. As previously mentioned, this difference is statistically significant. This means that in the treatment group, where the advertisement serves as a disturbance factor, the negative emotions aroused in the respondents are higher compared to the control group (3.012 > 2.284). Conversely, regarding positive emotions, these are higher in the control group (M = 2.457) compared to the treatment group (M = 2.261). Although this difference is statistically significant only when using an accepted error likelihood of 10%, it shows that the interruption caused by the advertisement reduces the feeling of positive emotions, compared to the case where there is no interruption.

5.3 The Moderating Effect of the Customer Segment

Within the context of analyzing the relationship between the advertising stimulus received by survey respondents and its impact on emotions, it is valuable to consider the segment to which the respondents belong, particularly in terms of their willingness to pay to avoid seeing advertisements. This can help determine whether this factor influences the emotions. The potential moderating effect of this variable is captured in the second research Hypothesis (H2), which states: "The relationship between disruptive factors and emotions is likely to be stronger for premium customers compared to free customers."

5.3.1 Emotional Responses to Disruptive Advertising: Premium vs. Free Users

The first step in testing the second Hypothesis (H2) is to create two segments based on the willingness to pay to avoid exposure to advertisements. To achieve this, an analysis of the internal consistency of the three items measuring respondents' willingness to pay to remove ads from premium platforms is conducted. This allows for the creation of a single variable to categorize respondents into the "free" or "premium" segment. These items are measured using a 5-point Likert scale. The internal reliability analysis is presented below.

Table 14: Reliability and Item Statistics: Willingness to Pay to Avoid Ads

Item Statistics - Willingness to Pay to Avoid Ads

Reliability Statistics - Willingness to Pay to Avoid Ads			
Cronbach's Alpha N of Items			
.860	3		

	Mean	N
I am willing to pay for the premium version	2.774	168
I prefer to use the free version (reversed)	2.411	168
I am very likely to pay for the premium version	2.399	168

Cronbach's alpha is sufficiently high (.860), which allows aggregation of the items. This is also supported by the Item Statistics table on the right, which shows similar average values across items. In fact, for the first element ("I am willing to pay for the premium version") M = 2.774, for the second one ("I prefer to use the free version" reversed) M = 2.411 and for the last one ("I am very likely to pay for the premium version") M = 2.399. The Likert scale of the second item was reversed to ensure consistency with the other two.

After aggregating the three items, the median of the variable is calculated to enable the segmentation of respondents. The median value is determined to be 2.333, and based on this, two segments are created: the "free" segment (M < 2.333) composed of 78 people and the "premium" segment (M > 2.333) with 90 respondents. In this way, it is possible to use the General Linear Model to test the effect of moderating nominal variable (segment: free and premium) on the relationship between independent nominal variable (group: treatment and control) and dependent metric variable (Negative Emotions). The SPSS output is presented in the following analysis.

The first table allows the examination of variance equality.

Table 15: Levene's Test: Negative Emotions

Levene's Test of Equality of Error Variances^{a,b}

	Levene Statistic	Sig.
Based on Mean	.698	.555

a. Dependent variable: Negative Emotions

F-value is .698 with an associated error likelihood of p = .555. Since the p-value is greater than .05, the assumption of homogeneity of variances is met, ensuring the reliability of the ANOVA.

b. Design: Intercept + Group + Segment + Group * Segment

Secondly, there is the analysis of the effect of the two nominal independent variables (Group and Segment) and their interaction, on the metric dependent variable (Negative Emotions).

Table 16: Effect of Group and Segment on Negative Emotions

Tests of Between-Subjects Effects

Dependent Variable: Negative Emotions

Source	F	Sig.
Corrected Model	7.992	<.001
Intercept	1172.549	<.001
Group	21.496	<.001
Segment	.182	.670
Group * Segment	1.452	.230

As summarized in this table, only the Group factor has a significant effect on negative emotions (F = 21.496, p-value < .001, which is lower than .05). This means that belonging to either the treatment or control group has a significant influence on negative emotions, as already demonstrated in the analyses presented in the previous chapter. In contrast, belonging in the "free" or "premium" segment does not have a significant impact on negative emotions, as indicated by F = .182 and a p-value of .670, which is greater than .05 and therefore not statistically significant. The same applies to the interaction between the two dummy variables. Specifically, the combination of Group and Segment does not have a meaningful impact on negative emotions. As a result, Hypothesis 2 is rejected.

Although not all effects are significant, examining the descriptive statistics can still be useful to gain a more detailed understanding of the analysis results.

Table 17: Descriptive Statistics: Group and Segment Impact on Negative Emotions

Descriptive Statistics

Dependent Variable: Negative Emotions

Group	Segment	Mean	N
	Free	2.352	35
Control	Premium	2.232	46
	Total	2.284	81
Treatement	Free	2.884	43
	Premium	3.136	44
	Total	3.012	87
Total	Free	2.645	78
	Premium	2.674	90
	Total	2.661	168

Table 17 summarizes the mean values associated with negative emotions for the different combinations of Group (Control and Treatment) and Segment ("Free" and "Premium"). The only significant difference concerns the mean values of the treatment and control groups. Indeed, when considering the totals for the treatment and control groups, it can be observed that the first one has higher mean values (M = 3.012) than the second one (M = 2.284). For the segment's variables, however, the difference is not significant. This can also be observed by looking at the mean values, which are very similar: M = 2.645 for the "free" segment and M = 2.674 for the "premium" segment.

If the interactions between the two variables are analysed, the mean negative emotions for the "free" segment increase from 2.352 (control) to 2.884 (treatment); while for the "premium" segment, they rise from 2.232 (control) to 3.136 (treatment). This suggests that interrupted advertising (treatment group) leads to an increase in negative emotions across both segments. However, the rise in negative emotions triggered by the disruptive element appears to be more pronounced in the "premium" segment (+0.904) than in the "free" segment (+0.532), even if this difference is not statistically significant.

When considering the differences between segments, it can be observed that in the control group, the "premium" segment (2.232) has a slightly lower level of negative emotions compared to the "free" segment (2.352). However, what is particularly relevant to the analysis in the context of this research is the treatment group, as the focus is on the situation where advertising is considered a disruptive factor. In this context the "premium" segment (3.136) has a higher, but not significant, level of negative emotions compared to the "free" segment (2.884).

5.3.2 Free and Premium Users: Comparison of Negative Emotional Responses

Based on the previous results, there is no statistical evidence supporting the moderating effect of the user segment. Despite this, it may still be interesting to focus on the treatment group dataset, to analyze, through a *t*-test analysis, the mean levels of negative emotions (metric dependent variable) between the two segment groups: "free" and "premium" (nominal independent variable).

Table 18: Variance and *t*-Test: Negative Emotions Across Segments (Treatment Dataset)

Independent Samples Test

		st for Equality riances	t-test for Equality of Means		
				Significa	ance
	F	Sig.	t	One-Sided p	Two-Sided p
Equal variances assumed	1.015	.317	-1.165	.124	.247

In this first table, it can be seen that the homogeneity of variance is given; in fact, F = 1.015 associated with an error likelihood of p = .317, which is higher than .05. As for the t-test values, t = -1.165 associated with a p-value = .124, which is higher than .05, so there is no significant difference between the two groups. This is confirmed by the descriptive table of results, presented below.

Table 19: Mean Comparison of Negative Emotions: Free vs. Premium (Treatment Dataset)

Group Statistics

	Segment	Mean	N
Negative Free Emotions Premium	2.884	43	
	Premium	3.136	44

The mean value of negative emotions for the "free" segment is M = 2.884, and for the "premium" segment it is M = 3.136. While the premium segment shows higher levels of negative emotions, the difference is not statistically significant.

5.3.3 Emotional Responses to Disruptive Advertising: Role of Attitude Toward Ads

In the context of this moderation, since the two segments did detect non-significant results, it is interesting to focus on the attitude respondents have toward advertising to understand whether this has an impact on the negative emotions produced by the advertisement interruption.

Three dimensions of attitude toward advertising are measured in the questionnaire: informativeness, with three items; entertainment, with three items and irritation, with four items. The first step is to analyze the Cronbach's alpha to check the internal validity of these three aggregate variables.

First, the three items measuring "entertainment" are evaluated.

Table 20: Reliability and Item Statistics: Entertainment

Item Statistics - Entertainment

Reliability Statistics - Entertainment Cronbach's Alpha N of Items .682 3

	Mean	N
Advertising has great amusement value	1.98	168
Advertising helps me to know which products will reflect my unique personality	2.09	168
Advertising is more interesting than other types of content	1.80	168

The Cronbach's alpha is .682. Although this does not indicate particularly high internal consistency, the value is still sufficiently high to be included in the analysis. Regarding the mean values of the three entertainment items, the first one has a mean of M=1.98 ("Advertising has gread amusement value"), the second M=2.09 ("Advertising helps me to know which products will reflect my unique personality"), and the third M=1.80 ("Advertising is more intresting than other types of content").

The same procedure is applied to "informativeness."

Table 21: Reliability and Item Statistics: Informativeness

Item Statistics - Informativeness

Reliability Statistics - Informativenes			
Cronbach's Alpha	N of Items		
.626	3		

	Mean	N
Advertising makes product information immediately accessible	2.76	168
Advertising is a convenient source of product information	2.64	168
Advertising supplie relevant product information	2.80	168

Also for these items, the Cronbach's alpha does not indicate particularly high internal consistency (.626), but the value is still acceptable to be included in the analysis. By examining the Item Statistics table on the right, it can be observed that the mean value of "Advertising makes product information immediately accessible" is M = 2.76; the mean for "Advertising is a convenient source of product information" is M = 2.64; and for "Advertising supplies relevant product information," the mean is M = 2.80.

Finally, the last reliability test is conducted for the "irritation" variable.

Table 22: Reliability and Item Statistics: Irritation

Item Statistics - Irritation

Reliability Statistics - Irritation Cronbach's Alpha N of Items .700 4

	Mean	N
Advertising is irritating	3.99	168
Advertising is deceptive	3.82	168
Advertising is annoying	4.15	168
I consider advertising an unwelcome interruption	4.33	168

Regarding the first four items measuring irritation, the Cronbach's alpha value is .700, indicating a sufficiently high internal reliability. The average values of the variables are quite similar to each other; indeed, the lowest mean value is M=3.82 ("Advertising is deceptive") and the highest is M=4.33 ("I consider advertising an unwelcome interruption").

Second, in order to run a regression, it is necessary to assess the correlations among the three variables measuring attitude.

Table 23: Pearson Correlation Matrix for Attitude's Dimensions

Correlations

	Informativeness	Entertainment	Irritation
Informativeness	1	.431	314
Entertainment	.431	1	394
Irritation	314	394	1

As can be seen from the SPSS output (Table 23), the correlations are moderately low, in fact the relationship between informativeness and entertainment is .431, that between informativeness and irritation is - .314, and that between irritation and entertainment is - .394. This indicates that there are no collinearity problems and it is therefore possible to perform a regression analysis.

The following table (Table 24) presents information regarding R^2 and the significance of the whole model for the three regressions, which focus on the three dimensions of attitude toward advertising. Two models were considered: Model 1 analyses the impact of individual independent variables, specifically the effects of Group (treatment vs. control) and each attitude dimension, on the dependent variable (negative emotions). Model 2 also considers the interaction between the two independent variables.

Table 24: Model Summary: Regressions of Attitude Toward Ads on Negative Emotions

R² and Entire Model Significance

Model		R^2	F	Sig.
1	Informativeness	.161	15.773	<.001 ^b
	Entertainment	.135	12.921	<.001 ^b
	Irritation	.176	17.592	<.001 ^b
2	Informativeness	.167	10.924	<.001°
	Entertainment	.136	8.572	<.001°
	Irritation	.179	11.896	<.001°

a. Dependent Variable: Negative Emotions

As can be seen, all R^2 values are lower than .200, indicating an acceptable ability of the independent variables to predict the dependent one. As for the significance of the model, all p-values are <.001, thus lower than .05, so the entire model is significant for the three regressions considered.

The three regressions were conducted separately, the variables related to attitude have been standardized for this analysis. Table 25 summarizes the key results provided by SPSS.

Table 25: Coefficients: Regressions of Attitude Toward Ads on Negative Emotions

Coefficients^a

Coem	cients			
Model		В	t	Sig.
1	(Constant)	2.269	20.894	<.001
	Group	.757	5.013	<.001
	Informativeness_Z	269	-2.870	.005
	(Constant)	2.263	20.439	<.001
	Group	.769	4.971	<.001
	Entertainment _Z	180	-1.791	.075
	(Constant)	2.269	21.101	<.001
	Group	.756	5.055	<.001
	Irritation_Z	.371	3.383	<.001
2	(Constant)	2.274	20.935	<.001
	Group	.757	5.017	<.001
	Informativeness_Z	171	-1.325	.187
	Group* Informativeness_Z	204	-1.091	.277
	(Constant)	2.265	20.272	<.001
	Group	.769	4.955	<.001
	Entertainment _Z	162	-1.123	.263
	Group* Entertainment_Z	034	167	.868
	(Constant)	2.272	21.089	<.001
	Group	.756	5.051	<.001
	Irritation_Z	.293	1.960	.052
	Group* Irritation_Z	.169	.769	.443

a. Dependent Variable: Negative Emotions

First, as shown in Table 25, the Group variables are statistically significant (p < .001), with coefficients above .750 in both models and for all examined dimensions of attitude toward advertising. This means that individuals in the treatment group experience more negative emotions compared to those in the control group.

Considering Model 1, which takes into account the individual effects of attitude's dimensions, there is a significant negative effect of the advertising's informativeness on negative emotions: $b_1 = -2.69$ (t = -2.870, p = .005, which is lower than .05). The same applies to the entertainment variable, where $b_2 = -.180$ (t = -1.791, p = .075), though a 10% error likelihood must be considered in order to categorized the effect as significant. Finally, there is a significant positive relationship between irritation and negative emotions, $b_3 = .371$ (t = 3.383, p < .001, which is lower than .05).

If Model 2 is considered, which takes into account the interaction between group and the individual dimensions of attitude toward advertising, it can be seen that none of the three variables considered show a significant effect, when combined with the group variable. Specifically, $p_{\text{Group* Informativeness}} = .277$, $p_{\text{Group* Entertainment}} = .868$ and $p_{\text{Group* Irritation}} = .443$, all of which are higher than the accepted error likelihood of .05.

Even though the individual direct effects of the attitude dimensions on negative emotions are significant, none of them serve as a moderator in the relationship between the disruptive factor and negative emotions.

5.4 Impact of Emotions on Purchase Intention

This chapter aims to analyze the second main relationship of the research model, namely the third Hypothesis (H3), which stated that "the emotions generated by a company's video advertising in a freemium platform have a negative impact on the brand's purchase intention." To do so, a regression is computed to assess the relationship between metric independent variable (emotions) and metric dependent variable (purchase intention).

First, the internal consistency of the three items measuring purchase intention is calculated; those related to emotions are previously assessed (Table 9, Table 10).

Table 26: Reliability and Item Statistics: Purchase Intention

Reliability Statistics -	– Purchase Intention
Cronbach's Alpha	N of Items
710	2

	Mean	N
My intention to buy their products has increased	2.375	168
The purchase interest has decreased_reversed	3.417	168
It is less likely that I will buy their products _reversed	3.512	168

Item Statistics - Purchase Intention

Since Cronbach's alpha of these items is .718 (Table 26), it is possible to create the aggregate variable. Looking at the table on the left with the Item Statistics, it can be observed that the mean values are very similar, with a minimum value of M = 2.375 ("My intention to buy their products has increased") and a maximum value of M = 3.512 ("It is less likely that I will buy their products_reversed"). In the context of this variable, it is important to note that the last two items were reverse-coded to measure the variable in the same direction as the first item.

The following regression will analyze how the two independent variables: positive emotions and negative emotions, impacted the purchase intention.

Table 27 shows the data to analyzed before examining the regression coefficients.

Table 27: Model Summary: Regressions of Emotions on Purchase Intention

R^2 and Levene's TestModelR SquareFSig.1 Regression.26529.783<.001b</td>

 R^2 is equal to .265, while F = 29.783 and p-value < .001, being lower than .05, the entire regression model can be considered valid. Therefore, it is possible to analyze the coefficients of the two variables.

Table 28: Coefficients: Regressions of Emotions on Purchase Intention

Coefficients^a **Unstandardized Coefficients** Model Std. Error В t Sig. 12.521 (Constant) 3.264 .261 <.001 **Negative Emotions** -.272 .056 -4.865 <.001

.066

3.594

<.001

.239

Positive Emotions

Concerning the two independent variables, there is a significant negative effect of the negative emotions on purchase intention: $b_1 = -.272$ (with t-value = - 4.865, p-value < .001, which is lower than .05). In contrast, positive emotions also exert a significant but positive influence on purchase intention, the regression coefficient is $b_2 = .239$ (t = 3.594 and p-value < .001, which is lower than .05). This result confirms Hypothesis 3; indeed, the disturbance factor evokes negative emotions (Hypothesis 1), which have a statistically significant and negative impact on the purchase intention.

5.5 The Moderating Effect of the Brand Perception

In the context of regression analysis testing the effect of emotions on purchase intention, it is relevant to analyze the impact of brand perception, considered as an antecedent and therefore measured in the questionnaire prior to exposure to the advertising stimulus. The idea is testing the last Hypothesis of this research work, which is: "If brand perception is positive, it will

a. Dependent Variable: Purchase Intention

b. Predictors: (Constant), Positive Emotions, Negative Emotions

a. Dependent Variable: Purchase Intention

mitigate the impact of negative emotions on purchase intent; and oppositely, if brand perception is negative, it will accentuate the impact of a negative emotions on purchase intention." The "brand perception" variable was measured in the questionnaire by a 5-point semantic differential scale with four adjectives: Unappealing/Appealing, Negative/Positive, Unpleasant/Pleasant and Unlikable/Likable. To create an aggregate variable of brand perception, Cronbach's alpha is calculated to analyze the four items' internal consistency.

Table 29: Reliability and Item Statistics: Brand Perception

Reliability Statistics – Brand Perception Cronbach's Alpha N of Items .893 4

Item Statistics - Brand Perception

	Mean	N
Unappealing/Appealing	3.52	168
Negative/Positive	3.12	168
Unpleasant/Pleasant	3.43	168
Unlikable/Likable	3.23	168

The internal reliability value is sufficiently high (.893) to aggregate the four items and proceed with the analysis. Indeed, the mean values of the four items are very similar, with the lowest value for "Negative/Positive," M = 3.12, and the highest for "Unappealing/Appealing," M = 3.52.

To perform the regression analysis with three metric variables, two of which are independent (negative emotions and brand perception) and one dependent, namely purchase intention; Model 1 of PROCESS v4.2 by Andrew F. Hayes is used. The following tables present the SPSS outcomes.

Table 30: Model Summary: Regressions of Emotions and Brand Perception on Purchase Intention

R ² and Levene's Test					
Model	R Square	F	Sig.		
1	.353	29.790	.000		

First, the $R^2 = .353$ indicate a quite good ability to predict the two dependent variables. F = 29.790 associated with an error likelihood of p-value = .000, which is lower than .05, indicate that the entire regression model is significant, so it is possible to proceed to the coefficients' analysis.

Table 31 shows the coefficients of this regression.

Table 31: Regressions' Coefficients: Emotions and Brand Perception on Purchase Intention

Coefficients^a

	Unstandardized	Coefficients		
	В	Std. Error	t	Sig.
(Constant)	1.797	.530	3.390	.001
Negative Emotions	.068	.166	.410	.683
Brand Perception	.646	.153	4.215	.000
Interaction (Negative Emotions * Brand Perceptioin)	118	.049	-2.399	.018

The constant term is significant ($b_0 = 1.797$, t = 3.390 and p-value =.001, which is lower than .05). Regarding negative emotions, the coefficient is quite low ($b_1 = .068$) and not statistically significant, in fact t = .410 is associated with an error likelihood of p = .683, which is higher than .05. In contrast, brand perception shows a significant (t = 4.215 and p-value = .000, which is lower than .05) and positive ($b_2 = .646$) effect on purchase intention. Finally, the last coefficient considered concerns the interaction between negative emotions and brand perception. Here, the regression coefficient is negative ($b_3 = -.118$) and significant, with a t-value = -2.399 associate with an error likelihood of p = .018, lower than .05. These last values confirm that relationship between negative emotions and purchase intention changes according to brand perception. Even if the moderation effect is statistically significant, the coefficient is negative, so Hypothesis 4 cannot be validated. More detailed explanations are shown in the table below.

Table 32: Effects of Negative Emotions on Purchase Intention by Brand Perception

Conditional effects of the focal predictor at values of the moderator(s):

Brand Perception	Effect	Std. Error	t	Sig.
2.50	227	.061	.410	.000
3.50	344	.153	.051	.000
4.24	431	.049	.070	.000

Table 32 presents the conditional effects of the focal predictor (negative emotions) on the dependent variable (purchase intention) at different levels of the moderator variable (brand perception). When brand perception is at a low level (2.5), the increase in negative emotions leads to a decrease in purchase intention (-.227). This relationship is statistically significant, because t = .410 and p-value = .000, which is lower than .05. As brand perception increases, thus with a higher level of liking (3.5), the effect of increasing negative emotions is even

stronger on reducing purchase intention (-.344) and remain significant (t = .051 and p-value = .000). Finally, at a very high-level brand perception (4.24), this trend continues; with increasing negative emotions there is an even more strongly decrease effect on purchase intention (-.431). This last relationship is also statistically significant; in fact, t = .070 and p-value = .000 is lower than .05.

5.6 Analysis of the Overall Research Model

This chapter presents the results concerning the relationship between the disruptive factor and purchase intention, mediated by negative emotions. Hayes' PROCESS macro (Model 4) was employed to examine this mediation effect.

The relevant data are presented in Table 33.

Table 33: Regression Analysis of the Mediating Relationship

Regression

	R Square	F	Sig.	В	p	IC 95%
$X \rightarrow M$.509	172.335	.000	.653	.000	[.555, .751]
$X \rightarrow Y$.369	48.336	.000	405	.000	[528,282]
M → Y	.369	48.336	.000	036	.602	[170, .099]
$X \rightarrow M \rightarrow Y$				023		[143, .088]

The coding of the variables is as follows: X represents the independent variable (disruptive factor), Y is the dependent variable (purchase intention) and M is the mediator (negative emotions).

Looking at the first row of the table, it is possible to observe that $R^2 = .509$, the beta coefficient is .653, and the relationship is statistically significant since p = .000, which is lower than .05. As the confidence interval does not include zero, it indicates that the disruptive factor has a significant and positive impact on negative emotions. When considering the effects on purchase intention (Y), R^2 is .369. The direct effect of the disruptive factor shows a coefficient B = -.405, with p = .000 (less than .05) and a 95% CI of [-.528, -.282]. Since the interval does not include zero and the p-value is lower than .05, it can be concluded that the disruptive factor has a significant and negative effect on purchase intention. The same cannot be said for negative emotions. In fact, the coefficient is B = -.036, with p = .602, which is greater than .05 and therefore not significant. This is also confirmed by the confidence interval, which includes zero. Therefore, in this model, negative emotions

do not have a significant direct effect on purchase intention. Finally, looking at the indirect effect (the last row of the table), B = -.023 with a 95% CI of [-.143, .088]. Since the confidence interval includes zero, the indirect effect is not significant, and the mediation effect is not validated.

A possible explanation for the existence of significant direct relationships between the variables, as shown in the previous part of the data analysis (where H1 and H3 are confirmed), but a non-significant effect when considering the mediated role of emotions, is the strong correlation between negative emotions and the disruptive factor. As a result, the effect of negative emotions on purchase intention may appear attenuated or statistically non-significant when both variables are included in the same model.

To test this possibility, the correlation between the two variables is examined.

Table 34: Pearson Correlation Between Disruptive Factor and Negative Emotions

Correlations

		Negative Emotions
Disruptive Factor	Pearson Correlation	.714
	Sig.	<.001

A strong correlation can be observed between the two variables, with a Pearson coefficient of .714. This correlation is statistically significant, as the p-value < .001 is lower than .05.

VI DISCUSSION

The analysis of the collected data provided results that made it possible to verify the research hypotheses and answer the research question. This section of the work is dedicated to explaining these results, evaluating their consistency with the existing literature, and providing recommendations to help company managers and marketers make more informed decisions.

Main Findings and Theoretical Interpretation

The first relationship studied concerns the impact of advertising, as a disruptive factor, on the emotions of the survey participants in the treatment group. The results obtained show a positive effect, with a coefficient of .681, between the disruptive factor and negative emotions. In other words, this means that an increase in the perception of disruption leads to an increase in negative emotions. The first hypothesis of the model is validated and confirms existing literature, which suggests that the interruption of an activity tends to generate anger, frustration and irritation (Acquisti & Spiekermann, 2011; Brajnik & Gabrielli, 2010; Davranova, 2019; Pavlou & Stewart, 2000).

This relationship can be further explored by analyzing the two versions of the questionnaire, taking into account also the control group. Indeed, in the treatment cluster, where participants were asked to watch a video interrupted by an advertisement, and in the control group, where the advertisement was shown without interrupting anything, a difference in the emotions produced was observed. More specifically, in the treatment group, the average value of negative emotions (3.012) is significantly higher compared to the control group (2.284). Conversely, for positive emotions, the treatment group has a lower average value (2.261) compared to the control group (2.457). It can be stated that there is a significant difference between the two groups regarding the emotions triggered by the advertisement. This result is particularly interesting, as the promotional content shown to both groups was the same; the only variable that differs between them was the context in which the advertisement was presented to the participants. This also confirms Hypothesis 1, which suggests that the negative emotions evoked are related to the interruption rather than the promotion itself.

Subsequently, the moderating effect of the participant segment on the relationship between the disruptive factor and negative emotions was analyzed. The results indicate that this variable does not play a significant role in influencing the relationship. Existing literature suggests that consumers' attitudes toward advertising play a significant role in differentiating market segments, with some individuals being more disturbed by ads than others (Li et al., 2024). Based on this, it was assumed that such attitudes might influence users' willingness to pay to avoid advertisements, as those with more negative attitudes may be more inclined to seek ad-avoidance strategies, such as subscribing to a premium service. Based on this theory, it was hypothesized that people willing to pay to avoid advertising tend to be more disturbed by it and, consequently, experience more negative emotions when interrupted by this type of promotional content (H2). Although it was found that, in the treatment group, the "premium" segment reports a higher level of negative emotions (3.136) compared to the "free" one (2.884), this difference was not statistically significant; meaning that, individuals more inclined to pay to avoid exposure to advertising on freemium platforms show greater negative but not significant emotional responses. This is further supported by the results obtained from the t-test analysis comparing negative emotions across the two segments. Also in this case, the "premium" group showed higher levels of negative emotions (M = 3.136) compared to the "free" segment (M = 2.884), but this difference was not found to be statistically significant. Another interesting finding that emerges from this analysis is that the increase in negative emotions caused by the introduction of a disruptive factor is stronger for the "premium" group compared to the control group. Indeed, when comparing the treatment and control groups across the two segments, those who reported a higher willingness to pay to avoid being exposed to advertising experienced a greater increase (+0.904) in negative emotions compared to the "free" segment (+0.532). Even though this difference is not statistically significant, the finding still suggests a greater sensitivity to disruptive factors for the premium segment.

The results concerning the analysis of the moderating variable are probably influenced by the characteristic of the sample of participants who responded to the questionnaire. In fact, willingness to pay depends on various factors, not only on attitude and the annoyance caused by interruptions, but also on purchasing power. Given that the sample is relatively young, with an average age of 33, and primarily composed of students (52%), it is likely that this group's price sensitivity had a greater impact on the responses to the question about willingness to pay to avoid ads. The same reasoning can also be applied to retirees or low-income workers, whose limited financial resources may similarly reduce their willingness to pay. As a result, even though respondents are sensitive to interruptions, which evoke negative

emotions, they may not be inclined to subscribe and become part of the "premium" segment due to financial limitations.

Still within the relationship between the disruptive factor and negative emotions, the moderating effect of attitudes toward advertising is also not statistically significant. Indeed, while the three dimensions of attitude, which are measured through informativeness, entertainment and irritation, have a direct impact on negative emotions, the interaction with the treatment and control groups is not statistically significant. This means that individuals' attitudes toward advertising do not significantly influence the difference in negative emotions between the two groups. To summarize, although attitudes have a direct effect, they do not alter how the type of exposure impacts emotional responses of participants.

Regarding the second main relationship studied in this research, namely between emotions and purchase intention, it is possible to state, based on the collected data, that there is a significant relationship between these two variables. In fact, the negative emotions evoked in the previous step have a negative impact on respondents' purchase intention, thus validating the third hypothesis of the research. In this context, the truly interesting and relevant result concerns the one obtained in relation to the final hypothesis, which aimed to examine the influence of brand perception on the relationship between negative emotions and purchase intention.

The final hypothesis (H4) is based on the theory that brand perception influences consumer behavior (Clark et al., 2009; Nerlove & Arrow, 1962; Sadeghi & Tabrizi, 2011). It was hypothesized that individuals with a positive perception of the brand would be less affected by negative emotions in terms of purchase intention. Specifically, it was assumed that because of their positive feeling towards the brand, they would continue purchasing it despite the negative emotional response to disruptive advertising. Conversely, for those with a negative perception of the brand, the negative emotions would have a stronger impact on their purchase intention. According to the results obtained from the collected data, the effect of the moderator variable "brand perception" is found to be significant. However, Hypothesis 4 cannot be validated, as the interaction is characterized by a negative coefficient, which reveals an inverse relationship compared to what was postulated. These results show that, in contrast to the initial hypothesis, positive brand perception does not mitigate the negative effect of emotions on purchase intention but instead intensifies it: as positive brand perception

increases, the negative impact of emotions on purchase intention becomes even more pronounced.

This result may be explained by the concept of expectations, which refers to the beliefs individuals form about a brand or product (Coye, 2004). Expectations serve as a reference point; when people have a high opinion of a brand or its offerings, they tend to develop elevated expectations. As a result, they may be more easily disappointed by the company's decisions or strategies that do not meet those expectations (Zeithaml et al., 1993). Indeed, Habel et al. (2016) highlight that expectations can be negatively correlated with customer satisfaction, as the higher the expectations, the harder they are to meet, which can negatively impact the overall satisfaction of costumers (Habel et al., 2016). So, based on the results obtained and the theory related to expectations, it is possible to interpret this result by considering that a favorable brand perception, tends to increase the expectations consumers have of the company. Consequently, exposure to a stimulus perceived as disturbing and irritating by the brand can generate a dissonance between positive expectations and actual experience. This discrepancy may trigger an even more negative reaction in terms of purchase intention compared to individuals with a neutral or negative perception of the brand, who, having lower expectations, are less likely to experience disappointment or frustration. Connecting this finding to the results obtained by Bell & Buchner (2018), who demonstrated through their study that the use of disruptive ads can improve the brand perception of the advertiser company (Bell & Buchner, 2018), it is possible to observe that increasing brand preference through intrusive ads does not necessarily translate into a positive impact on consumers' purchase intention, and consequently, on sales.

Beyond the specific hypotheses of this study, regarding the overall research model and the role of emotions as a mediating variable between the disruptive factor and purchase intention, the analysis shows that this mediation is not statistically significant. This may be explained by the high correlation between the disruptive factor and negative emotions. This collinearity could have reduced the unique explanatory power of the mediator, making it difficult to detect a distinct indirect effect.

Theoretical and Managerial Contributions

Based on the results obtained from the analysis of the data collected through the questionnaire, and considering the literature reviewed on these topics, it is possible to draw conclusions about the effectiveness of advertising on freemium platforms. According to this

empirical study, video advertisements on freemium platforms are not successful. In fact, regardless of the content presented in the promotion, the way it is delivered has a greater impact on potential consumers. The interruption of an activity or user experience triggers negative emotions, which in turn negatively affect the actions participants say they would take toward the brand, specifically, the decision not to purchase its products anymore. Some theories suggest that mere exposure to a stimulus can have an unconscious effect, creating a sense of familiarity, this effect can help foster the development of more favorable attitudes or behaviors toward a company (Grimes & Kitchen, 2007). However, this mechanism typically fits in the context of peripheral and non-intrusive stimuli, to which people are often unaware of being exposed. This stands in contrast to video ads that interrupt the user's flow experience on freemium platforms, which are more likely to provoke negative reactions.

As a result of this observation, the main recommendation for managers or marketers is to adopt a long-term perspective in the context of strategic marketing decisions. In today's evolving landscape, companies face two main tensions: on the one hand, increasing competition, which pushes them to adopt short-term communication strategies aimed at capturing temporary attention; on the other hand, technological innovation provides new promotional tools designed to build long-term customer relationships, through mutual exchange. Within this tension, disruptive ads on freemium platforms are more consistent with the logic of attention-grabbing. In fact, they are part of a strategy designed to forcibly capture attention, transforming the consumer into a passive actor with no control over the communication with the company. As demonstrated by this research, such short-term advertising tactics can have a negative effect on consumers' emotions and their intention to purchase the product, indicating that it is not a sustainable strategy for long-term growth. In this scenario, it is preferable to invest in quality rather than quantity, with the goal of building a solid and lasting relationship with consumers, instead of trying to capture users' temporary attention. To achieve an enduring bond with customers, companies can rely on new communication digital tools, created through technological advancements, which allow them to connect on a deeper level and foster an emotional bond through two-way communication.

Companies must therefore consider not only the immediate effectiveness of their promotional actions, but also how these may influence consumer perception and loyalty in the long run. As demonstrated in the study by Berger et al. (2010), it is important to differentiate between established companies and new entrants. Indeed, new entrants tend to benefit more from disruptive promotional content, as it helps increase brand awareness and familiarity, elements

already held by well-known companies in the market. For instance, it is argued that a small company can benefit from negative publicity because it generates engagement and attracts attention (Berger et al., 2010). However, this perspective does not align with the long-term vision that a company should adopt when it wants to develop a sustainable growth strategy, as while this short-term approach may initially generate attention, over time it loses its effectiveness, and the negative sentiment toward the brand becomes difficult to reverse. Thus, it represents an ineffective communication strategy, neither suitable for small and emerging businesses nor for well-established firms.

The idea is therefore to explore the opportunities offered by e-advertising in terms of promotional tools that can help achieve the company's growth objectives, placing the consumer at the center of the communication strategy design. The goal becomes to foster an emotional connection and meet their needs, rather than simply competing for their attention, since, as seen, this approach can have a negative impact on emotions and purchase intention. From this perspective, digitalization offers a wide range of non-intrusive tools (Mittal & Kumar, 2022) that allow companies to avoid causing inconvenience to consumers while better meeting their needs.

VII CONCLUSION

The aim of this research is to assess the effectiveness of promotional videos that interrupt the user experience on freemium platforms in influencing emotions and purchase intention. This topic is particularly relevant due to the increasing importance of digitalization, which, pushed by technological innovation, has over the past decades evolved into a key communication channel for companies. Indeed, e-advertising now represents an increasingly large share of both financial investment and strategic effort.

The first part of this work is dedicated to a literature review on these topics. This examination revealed a research gap, particularly the lack of studies in this field that specifically examine the effect on purchase intention. It also highlighted a tension between the advantages and disadvantages of using such promotional tools on freemium platforms. In particular, the study seeks to gain a deeper understanding concerning the trade-off between the potential benefits of this advertising approach, such as reaching a broad potential customer base, increasing brand visibility, and leveraging subconscious effects on information processing; and its drawbacks, including users' perceived loss of control when exposed to unavoidable advertising, as well as the negative emotions triggered by the interruption of enjoyable activities, such as watching videos, listening to music, or playing video games.

This phase was crucial, as it provided the basis for developing the research model used to empirically investigate the impact of disruptive video ads on purchase intention. Indeed, following the literature review and the formulation of hypotheses, an empirical analysis was conducted based on 168 data collected through a questionnaire. The results obtained made it possible to identify and describe the relationships between the variables considered within the research framework, thereby enabling the formulation of practical recommendations for managers to support strategic marketing decisions related to this type of e-advertising tool.

When interpreting the results and formulating managerial recommendations, it was necessary to take into account certain limitations that may have introduced biases in the values obtained during the empirical analysis.

First of all, limitations can be identified concerning the distribution of the participants across different sociodemographic variables. In fact, the sample is representative of a younger population, as the average age of respondents who completed the questionnaire is 33 years old. A possible explanation lies in the distribution method employed for the questionnaire,

particularly the use of the internet, which may have limited access to an older audience that is less familiar with this channel. As a result, older age groups are underrepresented in the sample. Closely related to this limitation is the predominance of students among the respondents (52%). In fact, the survey was distributed within a younger demographic still actively engaged in their education. Therefore, this population group is overrepresented in the sample, which may have impacted the results obtained regarding the moderating variable in the relationship between the disruption factor and emotions (H2). Specifically, students typically have lower purchasing power, and their limited financial resources may have influenced the responses regarding the willingness to pay for access to the premium segment. This could also be extended to other types of occupations. Indeed, it would have been interesting to include a question to determine respondents' income level to assess their purchasing power and understand whether this plays a role in defining the segment, namely "free" or "premium," to which participants belong.

Another limitation concerns how the advertisement was tested as a disruptive factor within the questionnaire. In the treatment group, the Coca-Cola advertisement interrupted a video that participants were watching. This video was a short movie about friendship and empathy. The choice of content was not random, but based on specific selection criteria, mentioned earlier, such as its duration, its ability to generate engagement, and its suitability for all age groups. Despite the selection process for the short film, it may have influenced the responses related to the emotions reported after viewing the content. Although the question specifically asked participants to rate their emotions in relation to the advertisement, with the word "advertisement" underlined (Appendix 3), it is possible that the emotional tone of the short film unconsciously affected how people responded to this question.

The next limitations are linked to potential future developments and research aimed at further expanding knowledge on this subject of study, with the goal of gaining a deeper understanding of the phenomenon that occurs on freemium platforms.

First of all, this study focused exclusively on video advertisements that interrupt the user experience. It would be interesting to also investigate the impact of other types of e-advertising tools on purchase intention. In addition, this research focused on analyzing purchase intention as the dependent variable. This could represent a limitation, as the choice of the channel used by companies to promote a message depends on the strategic objective pursued by the company. This means that the ultimate goal of communication is not only to

encourage purchase, but could also be, for example, to increase brand awareness, foster customer loyalty, or improve customer engagement. This means that further research could be undertaken to analyze other potential marketing objectives that companies pursue with such strategies. Finally, brand perception is considered within the research framework as an antecedent, meaning a pre-existing state at the time of analysis. It would be interesting, in future research, to examine the impact of advertising as a disruptive factor on a freemium platform on brand perception. Existing studies, in fact, focus on unknown companies or rely on stimuli that have an unconscious impact, making them less explicit compared to a video that interrupts the viewing of content.

To conclude, future research on this topic could explore the reasons why companies continue to invest heavily in this type of promotional channel. Indeed, the results of this study and the empirical evidence from previous research show that triggering negative emotions in consumers does not appear to be a viable long-term growth strategy. It would be valuable to interview companies that use this type of channel to deliver promotional messages to gain deeper insights into their motivations and strategic decision-making.

Despite these limitations, it is still possible to conclude that the research work shows how disruptive advertising has a negative effect on emotions and, consequently, on purchase intention. The first relationship, between disruptive factor and negative emotion, is not moderated by the segment to which consumers belong, whether "premium" or "free;" while the second relationship, between emotions and purchase intention, is moderated by brand perception. In fact, a positive brand perception intensifies the effect of negative emotions on purchase intention. The underlying mechanism may be linked to the issue of expectations; in other words, a strong brand perception increases the anticipation associated with interactions with the company and makes it more difficult to tolerate experiences that fail to meet those expectations, such as interruptions caused by advertisements.

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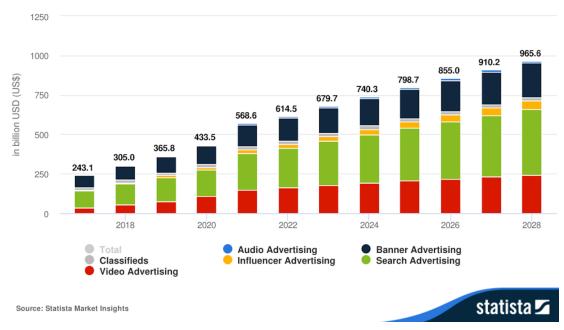
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APPENDIX

Appendix 1: Digital Advertising - Ad Spending

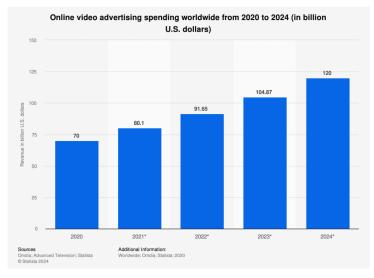




Source: Statista Market Insights, 2024a

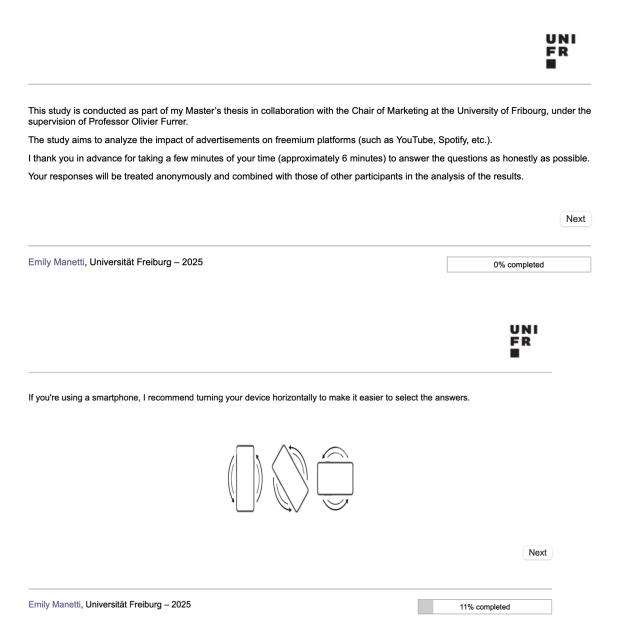
Appendix 2: Online video advertising spending worldwide

Online video advertising spending worldwide from 2020 to 2024 (in billion U.S dollars).



Source: Statista Market Insights, 2024b

Appendix 3: Research questionnaire





Advertising supplies relevant product information Advertising supplies relevant product information Advertising is annoying Advertising has great amusement value Advertising is deceptive Advertising is more interesting than other types of content Completely disagree Disagree No opinion Agree Completely agram willing to pay for the premium version prefer to use the free version am very likely to pay for the premium version	vertisements on f	freemium platfo	orms (like YouTube
consider advertising an unwelcome interruption Advertising helps me to know which products will effect my unique personality Advertising is irritating Advertising supplies relevant product information Advertising is annoying Advertising has great amusement value Advertising is deceptive Advertising is more interesting than other types of content Completely disagree Disagree No opinion Agree Completely agree am willing to pay for the premium version prefer to use the free version am very likely to pay for the premium version	vertisements on f	freemium platfo	orms (like YouTube
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am very likely to pay for the premium version	0	0	0
Ne			
Emily Manetti, Universität Freiburg – 2025 22% completed			Next
		22%	6 completed
		22%	
<u> </u>			
•			
•			
e you aware of the brand CocaCola?			
			229



I perceive the CocaCola brand as...

Unappealing		\bigcirc	\bigcirc		\circ	Appealing			
Negative						Positive			
Unpleasant		0	0	\circ	0	Pleasant			
Unlikable						Likable			
									Next
Emily Manetti, Universität Freiburg – 2025					44% (completed			

UNI FR

Please watch the entire video carefully to answer the following questions.



Next

Emily Manetti, Universität Freiburg – 2025

56% completed



Please rate the following statements on a scale of 1	to 5. Completely				
	disagree	Disagree	No opinion	Agree	Completely agre
The advertisement shown in the video is a disruptive factor					
I perceived the advertisement as an interruption	0	\circ	0		0
The advertisement in the video annoyed me					
Advertising has been intrusive	0	0	0	0	0
					Next
Emily Manetti, Universität Freiburg – 2025				67% c	completed
					UNI FR
After watching the <u>advertising</u> that appeared in the v	rideo Strongly disagree	Disagree	No opinion	Agree	Strongly agree
I feel irritated					
I feel happy	0	0	0	0	0
I feel relaxed					
I feel hopeful	0	0	0	0	0
I feel frustrated					
I feel angry	0	0	0	0	0
After watching the video, how has your purchase at	titude towards the	brand show	n in the advertis	ement chan	ged?
	Strongly disagree	Disagree	No opinion	Agree	Strongly agree
My intention to buy their products has increased			0		
The purchase interest has decreased	0	0	0	0	
It is less likely that I will buy their products					
					Next
Emily Manetti, Universität Freiburg – 2025					mpleted



What is your gender?	
[Please choose] 💠	
What is your year of birth?	
[Please choose] \$	
Which language region are you from? [Please choose] ‡	
What do you do in life?	
[Please choose] \$	
	Next
Emily Manetti, Universität Freiburg – 2025	89% completed
	UNI
	FR

Thank you for completing this questionnaire!

I really thank you for having helped me.

Your answers were transmitted, you may close the browser window or tab now.

Emily Manetti, Universität Freiburg – 2025



Faculté des sciences économiques et sociales Wirtschafts- und sozialwissenschaftliche Fakultät Boulevard de Pérolles 90 CH-1700 Fribourg

DECLARATION

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Fribourg	le	19	mai	20.25	
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Faculté des sciences économiques et sociales Département de Gestion Chaire de Marketing Prof. Dr. Olivier Furrer Bd. de Pérolles 90 CH-1700 Fribourg

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